CHAPTER 7

Program Evaluation and Quality Assurance in Animal-Assisted Therapy

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I. INTRODUCTION

The benefits of using animals in therapy settings have been reported for centuries (Burch, 1995). Animals have been used to help practitioners achieve program goals in every setting imaginable. Individuals in nursing homes, prisons, schools, physical rehabilitation, and a variety of specialty programs have experienced firsthand the powerful healing potential of animals.

The late 1970s and 1980s marked a turning point in the growth of animal-assisted therapy (AAT) as an established field. National programs for animal-assisted therapists registered large numbers of volunteers, training courses were developed, animals were certified, AAT conferences were held at the local, state, national, and international level, and there was a dramatic surge in the literature pertaining to AAT. Having witnessed the positive effects of animals in therapeutic settings, both researchers and practitioners advocated increases in the availability of AAT services. By the 1990s, thousands of animal-assisted therapy volunteers were working in programs around the world.

For most types of educational and habilitation programs, the 1990s could be characterized as a time when taxpayers, program administrators, and govern-
ment officials began to demand more accountability and documentation of program quality. With this increase in the demand for accountability, by the 1990s, the area of program evaluation was becoming an increasingly essential and important component of AAT programs.

II. PROGRAM EVALUATION

Historically, the field of program evaluation has changed dramatically in the past 40 years. Guba and Lincoln (1985) identified four distinct phases that have occurred during the evolution of program evaluation. In the early development of the field, evaluators were often measurement specialists. These specialists were usually outside consultants who were hired to measure some particular aspect of a program. Statistics was a primary tool in assessing program effectiveness.

In the second phase of the development of program evaluation, evaluators focused on identifying objectives for a particular program, then measuring how closely outcomes reflected the original goals. As program evaluation became a more commonly accepted practice, program evaluators became involved in making value judgments about program goals and initiatives. It was during this third phase in this rapidly evolving field that program evaluation moved beyond educational settings and into social, government, medical, and specialty settings such as animal-assisted therapy.

In most programs using program evaluation strategies, the fourth and final phase of program evaluation is currently in place. According to Guba and Lincoln (1985), this fourth phase can be characterized by evaluators who have gone beyond simply measuring effects to become extremely involved in the dynamics of the program. Sensitive to the political and social climate in a given facility, these evaluators work closely with program staff and administrators and involve them in making decisions about the evaluation process. Administrators should be actively involved in making decisions about program evaluations that involve staff, funding, or other resources from the facility and have implications for the overall facility program.

If the current trends continue, program evaluation might eventually become as integral to an AAT program as the training and interventions already are. Rather than using short pre- and poststatistical evaluations to evaluate program effects, ideally the evaluation process will be ongoing with routine feedback given to the administrators and decision makers (e.g., community boards, human rights committees) who will ultimately be responsible for implementing programs and approving continued evaluations. The administration of a facility generally has a significant interest in whether or not a particular program results in documented client improvement or a substantial cost savings. Robinson and
III. PURPOSES OF PROGRAM EVALUATION

In the early years of program evaluation, evaluators focused on outcomes and summative evaluations. Summative evaluations were used to make summary decisions such as to continue or discontinue a program based on the results (Basarab & Root, 1992). In an AAT program, if after an intervention has been in place for several months, a program evaluator gathers postprogram data, a summative evaluation has been used. In more recent years, the use of formative evaluation techniques in program evaluation has increased. Formative evaluations are in place throughout a program and are used to make adjustments in an ongoing process (Basarab & Root, 1992). An example of the use of formative evaluation would be modifying a training program for AAT volunteers during the second week of training when it became apparent volunteers were having trouble mastering the material designed for a 10-week course.

Program evaluation in AAT has several purposes. Program evaluation assists in planning for the future, determining needed interventions and program modifications, and documenting outcomes for justifying funding or the allocation of resources. Program evaluation in AAT settings can be used to assess current program status and whether or not AAT interventions with clients are effective. Animal-assisted therapists can use program evaluation as a diagnostic tool that gives direction for future goals for clients. If a client in an AAT program began to show greater physical strength after walking with a dog, physical therapists might decide to develop new treatment plan goals involving walking (e.g., walk to the dining room, walk to the yard outside where the dog is waiting). Program evaluation can also be used to conduct a cost–benefit analysis of the AAT program. Basically, in AAT settings, the program evaluation process helps decision makers determine, after considering all of the variables, if a particular program or procedure has value and should be continued.

Just as programs can be evaluated, the process of program evaluation can also undergo evaluation. The Joint Commission on Standards for Educational Evaluation (1981) identified four major categories by which a program evaluation can be evaluated. These areas include utility, feasibility, propriety, and accuracy. Utility refers to whether or not an evaluation serves the needs of the audience. Feasibility addresses whether or not a program evaluation is realistic and economically sound. The consideration of propriety ensures that sufficient concern has been shown for the clients who will be affected, and finally, accuracy refers to the process of determining the program evaluation has been implemented in a technically correct, systematic manner.
IV. AREAS OF PROGRAM EVALUATION

Program evaluations for AAT programs can address a variety of areas. Ten main areas can be identified: mission statement, physical plant, clients, animals, volunteers, staff, curriculum, cost–benefit analysis, results, and long-term impact (Table I) (Burch, 1996). Each of these areas includes subcategories and may be referred to by different terminology depending on the program evaluator.

A. MISSION STATEMENT

The mission statement for any program provides a broad description of the intent of the program. The mission statement provides the starting point from which goals and objectives are developed. When evaluating a mission statement and the accompanying goals and objectives, program evaluators would determine if there is a clear relationship between the activities of the program and the mission statement. Program evaluators would also determine if an AAT program's mission statement was practical, attainable, and related to the goals and short-term objectives that had been identified. A mission statement that described the mission of a facility's AAT program as to “use animals so each child in the program can function independently in the community,” would not be appropriate or reasonable in a setting for children with severe disabilities. A mission statement that would propose to use animals to teach new skills “so that each child can function as independently as possible” would be more reasonable.

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B. PHYSICAL PLANT

For AAT programs, the physical plant includes the building where the program will take place. This could be a nursing home, rehabilitation hospital, or any other type of facility with an AAT program. Included in the physical plant portion of the program's evaluation are outside areas such as yards where clients might exercise dogs, hallways where fish tanks are placed, or dayrooms where cages of small animals or birds might be located. The physical plant needs to be adequately arranged so as to facilitate the activities of the AAT program. If AAT programs are related to client goals such as ambulation, adequate space should be designated in the facility where clients can walk with therapy animals. When animals live at facilities, compliance with health codes related to infection control and sanitation are a part of the AAT evaluation. For example, during inclement weather, animals can be brought indoors, but they should not be housed in the closet with clean linens or in food preparation areas.

C. CLIENTS

Other names for clients depending on the particular setting are patients, residents, or students. Basically, the clients are the consumers who will be the recipients of AAT services. The client portion of program evaluation addresses the procedures that are used for selecting clients for AAT, as well as whether or not individuals or groups of clients could benefit from the services. For example, while animals have been used to reduce the pain reported by some clients, an elderly client who was suffering and screaming from the intense pain caused by a broken hip would certainly be better served with a medical intervention than AAT. In a juvenile justice setting where teenage boys have frequent incidents of behavioral acting out, an AAT program built around the use of smaller, more fragile animals would not be recommended until the behavior problems of the teenagers were under control. The role of program evaluation here could be related to the behavioral goals of individual teenagers and the formative evaluations (e.g., daily data) of their behavioral progress.

The AAT client portion of the program evaluation is directly related to the portion of the program evaluation described as “results.” Client responses and behavior changes related to AAT are most often measured by the use of questionnaires and surveys, statistical measures, and single-subject design methodology. In some residential facilities such as nursing homes and developmental disabilities settings, family members and staff respond to quality of life questionnaires as part of the overall facility evaluation. Quality of life measures are receiving increased interest in AAT settings. Oftentimes “an improved
quality of life” is the justification for the implementation of AAT programs (Keil, 1998).

D. Animals

The selection of animals in an AAT program can make or break a program. Animals should be selected to match client characteristics and program needs. Animal selection relates to species selection, breed selection, and the careful selection of individual animals within a breed in order to fully maximize the benefits of the AAT program. A toy breed of dog, such as a Maltese, would most likely be a better bed companion for a bed-ridden person in a nursing home than a giant breed, such as a Great Dane. A person with allergies might do better with a short-haired cat in AAT sessions than with a Persian. A child who was quiet and fearful would be better placed with a calm, reserved, Welsh Springer Spaniel than a dog of the same breed who was extremely active and full of energy. An adult who had an inability to be gentle with more fragile animals such as hamsters might benefit more from an AAT program involving riding a horse.

The animals in AAT programs can be evaluated in a variety of categories including suitability for the program, health, and behavior. Veterinary assessments and checklists are typically completed for most AAT animals. The behavior of AAT animals is assessed by using checklists of skills related to a basic level of training such as the American Kennel Club’s (1996) Canine Good Citizen Test.

The training and behavior of animals in AAT programs is also important. Program evaluators determine if animals are under control and if their presence enhances the habilitation process, or if the animal becomes simply one more thing that needs to be managed. All animals in AAT settings should have passed the necessary health and veterinary screenings. Program evaluation in AAT should ensure that all animals are healthy, clean, and well groomed.

E. Volunteers

During a complete AAT program evaluation, AAT volunteers will be evaluated. Factors relating to volunteers include the number of contact hours provided to clients, volunteer behaviors related to interacting with clients, volunteer behaviors related to handling therapy animals, and volunteer turnover rates. Most facilities require that AAT volunteers complete general facility orientation and volunteer training. When AAT programs rely heavily on volunteers, the role of competency-based training and feedback in the therapy setting is critical.
Turnover is a particular problem in programs depending on volunteers. In only a few months, Savishinsky (1992) reported a 30% attrition rate among 100 volunteers who visited facilities with their animals. In evaluating this program, it was determined that the most likely reason for the high attrition was that the volunteers were unprepared for the emotional stress involved with working in a nursing home. Studies such as this are valuable because they identify problems that can be addressed in future program evaluations. If the problem was that volunteers were unprepared for the experience in the nursing home, program evaluators could work with AAT decision makers to evaluate interventions that would ensure volunteers were more prepared. Such interventions might include more time in the facility before beginning volunteering, additional training, and developing procedures to carefully match individual volunteers with specific settings.

F. Staff

Staff who might be involved in some aspect of a facility’s AAT program most commonly include administrators, medical staff, managers, departmental directors, therapists and other health care professionals, teachers, and direct care staff. Only when an AAT program has the support and cooperation of administrators, managers, and directors will it achieve maximum success. The role of the staff who work directly with clients is also critical. Staff evaluations can be in the form of questionnaires, interviews, checklists, direct observation of staff behavior, and consumer (client and family) evaluations of staff performance. In a quality AAT program, therapists will work with AAT personnel and volunteers to identify the goals and treatment strategies that are the most appropriate for each client.

G. Curriculum

The curriculum is the content of the AAT program. Ideally, the curriculum will be driven by the habilitative goals and objectives for individual clients. The goals of the facility should match the curriculum and goals for individual clients. Specific interventions and activities should match the needs of individual clients. For example, brushing dogs is a worthwhile activity and it can improve dexterity and fine-motor coordination. However, in a group of clients for whom ambulation has been identified as a priority, walking dogs might be an activity more suited to achieving significant therapeutic results. Other program issues, such as scheduling, are tied closely to the curriculum of the
AAT program and these issues can also be considered during a program evaluation.

H. Cost-Benefit Analysis

In the area of program evaluation, cost-benefit analysis is an important consideration. Cost-benefit analysis refers to the portion of the program evaluation that essentially answers the question "Considering the cost of the program, was it worth it?" A cost-benefit analysis can determine the benefits of a particular program and put a dollar value on those benefits, calculate the total costs related to a program, and compare the benefits and the costs (Kee, 1994). One obvious benefit related to AAT programs is the volunteer labor. Even though volunteers are not paid, a dollar amount can be calculated to estimate the value of volunteer services. Using a simple log or sign-in procedure, the number of contact hours with clients in an AAT program should be documented to assess the worth of the contribution made by volunteers.

Some benefits are extremely important even though they may be more difficult to quantify. For example, if a person has made tremendous gains as the result of therapy dog intervention, they might sustain fewer injuries and therefore need less medical care; they might require fewer medications or fewer one-on-one staff hours, and they may have a shorter length of stay in a facility.

In the cost-benefit analysis portion of program evaluation, benefits are compared to costs in order to assess overall program value. Because AAT programs are very often largely staffed by volunteers, there may be limited costs with regard to staffing the program. Costs to facilities for AAT programs could be one-time, fixed costs such as constructing fencing or housing for animals; recurring costs such as transportation costs related to getting clients to a specialty program (e.g., riding horses at a stable); and staff-related costs, such as salaries of facility personnel who will supervise AAT volunteers.

I. Results

The remaining two areas of AAT program evaluation, results and long-term impact, relate to the outcomes of the program. Results encompass client progress and size of effect changes that can be measured with individual client assessments, questionnaires, statistical measures, and single-subject design data.
J. Long-Term Impact

The long-term impact of AAT can be assessed by implementing follow-up measures as a part of the AAT program evaluation. There is a need for more longitudinal studies that show the long-term effects of AAT programs and the lasting role that AAT might have on improving specific skills and quality of life. Longitudinal studies and follow-up measures should document whether or not there are any lasting benefits of AAT once a client leaves the facility or no longer participates in the program. If follow-up data were available for teenage AAT participants that showed they went to get their own pets, live a well-adjusted life, and choose a vocation related to AAT, the funding for AAT programs would be dramatically increased.

V. Client Evaluations: Measuring AAT Results and Long-Term Impact

To measure the results an AAT program has had with regard to increasing client skills or changing behavior, program evaluators can use three broad categories of data: (1) individual client progress data, which may include acquisition data or reduction programming data; (2) group research design data; and (3) single-subject research design data.

A. Individual Client Participation and Progress Data

In many therapeutic settings, data are required to document client participation and progress in activities. Data can be obtained for individual clients by using (1) standardized assessments that are administered on a regular basis, (2) direct observation of specific behaviors, (3) task analysis data from skill acquisition programming data, and (4) reduction program data from programs designed to reduce problem behaviors.

B. Standardized Assessments

Standardized assessments are administered in most therapeutic settings as a routine part of the habilitation process. Standardized assessments are available for every type of specialty area. A comprehensive client assessment would include information such as the client's mental and cognitive functioning,
academic abilities, physical abilities, health, leisure, and social skills. Assessments are generally administered at least yearly as a part of a habilitation planning process. The information from annual assessments is used to develop goals and objectives for therapy. Standardized assessments or portions of the assessment tools could be administered periodically to provide therapists with diagnostic information.

C. DIRECT OBSERVATION OF SPECIFIC BEHAVIORS

As part of an AAT program evaluation, evaluators can conduct direct observations of specific client behaviors. For example, if a goal for a particular client was to have the client engage in verbal interaction with others, data could be taken during sessions when the client was with and without the therapy animal. Another important aspect of AAT program evaluation is measuring any lasting effects of the animals. When the therapy cat leaves, is the client still more verbal 1 hour later? What about 2 hours later? To document the effects of animals both before and after sessions, an observation system and data collection system could be developed, and an observer would simply watch the client during the specified times and record the number of verbalizations. If there were consistently more verbalizations with the animal present, there would be some indication that the AAT program was having a positive effect on the client. Kongable et al., (1989) observed clients and recorded eight social behaviors in three conditions that included no dog, a dog temporarily visiting, and a dog permanently placed in the facility. Direct observation was used and the results indicated that the presence of a dog increased the number of social behaviors. Although standard data collection methods would provide a more objective picture of client progress, when direct observations are conducted, some therapists record the results as narrative, anecdotal records, which can be compiled as case studies. Even though anecdotal notes are widely used, as AAT program evaluations become more sophisticated, anecdotes will less often be acceptable as a means of reporting program effectiveness.

D. TASK ANALYSIS TRAINING TO TEACH NEW SKILLS

The task analysis method is used when a skill would be more easily taught if it were broken into smaller units of behavior. A task analysis involves breaking the task down into a sequence of steps that the learner must perform in order to complete the task (Gagne, et al., 1992). If an animal-assisted therapist wanted to teach a child with severe physical disabilities to brush a therapy
dog, the task could be broken into steps that would include (1) reach for the brush, (2) pick up the brush, (3) put the brush on top of the dog's head, (4) move the brush from the head to the middle of the back, and (5) move the brush from the middle of the back to the base of the tail. The steps could be listed on a data sheet that the therapist would score during each session. A graph of acquisition data could be developed from the task analysis data that showed the rate at which each of the skills was performed independently.

Burch (1991) used the task analysis approach to document client progress in AAT settings. In a training program designed to teach a 3-year-old substance-exposed child who was refusing to walk to ambulate to a therapy dog, a 10-step task analysis was developed. The task analysis began with the child crawling to the dog, then walking by holding one of the therapist's hands, and finally, walking with no assistance. The child accomplished all 10 steps of the task analysis in 11 sessions; in the 11th session, he walked 5 feet independently.

E. REDUCTION PROGRAM DATA FROM PROGRAMS DESIGNED TO REDUCE PROBLEM BEHAVIORS

In addition to their usefulness at teaching new skills, animals in therapy settings can also be used to reduce client behavior problems. Program evaluators can evaluate one aspect of program effectiveness by reviewing data from AAT programs designed to reduce client behavior problems. Clients with stereotypical behaviors such as rocking, hand-flapping, or making noises may engage in fewer maladaptive behaviors if an animal is present. Because reducing or eliminating behavior problems is an important part of the therapeutic process, the effects of animals on the reduction of unwanted behaviors should be a part of all comprehensive AAT program evaluations. There is a need for more studies that focus on the effects of animals on decreasing unwanted behaviors.

VI. STATISTICAL RESEARCH DESIGN

Formal assessments, direct observations of behavior, task analysis data, and reduction programming data can be used to provide program evaluators with information regarding the progress of individual clients. Although this information is a critical part of the habilitation planning and therapeutic process, at times the AAT program will need to be evaluated according to more rigorous standards. When funding is an issue or when a particular treatment needs to be evaluated as to its effectiveness, there is a need to go beyond independent sets of individual client data and to begin analyzing the entire AAT program.
The most common method of evaluating the effects of AAT programs has been to use group statistical designs. In these designs, participants are most often randomly assigned to groups and different groups receive different treatments. The data are analyzed using statistical procedures. When statistics are used to evaluate programs, most often, a sample is selected from the population with the hopes of being able to generalize the results to the whole population. In statistics, a population is the entire group that has something in common, such as all of the people in nursing homes everywhere who receive animal-assisted therapy services. Statistics can be used in program evaluation to describe sets of numbers, make inferences about groups, compare results, and to test a research hypothesis. When statistics are used to evaluate AAT programs, questions such as these can be answered:

1. Which of several procedures is the most effective in AAT settings?
2. Will conducting an AAT session one way be more effective than doing it another way?
3. What is the probable outcome of an AAT program in a particular place?
4. When clients receiving AAT are compared to clients who have not received the services, what are the differences in specified variables?

When statistics are used, the first step for program evaluators and researchers is to decide which questions should be asked. Then they determine which statistical test is the most appropriate tool for answering the questions. Statistical tests commonly used to evaluate the effects of an AAT program include t-tests, chi-square ($\chi^2$), and regression analysis.

A. t-Tests

The t-test can be used in program evaluation to assess the generalizability of data. The t-test for statistical significance tests the null hypothesis that there is no difference between two groups (Newcomer, 1994). The t-test is one of the most commonly used tests in AAT research. Batson et al. (1998) used a t-test to evaluate the effectiveness of the presence of a therapy dog on socialization and physiologic indicators of stress in adults with Alzheimer's disease. Dependent variables included both social and physiologic variables such as verbalizations, looks, smiles, leaning toward stimulus, praise, heart rate, and blood pressure. The data showed that mean scores for social variables such as smiles, tactile contact, and looks were significantly higher when the pet was present.
B. CHI-SQUARE

Both the chi-square test and the t-test can be used to address the issue of generalizability of the data. The chi-square test, also written as $\chi^2$, can also be used to test the relationship or association between two variables. For example, a chi-square test could be used to select companion animals to be trained by juvenile offenders for placement with senior citizens. In a hypothetical study, 125 elderly prospective pet owners could be asked to choose one of three types of dogs they would prefer. The AAT researchers might also want to consider an additional variable and determine if their choices were related to whether or not the individual was an elderly male or female (e.g., would women prefer smaller dogs?).

McNicholas and Collis (1998) used chi-square as one of the measures in a study designed to evaluate the relationship between pet ownership and health in Type A individuals. In this study, the two sexes were equally represented in three pet ownership groups that included owners of cats/dogs, other animals, and no animals. The data showed that there was a tendency for more females to be pet owners than males, that participants who were older (i.e., 56 to 65 years) had a higher than average nonownership, and a lower than average cat/dog ownership.

Friedmann and Thomas (1995) used chi-square analyses to evaluate the relationship between pet ownership and survival status. In a study with 369 participants, data showed a significant relationship between survival of cardiac parents and dog ownership. The study showed that dog owners were more likely to be alive 1 year after the baseline assessment than patients who did not own dogs.

C. REGRESSION ANALYSIS

Regression is an analytical technique that can be used to predict values for a criterion or dependent variable based on historical trends in that criterion or on other factors that are assumed to influence it (Newcomer, 1994). The regression model represents the average change in the criterion across time or in the other factors that are assumed to influence it. When regression is used to evaluate AAT programs, it is frequently used in connection with widescale policy or program evaluations to provide estimates of changes in behaviors that the program is likely to produce. For example, data on recidivism among women inmates might be used to estimate the impact a dog training program in a prison had on specific behaviors. When regression is used to
show predicted values, a measure that is often reported is the coefficient of determination, also known as R-square (Newcomer, 1994).

Keil (1998) used a regression procedure in a descriptive study related to the role of human–animal bonding in the quality of life of older adults. A stepwise regression procedure was used to determine the impact of five variables (i.e., gazing, appeal, stress, and two dummy coded animal variables) on the level of human–animal attachment. The data presented as an R-square showed that four variables, including gazing with the animal (looking into the animal's eyes), dog ownership, stress, and appeal of the animal's appearance, explained 31% of the variance in the human–animal interaction.

Triebenbacher (1998) also used a regression analysis in a similar study designed to investigate the developmental differences in the relationship between children's attachment to companion animals and their self-esteem. The results showed that there were developmental differences in children's attachment to their companion animals and their self-esteem ratings. The R-square was used to present data that showed the greatest amount of variance was in the elementary school model and the least amount was with the middle school model.

VII. SINGLE-SUBJECT RESEARCH DESIGN

Single-subject research design is seen far less frequently in AAT research and program evaluation than group statistical designs. This is unfortunate because single-subject methodology lends itself well to providing an ongoing assessment of program progress. Further, single-subject design embraces the goals of the behavior analytic approach that permits one to understand the behavior of individual participants. In a single-subject approach, individual differences are not obscured by the averaging process that is required by statistical design (Sidman, 1960).

Single-subject research designs were first developed in animal operant conditioning (Burch & Bailey, in press). The designs have been adapted and used to evaluate applied problems in educational, health, business, human services, community issues, and a variety of other areas. The goal of single-subject designs is to demonstrate the functional relationship between an event and a target behavior (Bailey, 1979). In single-subject methodology, the term functional is used in a cause-and-effect sense and refers to an arrangement where the contingency is "turned on and off repeatedly" (Bailey, 1979). If the behavior occurs each time the contingency is "turned on," then ceases each time it is "turned off," a functional relationship has been established. Using single-subject techniques, researchers and trained practitioners can answer AAT questions such as these:
1. Is the person more likely to cooperate in an ambulation program if the therapy dog is present?
2. Are residents calmer when they have fish tanks in the day room?
3. Which of these two AAT conditions results in the desired behavior change?

Several types of single-subject designs can be used both for research purposes and for program evaluation. The most common of these designs include AB designs and related variations (although these have no experimental control), reversal designs, multiple baseline designs, and multi-element designs.

A. AB DESIGNS

The AB design begins with some quantification of the dependent variable, the variable that is expected to change as a result of the intervention. The “A” represents a baseline condition in which the specified variables are observed and quantified before any treatment takes place. The “B” in the AB design represents the treatment phase and shows the data after the treatment or intervention has been implemented. Figure 1 shows data presented in the AB format. The data in Fig. 1 are from an AAT program implemented with a 24-year-old male with profound mental retardation. A reinforcer sampling assessment showed that animals were a potential reinforcer. In pilot sessions, when animals were present, the participant would sit up in his wheelchair and vocalize. In the baseline phase, observers counted the number of vocalizations during leisure time when no animals were present. In the intervention phase,
vocalizations were counted when a trained therapy dog stood next to the wheelchair for petting.

B. REVERSAL DESIGNS

In single-subject design, experimental control can be demonstrated by "turning the behavior on and off" (Bailey, 1979). The reversal design shows that a particular treatment or intervention is responsible for the behavior change when the onset of the intervention results in the onset of the specified behavior. Reversal designs are used when it is expected that results are reversible, that is, that behavior will return to baseline levels when the intervention is removed. It is not ethical to use a reversal design when the removal and return to baseline levels will cause negative effects to the participant. For example, if regularly scheduled access to a therapy cat caused a child to stop engaging in self-injury, it would not be ethical to remove the successful intervention simply for the purpose of demonstrating experimental control.

Figure 2 shows a reversal design that was used to evaluate the effects of adding a dog care program to the vocational class of a 39-year-old man with moderate mental retardation. The problem prior to the intervention was that the participant was leaving class about 15 minutes early each day. Despite teacher requests to stay until class had been dismissed, the participant would leave early in order to go and wait for lunch. When the care of the resident beagle was added to the participant's list of jobs, he was sufficiently motivated.

![ABA (Reversal) Design](image)

**FIGURE 2** Reversal (ABA) design showing the number of minutes a student left class early in baseline (vocational class only) and treatment (allowed to care for dog in class) conditions.
to stay in class for the entire time. When the dog care intervention was removed as a part of the reversal design, leaving class early returned to the baseline rate. Other variations on the reversal design include BAB formats and conducting more than one reversal (ABABA).

C. Multiple Baseline Designs

The multiple baseline design is one in which some treatment condition is applied successively across two or more baselines that have been established (Bailey, 1979). When it is not possible or ethical to use a reversal design, the multiple baseline can be used to demonstrate experimental control. Multiple baseline designs can be implemented across behaviors, participants, or settings. Figure 3 shows a multiple baseline design that was used to evaluate the effects of a therapy dog in individual therapy sessions for two preschoolers who had been diagnosed as electively mute.

In the baseline condition, the children were prompted and encouraged to say words. During the intervention phase, the therapist removed one of the child's shoes. The trained therapy dog was sent to fetch the shoe and turn and sit with the shoe in his mouth. The child was told, "He's a dog; he doesn't know what to do. If you want your shoe, say, 'give shoe.'" The commands for the therapy dog of "go" and "sit" were added after the first intervention session for each child. Through the use of a multiple baseline design, it was shown

![Multiple Baseline Design](image)

**FIGURE 3** Multiple baseline (across children) design showing the number of words said by electively mute children when a therapy dog was used in treatment.
that a therapy dog was an effective intervention for the two children with elective mutism.

D. MULTI-ELEMENT DESIGN

The multi-element design, also known as the multi-element baseline design, operates by bringing the same behavior (of either one or several subjects) under the control of several different experimental procedures (Bailey, 1979). The multi-element design is versatile and can be used across different behaviors of the same participant, across different participants with the same behavior, and across different settings with the same participant and behavior. For example, a multi-element design could be used with one AAT participant to determine if several different behaviors change as a result of AAT interventions. The multi-element design could also be used to measure AAT results with several different participants. Because multi-element and other single-subject designs can be used to evaluate the effects of a program has on more than one individual, the term single subject can be misleading. Single subject does not refer to only one client; it means that data for each individual client can be evaluated independently and that data are not presented as an average. The multi-element design can also be used to evaluate the same target behaviors across settings. For example, if the participant is more vocal around therapy animals, can this effect be seen outside as well as in the dayroom?

Figure 4 shows the multi-element data for an AAT program related to ambulation. The participant was a 30-year-old woman with severe mental retardation.

Multi-Element Design

![Multi-Element Design Diagram]

FIGURE 4 Multi-element design showing the distance walked when instructions alone were given, and when the client was asked to walk the therapy dog.
She was nonverbal and noncompliant with staff requests. Medical staff had identified walking a specified distance each day as a priority goal. The participant would smile and vocalize when she saw the facility's resident dog. Much of the day she sat in a chair refusing to walk and holding a stuffed dog. Every other day, when the staff attempted to take the participant for a walk, they brought the dog and said, "The dog needs to go for a walk. Can you take her?" The data show that in the dog condition, there was far greater compliance with the ambulation program. On the nondog days, the prompt, "Would you like to go for a walk?" resulted in almost no compliance.

When a multi-element design is used to evaluate a program, the different experimental conditions may occur within the same session or day, or, in some cases, within the same week. Multi-element designs might be used in AAT to evaluate the effects of animals/no animals, verbal praise/no praise, instructions/no instructions.

VIII. CONCLUSIONS

Program evaluation has become a critical area for AAT. In the late 1980s and 1990s the field of animal-assisted therapy began to experience a dramatic shift from case studies, anecdotes, and heartwarming stories to systematic evaluation and research as the bottom-line criteria for justifying programs and procedures. AAT programs can be evaluated in a number of areas, including the overall mission statement, physical plant for the program, clients, animals, volunteers, staff, curriculum and other program specifics such as scheduling, and cost benefits of the AAT services. In addition, the results and long-term impact of AAT can be evaluated using traditional research methods such as statistical and single-subject research designs.

Even though single-subject designs have much to offer in terms of providing clear pictures of client behavior change and a methodology that trained professionals can use, they have not yet been widely used in AAT research and program evaluation. Effective, comprehensive program evaluation models can use single-subject techniques for the ongoing formative evaluation of the AAT program. Using single-subject designs, program evaluators can answer questions pertaining to the procedures and specifics of a program. For example, if an AAT program were developed to put small animals around a nursing home, single-subject methods could be used to determine where cages and fish tanks should be placed, how many animals should be provided, and what kinds of training or prompting clients should receiving regarding the animals. Once the program was in place, summative evaluations involving the use of statistical designs could be used to evaluate the pre- and postintervention effects.
Group statistical designs demonstrate statistical significance; single-subject designs are tools that can be used by program evaluators to demonstrate clinical significance. As AAT continues to evolve, program evaluation should encompass both full-scale, traditional statistical studies as well as the ongoing measurement of individual client behavior change.

REFERENCES


I. THEORETICAL RATIONALIZATION FOR USING ANIMAL-ASSISTED THERAPY WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER

A hypothesis explaining the efficacy of treatment centered on contact with animals and nature is described using Barkley’s conceptualization of attention deficit/hyperactivity disorder (ADHD). In brief, Barkley suggests that the cardinal features of ADHD (i.e., poor sustained attention, impulsivity, and hyperactivity) can be reduced “to a single core impairment in delayed responding or response inhibition” (Barkley, 1994, p. 18). We will suggest that the evolutionary development of the human brain was shaped by the necessity to forage and hunt. As a by-product of this necessity, humans have an innate tendency to pay attention to animals and the natural surroundings. The tendency to pay attention to animals is in turn associated with an increased capacity for response inhibition, which is particularly enabling for children with ADHD or those who have difficulty learning from lecture or textual materials.
ADHD (American Psychiatric Association [APA], 1994) is a biologically handicapping condition that is characterized by developmentally inappropriate degrees of inattention, impulsivity, and hyperactivity (Barkley, 1990). As described, the central impairment of ADHD is one of behavioral dysregulation in response inhibition to an event or stimulus. ADHD has a definite neurologic substratum in which the orbitofrontal cortex and its rich interconnections to the limbic system are implicated. This substratum adversely affects the capacity for delayed responding, particularly as required by diverse contextual demands. ADHD is also a relatively stable behavioral condition that emerges in early childhood and persists with tenacity into adolescence and early adulthood (Barkley et al., 1990; Hallowell & Ratey, 1994). Fluctuating attention, impulsivity, and hyperactivity are typically transsituational in nature and accordingly are manifest across academic, occupational, home, community, and interpersonal contexts.

Individuals with ADHD often tend to have more spontaneity than normals. Their thinking is at times unrestrained and creative, but at other moments is quite disorganized and tangential. Their speech patterns are compromised in that they exhibit inarticulateness, dysfluencies, and psycholinguistic impairments. They act unpredictably and lack the intermediate reflection between impulse and action that is required for goal-directed or context-regulated behavior. The central focus of disinhibition and the inadequacies of accommodating responses to situational demands result in a panoply of symptoms associated with ADHD, including behavioral impulsivity, disruptiveness, variability in attention and performance, disorganization, interpersonal tactlessness, impatience, mood changes, and sensation seeking typically in the form of risk-taking behaviors.

Most relevant to the conceptualization of animal-assisted therapy and education (AAT/E) and the deficiencies of ADHD is the deficit in the modulation of behavior in response to contextual demands. For example, when confronted with situations in which a delay of gratification and work toward more distal goals with larger rewards are required, ADHD children select the immediate, smaller rewards that require less persistence of effort to achieve. Games with peers that require sharing, cooperation, and frequent behavioral restraint constitute a nemesis for these impulsive children. The disinhibited behaviors of ADHD children have deleterious effects on almost every aspect of their daily lives. While in school, such children are frequently out of their seats, talking to and disrupting classmates, making atypical vocal noises, roaming about the classroom without permission, playing with objects not related to the assigned task, restlessly moving their limbs while working, and engaging in task-unrelated commentaries on any topic of ephemeral appeal.

It is important to emphasize that the primary deficit with ADHD is not just excessive movement, but the failure to regulate activity level to setting or task
demands that is so socially problematic in this condition. Another characteristic that has been found in empirical studies of ADHD children pertains to excessive variability of task or work performance over time. Kupperman (1988, as cited in Barkley, 1990) noted the fact that these children have performed well on a few occasions will be held against them the rest of their academic careers. From a diagnostic perspective, it is essential that occasional observations of adequate, or even good, attention or behavioral controls not be used to rule out a potentially disabling condition such as ADHD. Instead, such observations may be used to consolidate an enriched understanding of the specific aspects, tasks, and contextual demands that either facilitate or diminish an ADHD child's performance.

The problems of ADHD children are seldom limited to the core ADHD symptoms themselves. ADHD children and adolescents frequently exhibit an interrelated cluster of psychosocial problems including aggression, oppositional defiant behavior, conduct disturbance, academic underachievement, diminished self-esteem, depression, and peer rejection. The oppositional defiant or noncompliant behavior of ADHD children is a particularly relevant psychosocial objective for treatment. In combination with ADHD, noncompliant behavior with respect to developmentally appropriate tasks is a significant predictor of later conduct maladjustment during adolescence and adulthood.

ADHD is a disorder that has been the object of rigorous scientific investigation during the last several decades. In conceptualizing this disorder, a number of theoretical formulations have been proposed regarding its deficits and primary characteristics. Despite the consensus on many dimensions of ADHD, considerable controversy has arisen concerning its central and causative deficits. A comprehensive review of previous theories of ADHD is beyond the focus of this paper. Instead, a recently proposed unified theory of ADHD (Barkley, 1994), which has impressive empirical support, will be discussed because it offers an advantageous framework for understanding its symptoms and permits an optimal assimilation of associated research findings. Relying heavily on the seminal essays of Jacob Bronowski (1977) regarding the distinctive capacities that arose during the evolution of human language, Barkley suggested that the cardinal impairment of ADHD is impaired response inhibition or insufficient delayed responding to a stimulus or event. This implies that such persons experience less success in accommodating themselves to the demands of academic, social, and occupational tasks that place a premium on delayed responding, specifically when the consequences associated with performance in the context are weak, delayed, or virtually nonexistent. It is essential to note that Barkley's theory of ADHD stresses that this disorder is a dysregulation of ongoing behavior, not a deficit in knowledge or skills (Barkley, 1994; Kinsbourne, 1989).
In delineating the formative features that resulted from the evolution of human language and thought, Bronowski elaborated four uniquely human capabilities—separation of affect, prolongation, internalization of language, and reconstitution—which are a direct product of man's enhanced capacity for delayed responding (Barkley, 1994, pp. 26-45). The cognitive capacities that are derived from delayed responding include first separation of affect. Through the imposition of a delay between the presentation of an event and its response, the human brain is afforded sufficient time to separate the informational content of an event from its emotional counterpart. Such a capacity structures logical and rational appraisals of events, which enables flexibility in dealing with the content or facts of an event without interposing an emotional bias. In this way, one can formulate a response that is more adaptive than would have occurred had one reacted more passionately and without necessary delays.

Prolongation is a second consequence of the capacity to protract the delay in responding to an event and is comparable in many ways to the neuropsychologic concept of working memory. Humans have an innate capacity to hold an event that has just transpired in memory and to sustain this mental representation of the event for long intervals. Such a capacity accentuates the salience of an event in working memory and enables the extraction and comparison of this information with equivalent events that were previously stored in memory. Barkley's theory holds that, because those with ADHD cannot inhibit and postpone their initial response to a situation, "they will be less likely to engage in these mental activities or, if they do, these actions will not be very effective" (Barkley, 1994, p.2). Thus, individuals with an attenuated capacity for prolongation have a limited sense of time, are susceptible to the negative effects of immediate gratification, are less goal directed and organized, and give less consideration to the probable consequences of intended actions.

Internalization of language is a third consequence of an increased capacity in response inhibition and simply means the ability to talk to ourselves. Deficits in the delay of responding interfere with the internalization of language and the effective deployment of self-directed speech, rules, and instructions as guiding, regulating, and controlling influences on current adaptive behavior. Bronowski defined the critical nature of internalized language in terms of its effects of freeing the individual from his immediate and encircling context by bringing ongoing behavior under the control of directions, goals, plans, and anticipated future events. Barkley then clarifies the ways in which ADHD children differ from normal children with respect to these effects. Importantly, ADHD children demonstrate more variability in their responses to tasks because their behavior is more contingency shaped and less rule governed; they are more susceptible to the effects exerted by immediate contingencies and momentary
changes in the environment; they perform less capably in contexts in which extreme delays in consequences exist; and they are developmentally delayed in the growth trajectory of rule-governed behavior. Not only does language enable efficacious self-control, but it permits us to construct new rules to use when we are confronting a problem.

Reconstitution refers to the capacities of analysis and synthesis that are permitted by the delay or inhibition of responses. Analysis is a vital skill that involves the decomposition of a stimulus or event into its constituent parts, and synthesis is a process whereby dissembled parts are examined, manipulated, and reconstructed into new messages or events. This capacity enables novel constructions and meanings to be derived from distributed parts. The process of reconstruction endows humans with unparalleled skills of problem solving, imagination, and creativity. Those with ADHD are accordingly poorer than normals in dissembling messages and events into parallel units of analysis, as well as in employing recombinative processes in assembling these units into new responses or constructions. This deficiency limits the extent to which one can select from new reconstructions of prior ideas and events and simultaneously constrains effective actions.

ADHD children also have greater problems with aggressive behavior and interpersonal conflicts than do normal children. More than half of our subjects were aggressive, argumentative, noncompliant, socially rejected, and resistant to control of their behavioral excesses. These subjects also were ascribed frequently as significant violators of age-appropriate social norms and the rights of others. In other words, these subjects meet the diagnostic criteria of the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-IV, APA, 1994) for conduct disorder (CD) and oppositional defiant disorder (ODD). The superimposition or comorbidity of CD on ADHD occurs with a moderate frequency (Barkley, 1990, 1994) and usually within families and social milieus characterized by interpersonal disequilibrium, chaotic familial situations, and conflicts and in which behavior is controlled by violence and coercive interaction patterns (Kadzin, 1987a,b, 1989; Patterson, 1979, 1986, 1991). With such brutalizing and traumatic experiences, children become suspicious and mistrustful and project their own angry and retaliatory impulses onto others. Research concerning the treatment of CD is crucial at the present time because no treatment has been demonstrated to ameliorate its symptoms or controvert its negative prognosis. Moreover both CD and ADHD conditions present many serious risk factors such as school failure and underachievement, psychiatric hospitalization, occupational difficulties, marital distress, and criminal behavior later in life (Kazdin, 1987b, 1985).

Of central relevance to our work on animal-assisted therapy, conduct-disordered children and adolescents often exhibit deficits in social competence with corresponding difficulties in peer relationships. Empirical studies demon-
strate that in comparison with peers, those with conduct disorders are frequently more aggressive, less empathic, and more deficient in interpersonal problem-solving skills, and they tend to misperceive their environment, often incorrectly attributing hostile and malevolent intentions to others (Dodge, 1985).

In choosing to set up an intervention structured around observant contact with animals, we made a number of assumptions based on the theoretical concepts and data just reviewed.

1. The presence of the animals would have the ability to capture and hold the children's attention. This assumption is based on the most limited interpretation of the biophilia hypothesis (Wilson, 1984; Kellert & Wilson, 1993), that is, that the human brain has been shaped to pay selective attention to animals.

2. The attention directed at animals is associated with behavioral inhibition because the child does not know what the animal is going to do. The animal is a stimulus that continues to have novelty. The behavioral inhibition creates the time for the child to formulate questions about the animal. The animal creates a "need to know" or a curiosity that can be satisfied only if the child frames the appropriate questions.

3. The child can become familiar with the animal's behavior, but must still pay close attention to the animal because the details of the creature's actions cannot be predicted. This sustained attention is associated with the prolongation of the idea or image of the animal in the child's mind that would facilitate the generation of more questions.

4. Because the child's anxiety about handling the animal can be rapidly desensitized while the curiosity about the animal is prolonged by the animal's continuing behavior, or the need to know information about the animal, the child experiences the separation of affect and information and can better compartmentalize those two aspects of apprehension.

5. The presence of the animal, because it directs the child's attention outward, lowers the level of arousal, and permits the child to more accurately perceive the behavior of the therapists, and other children, thus inhibiting the use of preformed negative attributions about the therapist's intention. This tendency would favor the development of a web of positive attributions toward the animal, the staff associated with the animals, and the other children.

6. The play of children with conduct disorder is almost always aggressive (Wilkins & Sholevar, 1995). The animals give the children an opportunity for elaborating affectionate nurturing play.

7. Children with ADHD and conduct disorder tend to make negative attributions about their peers, parents, and adults, projecting hostility and justifying their own aggressive behavior. People paired with animals are per-
ceived positively and when animals are introduced into therapy, there is more positive interaction between patient and therapist.

8. The competency obtained through mastery of fear, learning the behaviors necessary to care for the animals, and the increased ability to experience rewarding social interaction from animals, from staff, and from other children would increase self-esteem and increase the probability that the child would be willing to learn in other contexts.

9. By breaking down the learning process into units that are spoken as well as performed, the child is helped to develop a capacity for the monitory speech that guides moral and problem-solving behavior in normal children (Vygotsky, 1986). As noted this monitory speech is less well developed in children with ADHD.

II. THE COMPANIONABLE ZOO METHOD

Many children learn actively and creatively from only books or images on a screen. However, many other children who do not have that capacity for abstract learning are shut away from their own potential by the nature of modern teaching. Perhaps as much as one-third of all children are doomed to spend years in school feeling that they are failing at simple tasks that others do well (Sennett & Cobb, 1972). They are excluded from feeling successful and competent. Some of these will be rescued by the praise and success they attain in sports and a much smaller minority will have their musical or artistic talents awakened in school, but for the large majority of that bottom third of the class, school will be an exercise in failure. These children will leave school too soon, and will be unable to apply for the jobs created by the communication revolution. Worse, they will be angered by years of failure and sometimes, because their own anger developed early, they will live a life at the margins, encountering unemployment, substance abuse, and crime.

We have been treating children with severe ADHD, conduct disorder, developmental disorders including autism, and a variety of functional disorders through use of education structured around the care of animals and nature study. Our experience also extends to special education classes in public schools with children diagnosed as having serious emotional problems or learning disorders. We now have 8 years of experience and the method is being used in five of Devereux's campuses, two public schools, and a residential campus of the Wordsworth Academy. We have conducted one controlled clinical trial of the method lasting for 9 months and have used correlational methods to evaluate the effectiveness of the programs when we could not longer use a control group. The locus of treatment is always a collection of animals maintained in a classroom or a small building. The children help care for the
animals, learn about the animals, interact with them as pets displaying touch-talk dialogue and affection, play with them, and, when they are competent, demonstrate them to children in other classes or to adults in senior centers or hospitals. The children also have learning structured around nature study, and trips to diverse locations such as zoos, nature centers, state parks, and animal fairs. The method has been described in detail in a manual title *The Centaur's Lessons* (Katcher & Wilkins, 1999).

The composition of a zoo varies with the location and the needs of the patient population. In almost all zoos there is a basic population of caged birds, lizards, rabbits, chinchillas, guinea pigs, hamsters, and aquarium fish. Where there is outdoor space and room for paddocks there are pot-bellied pigs, goats, sheep, and miniature horses. The zoo at the Devereux campus where children with autism and developmental delays are treated has many birds and fish tanks because the visual environment is important in entraining the attention of these children. The list of animals at any zoo is never static and depends on what is purchased by the zoo instructors, bred in the zoo, or donated. All zoos except those in the public schools have gardens and the children participate in gardening as they do in the care of animals. At these zoos animal waste is composted for the garden, and some of the garden produce is fed to the animals. Just as the opportunities for nature study vary with weather and season, the zoos and gardens are never static.

Within each campus or school the zoo is a place apart and acts as a frame or boundary (see the section on evaluation). The frame is literally territorial, and the change in demeanor experienced by the children in the zoo can be seen to alter at the boundaries. When the animals are about outside, the boundary extends as far as the animals, as far as direct eye contact can be maintained with zoo staff. When the weather is bad and people and animals are shut inside, the boundary is at the threshold of the zoo. The space inside the boundary is a space with new rules for behavior, these rules are dependent on the presence of the animals, but the presence of the animals is only a necessary, not a sufficient, condition for the new way of behaving. To understand the workings of the zoo, it is necessary to understand how it is set apart from a regular classroom.

Animals are out of place in a regular schoolroom, much like Mary's little lamb, perhaps because they make children laugh and play, both actions being defined as incompatible with learning. Classrooms are usually, except for kindergarten and perhaps first grade, designed to be sterile so that they do not induce the eye to wander. Classrooms are designed to give the teacher complete control over the children's attention. When animals are present, the possibility of unplanned agendas is always present. The children have more to attract their eyes, and can find relief from the teacher without retreating into their own private world of fantasy. Animals join children in a common
world out of the teacher's control. They continually offer testimony that the world is more than words and definitions, and that the power of the teacher is limited. Because animals so fundamentally change the balance of power in the classroom, they create a discontinuity—a break—between the classroom and the child's expectations about school. The animals tell the child that things will be different here.

In our Companionable Zoo, the difference was also marked by a ceremony at the door. The children were expected to greet the instructors and the other children in the zoo. When they entered the zoo, they entered a community of people and animals, and the existence of that society and its members had to be recognized. To greet a person or an animal implied that the individual was not an object but someone who was owed the obligation of recognition and polite discourse. The children in Devereux are there because they failed at home and failed at school and failed in their community. We wanted the zoo to be a place where dialogue would be rewarding and where interaction could be a source of comfort, pleasure, and validation.

Once within the boundary of the zoo, the children were given only two general rules: (1) Be gentle with the animals and talk to them softly! (2) Respect the animals and the people in the zoo and avoid speech that devalues them! These two rules were not learned nor obeyed immediately and consistently by all students. The children needed repeated gentle reminders session after session, but these precepts were critical to the educational dialogue in the zoo. The first of these rules was designed to reinforce the impact of the zoo animals on the children's behavior. By selectively commanding the attention of the children, the animals improved behavioral inhibition and decreased the tendency to interact aggressively and chaotically with each other. However, this innate response to the animals' presence needs reinforcement—needs to be incorporated into a "rule of the place" to gain consistent and enduring control over the behavior of these volatile children. The insistence of the teachers that the animals must be handled gently at all times reinforces the innate response to animal contact. Asking the students to speak gently has the same consequences. Speech is a kind of action, and gentle speech calms the speakers as well as the animals they handle. The animals' behavior also reinforces these rules. When the student slows down, uses less muscle tension, and less grasping behavior when handling the animals, the animals respond with less fear, less escape behavior, and more exploration and interaction. One of the most hyperactive children in the program was bitten by almost every animal in the zoo during his first days in the program—including a most phlegmatic turtle—because he grasped too tightly and moved too quickly. He went on to be one of the most successful students in the program, but it was the animals, not the teachers or medication, that slowed him down in the zoo.
The second general rule, "Respect the animals and the people in the zoo and avoid speech that devalues them!," defines the social relationships in the Companionable Zoo. It states that everyone in the zoo has obligations toward the animals, staff, and students thus defining relationships in the zoo as moral relationships—relationships of mutual obligation. In the school outside of the zoo, all relationships are material. Behavior is good when it earns points for privileges such as access to video games, opportunities for more independence, purchases at the school store, and trips to stores and films, and bad when it leads to loss of points or privileges, restraints, and isolation in “focus” groups, or being bound to a counselor in one-to-one supervision. In the zoo behavior is good when it contributes to the welfare of others or enlarges your own knowledge and skill, that is, when it contributes to your own welfare, and bad when it violates the rights of others. Careful attention is paid to speech, because speech is always action—it is always directed at others and sets a precedence for other actions. The practice of asking students to be “respectful of the animals” reflects, of course, a kind of anthropomorphic thinking, since respect is a human concept, with no obvious equivalent in animal behavior. It is a kind of anthropomorphic thinking that is appropriate if you believe that animals have “rights,” however, a commitment to animal rights is not the motive for using terms like respect to designate the children's obligation to the animals. We use those terms for two reasons. First, because we wish the children to adopt a set of values toward animals that include the moral demands for responsibility and care. Second, we wish the children to reason back and forth from a consideration of the animals needs and the needs of people including their own. We want them to compare their obligations toward the animals with their obligations toward other people, and learn to anticipate other people's needs and feelings in the way they anticipate the needs and feelings of animals. We want them to gain the same good feelings from looking out for the welfare of other people as they get from looking out for their animals' welfare. This precept to respect animals and people supports the reflexive nature of the curriculum.

The zoo because it is a place for animals first and then a place for people, exists in strong contrast to the rest of the institution. The rest of the institution is focused only about the children serving to keep them out of reality, and provide them with a “special” education. This is the primary and only mission of the institution. In the zoo, the animals are the primary mission, and their care is a priority that is given the same salience as the zoo's teaching mission. This gives the zoo a connection with a wider reality beyond the institution and beyond the other schools the children have experienced as well. It is critical to the method of the Companionable Zoo that the students know that the zoo exists for the animals as well as for teaching and therapy. The Companionable Zoo is more than a classroom. It is a part of the world, not
unlike the way a farm is part of the world. The zoo instructors are teachers, but they have a primary responsibility to care for the animals in the zoo and its garden. The students are there to be educated but must share those obligations and responsibilities toward the animals. When the children go to the local nature center, they come to learn, but also to aid in the maintenance of that nature center. They come to learn and do real work. To understand the zoo curriculum, both its assets and deficiencies, it is necessary to understand how responsibility and work are interdigitated with learning and discovery.

The first task given the new students was learning the general requirements for care of animals and the proper means of holding them. They were shown how to hold each kind of animal, how to support the hind legs and backs of the rabbits to prevent them from jumping and falling, how to use gloves to hold unfamiliar “bitey” animals like gerbils, how to hold a chinchilla up by its thick short tail, and how to hold an iguana by its body, never by its tail. They were shown how to clean cages and that included taking the waste out to the garden to provide fertilizer for the vegetables being grown to feed the animals. The children were given reasons for each rule of animal care. There were always three elements to learning:

1. They had learn the rule well enough so that they could articulate it for others.
2. They had to learn the reasons justifying the rule. If the rule being learned was “When you pick up a rabbit you must support its hind legs,” the justification was “The rabbit could injure its back by kicking out in the absence of a resistant surface.”
3. They had to demonstrate mastery of the skill inherent in the rule.

With this kind of learning, the child learns that the rules are rational, not arbitrary, he achieves a mastery of a skill, and he has all of the requisite knowledge to articulate the rule and its justification to others. The zoo experience provided the child with seven immediate gains:

1. He earned the approval of the instructors for responsible behavior.
2. He formed a working alliance with the instructors through sharing their “real” work.
3. He had the self-satisfaction of mastering a rewarding skill.
4. He had the sensual satisfaction of petting the animal.
5. He was defined as a caregiver instead of a care receiver and had the innate satisfaction of nurturing another being.
6. Perhaps for the first time, he was able to engage in a learning dialogue in calming, pleasurable circumstances.
7. He learned information that could be valuable “social currency” and shared with other children and adults thus increasing his social competence.
We borrowed the idea of the skill card from Green Chimneys where they had been using them successfully for years. A skill card is very much like the list of requirements for a Boy or Girl Scout merit badge. It specifies what skills the student must master and what knowledge she must have at her command to be permitted to proceed independently. Learning the skills and knowledge on an animal skill card was the prerequisite to being trusted to care for that animal. In initially designing the skill cards, the information was kept to the minimum necessary to rationalize the requirements for the animal's welfare. Children who were learning to care for a chinchilla had to learn that the wild animal lived in the high Andean deserts. That "fact" rationalized two requirements for the chinchilla's welfare: (1) They could not tolerate temperatures above 85°F, and (2) they had to be provided with access to a tray of sand from time to time so that they could take "dust baths." Children could learn the skill card one step at a time if necessary. Because of the low levels of reading skills in many children, the instructor would read the statement aloud, and then ask the child to read it aloud or to repeat it. Then the rule would be discussed, and if any skill, such as holding the animal, cleaning its cage, or changing food and water, was involved, the student would practice that skill. At the same time the instructor would encourage free discussion about the animal and some of the implications of its requirements for care. When a step was mastered it would be joined to another step. When a new step was to be learned, previous items were first reviewed. Finally, when the student could repeat all of the statements in the card and demonstrate the skills on several successive days, she was deemed ready to handle the animal independently.

With the exception of the public schools, all zoos were located in situations where the children had access to the natural history of open meadow, woodland, wetlands, and streams. We could also take them off campus to state parks and could organize field trips to public zoos and aquaria. On outdoor excursions we built the skill work around four complementary themes: (1) preservation of the integrity of the environment, (2) respect for the concerns of other people who are responsible for the environment or who are also enjoying it, (3) personal safety, and (4) Recognition of those features that make any environment a distinct place.

For example, on visiting a state park the children learn that the rule about walking on paths is designed to preserve the unique plant life of the place and to prevent needless destruction of nesting sites. They learn that they must sign in at the ranger station before going on a hike both to acquaint the ranger about how many people are in the park that day and to protect themselves in case they become lost and fail to return. At the same time the instructors will keep the noise and exuberance to a reasonable level by telling the children that people come to state parks to be away from the kinds of noise and
confusion people create—that people have a need for tranquillity motivating them to be out in nature is not a self-evident concept to most children. If the children have been working on their “dangerous plants” skill cards, the instructors might review poison ivy recognition or, in season, illustrate the difficulty of distinguishing between safe and dangerous fungi. If there is going to be a campfire, fire safety is reviewed.

All during the walk the children will be asked to identify trees or to recognize gross features of the geology of the place such as the way in which a stream might cut its valley. A stream will evoke talk about the water cycle or the animals that inhabit streams. Each bird that rests in sight will contribute its name and the way it gains a living. Insects also contribute their lessons, some as simple as the difference between the number of legs on grasshoppers and spiders or as complex as the metamorphosis of caterpillars into butterflies.

To let the children learn from nature, we had to begin as guides not teachers. Our first duty was to bring about an encounter between the child and the natural world, the world that all of evolution has designed him to inhabit. From this encounter and free interaction, the learning could proceed. The encounter had to be active, sensuous, and spontaneous. The child had to spend some time moving through those spaces, unbounded by buildings or objects made by people, at his own speed and at a variety of speeds. He had to touch, hold, smell, plunge into, fall on, and sometimes listen to. Rocks had to be picked up or turned over, rotten logs kicked at, insects chased, and tree limbs jumped for. When the child had thus grasped the place to him, the dialogue could begin. Questions pushed their way up from ground to voice. Nature was theirs to talk about, and being carried by the spoken word it could exist between the child and the instructor, between one child and another. Answers to questions were designed to encourage the child to turn away from this dialogue with people, back to the inquiry with nature. Experience and dialogue were the foundations of learning. In this sense, all learning came from nature, but it came into a dialogue between people. Learning was a social skill and was designed to equip a child to enter into conversation with others (Vygotsky, 1986).

Knowledge is usually not perceived as valuable unless it has value for others. Identification between pupil and teacher cannot flourish unless the student can imitate the teacher. One reason why students like, respect, and want to be like their athletic coaches so much more than they wish to emulate their teachers is that the coach permits the student athlete to demonstrate and even excel at the skills the coach teaches. Athletic skills and knowledge are also more valuable than book knowledge because other children value athletic skills and knowledge. In the Companionable Zoo we knew that the children valued the skills and information they learned, yet we knew that unless they could actively give those skills and knowledge to others, their knowledge and
their ability would be incompletely validated and incompletely valued. For this reason we set up a visitation program in which the students could bring their animals to other Devereux campuses and permit other children to handle them, while telling them a little about the animals. We thought that the capacity to help others handle animals safely—for the person and the animal—and offer information about animals should be acknowledged as a skill. The student trainer skill card reviewed basic knowledge about the student's animal, the procedure for holding and positioning an animal so that someone could pet it, the use of gloves to prevent bites and drop cloths to prevent soiling, and safety procedures for transporting the animal and controlling the animal at the site of the visit.

Once they completed the student trainer skill card, they were permitted to go on trips with their animal or a house animal, and with the aid of the zoo instructors conduct a demonstration for another group of students or adults. The students have made trips to other campuses at Devereux, working sometimes with children that they perceived to have disabilities, and sometimes with students who were like themselves. They also traveled to two other treatment centers, one day school for children with emotional and physical handicaps, and another that was a residence for children and adults with mental retardation. They visited public schools demonstrating the animals and animal care to regular and special education classes. They even visited one private school that catered to gifted students. In addition to visiting children they also brought their animals to a recovery center for adults with head trauma and to several homes for the aged.

On some of these visits they worked very hard, making presentations to five or six classes in a morning or afternoon. The visits were another—and perhaps the most convincing—affirmation of their status as "experts" about animals. They were best at the interactive process of demonstrating the animal, and were very patient even with seriously compromised children or adults. During these visits, for the first and only times in their careers as patients, they shared the task of therapy with the instructors.

III. AN EMPIRICAL STUDY OF PROGRAM EFFECTIVENESS

Evaluating the effectiveness of an educational program is achieved the same way that you judge a stew or a pasta sauce—you taste it. You sit back and watch the children and the teachers and see what happens. After a few hours, or at most several visits, you know if the class feels good, tastes good. You judge from the children's faces, their eyes, the body language of teachers and students. You hardly need attend to the words said. You watch the amount
The first problem for the evaluator is distinguishing between the increased hopes and expectations created by a new and manifestly attractive method and the real effect of the teaching mechanism. Many new teaching methods appear to work because the teacher is encouraged, that is, pumped up by the expectation of better results, and that enthusiasm is communicated to the students. Unless carefully controlled studies are performed, you may have to wait for years until the novelty has worn off sufficiently to obtain a legitimate estimate of the power of the method itself. New curricula are similar to new diets. When everybody is talking about them, they always work. When the publicity stops, the pounds do not seem to come off so miraculously and the children do not seem to learn so wondrously. To evaluate the Companionable Zoo (CZ) program, we chose to compare it to an Outward Bound (OB) program. The OB curricula are highly attractive to the kind of behavioral disturbances and physically oriented clients that are referred to Devereux Brandywine. It was novel. No outdoor skills program was in place at the time. Moreover, there have been empirical studies attesting to OB's training and therapeutic effects including increasing self-esteem and promoting responsible behaviors. OB, as a therapeutic intervention, enabled a fair comparison with the CZ activities, evoking comparable enthusiasm, especially because an experienced specialist who believed wholeheartedly in the method taught it.

The experiment used a rigorous methodology to compare the two treatment interventions (OB and CZ) for treatment effectiveness. The empirical focus was not merely the extent of behavioral change associated with the influence of the CZ program, but also the extent of behavioral change that occurred in different situational contexts (i.e., the regular school, residential program, and the CZ program). To achieve these objectives, measures of client behavioral change in the regular school program were compared to the client behavior ratings obtained from teachers who neither taught nor interacted with their pupils in the CZ program.

Prior to starting the study, clients were selected and randomly assigned to either the CZ or OB program. Not entirely trusting the randomness of client assignments with small sample groups (i.e., n < 100), demographic variables including age, full scale IQ, DSM-III-R or DSM-IV diagnoses, and educational attainment were compared across the two groups. There were no significant differences between the demographic variables of the two groups at pretest, which ensures somewhat initial comparability of the OB and CZ groups. The
total age distribution of the clients was slightly skewed in a negative direction. The age range of the clients was 7 to 16 inclusively. The total mean age of the clients was 12.58, and the standard deviation was 1.53. Letters of consent for client participation were sent to parents or guardians for approval for their children to participate in this study. These letters described both the CZ and OB programs, delineated potential gains for program participation, described potential risks, and theoretical rationale and supporting research for conducting this study. After parental consent was obtained for client participation, the study was described to potential clients so that informed assent to participate in the study was obtained.

A partial crossover experimental design was used with 55 children. Participation in the CZ and OB programs was voluntary so that a measure of the children's preferences, as well as responses, could be obtained. Children participated in the two groups for approximately 5 hours per school week. After 6 months, the clients in the OB group were assigned to the CZ or the animal and nature education program, and the clients in the CZ group were returned to their regular school program. They were, however, permitted to visit their animals in their free time. The reason for the partial crossover design was the strong belief that it was unethical to separate the children from their pets.

Attendance provided the first evidence that the CZ program was effective. The children would race through their morning chores and breakfast to make time to come to the zoo before their regular classes. The CZ was the most attractive activity that was measured in the regular school program. The average group attendance during the summer for the CZ and OB groups was 93% and 71%, respectively. This difference was significant ($t = 3.43$, 52 df, $p < .001$). In the fall term, the average attendance for the CZ and OB programs was 89% and 64%, respectively, which was also significantly different ($t = 2.81$, 48 df, $p < .01$).

When the OB group shifted after 6 months to the CZ program, there was a significant increase in attendance. The same children, who had a 67% voluntary attendance rate in OB group, now attended the CZ program 87% of the time ($t = 2.94$, 28 df, $p < .01$). The clients from both groups also visited the zoo in their own free time in the afternoon and weekend, performing comparable work in educational learning and application tasks as they performed during the regular school program. The attractiveness of the zoo was one of the best measures of successful involvement in the CZ program. Of importance, the clients who visited the zoo most often during their free time were also the clients who demonstrated higher performance levels in the CZ program ($r = .55$, 54 df, $p < .01$).

As discussed in greater detail earlier, the CZ curriculum was flexible in design and content so that experiential learning tasks were incorporated into the curriculum and formalized to an extent. Learning tasks, even when acquired
through spontaneous exploration such as calculating a tree's age, were delineated into component and informational parts. Later these tasks were formalized into skill cards for the instructional purposes of other clients. In this way, children learned actively through their experiences in the zoo. In one term, the clients progressed through an average of eight skill areas completely, and partially through three or four more. Some students who had made minimal progress in the regular school program for as long as 4 years rapidly accomplished learning tasks in the zoo. Using a variety of criteria such as the number of skill areas mastered, scores on objective knowledge tests, and results of weekly progress reviews, it was observed that 80% of the clients made a good clinical response to the CZ curriculum.

Impulse control and aggressive behaviors were consistently modulated better in the CZ program than in the regular school program and residential settings. For their protection, children often were restrained as a result of uncontrolled behavior or explosive outbursts in both the residences and the classroom. No child, on the other hand, was ever restrained in the Companionable Zoo, although estimating from the frequency of restraints during the regular school day, 35 incidents of restraints were predicted ($p < .001$). Teachers used a visit to the zoo as a therapeutic intervention to calm children who otherwise might have been restrained or medicated. In the 6 years since the conclusion of the controlled study, there have been no restraints in any of the three Devereux zoos in the Philadelphia area.

The Child Behavior Checklist (CBCL) and Teacher Report Form (TRF) are empirically derived behavior rating scales, which, with latest completed revisions, yield standardized scores on narrowband and broadband scales (Achenbach, 1991). The CBCL and TRF were developed with the intent of contrasting the behavior ratings of children and adolescents with conduct disturbances to be compared to the normative or original standardization data established by content or rating informant across different informants (teachers versus parents) and contexts of performance (CZ versus the regular school program and the residential program). The CBCL and TRF were used to assess the severity of the children's behavioral problem in the zoo, the regular school program, and the residences. We used the significant change in symptom pattern with respect to the externalizing and total behavior scores in the regular school program as the critical measure of success.

If 5 hours a week in the zoo could improve behavior in the regular school classes, then the zoo method could equip children to succeed where they had to succeed, if they were to succeed in our society. The special education teachers completed a TRF on the clients prior to the beginning of the study, at 3 months, at 6 months, at the end of the fall term when the groups "crossed over," and again before the spring term, 5 months later. There were no differences between the two groups before the start of the study. The randomization
procedure that was employed to assign the children to the two groups was effective.

At the end of 3 months, the CZ and OB groups were not different with respect to level of behavioral pathology in the regular school setting. At 6 months, however, the clients in the CZ group had significantly lower levels of behavior symptoms than the OB group (i.e., externalizing and total problem scores) in the regular school program. The difference in levels of externalizing and total behavior problems was significant and clinically meaningful. That is, an inspection of the average CZ externalizing and total problem scores demonstrates that client functioning was substantially closer to normative levels than was the OB group. Subsequent to the partial crossover, the children assigned first to the CZ were permitted now to visit the zoo and their animals in the afternoon and evenings, but not during the school day. At this point, their performance in regular school classes worsened again. The TRF provides measures of narrowband and broadband scales. Significant changes were observed in the total problem score and externalizing score, the second of which is composed of items measuring behaviors characterized by aggression, social disruption, interpersonal coercion, property destruction, and impulsivity (Figs. 1 and 2). Given their debilitating effects on adaptive functioning, these behaviors were those of particular interest to the study.

CONTROLLED CLINICAL TRIAL
TOTAL PROBLEM SCORE (SCHOOL)
TEACHER’S REPORT FORM (TRF)

TREATMENT EFFECT $F(1,29) = 13.5$, $p < .001$

FIGURE 1 Controlled clinical trial: total problem score (school) and TRF.
We concluded that AAT/E has large and broadly distributed therapeutic effects on children and adolescents with significant emotional and behavioral disturbances. Positive effects include decreases such as in undercontrolled and aggressive behavior. There were also positive effects in terms of improving client cooperation with instructors, the extent of engagement with learning, and the appropriateness of behavioral control in regular school classes. These changes were demonstrated with valid measures of behavior in this controlled clinical trial.

As salient as these treatment effects were, they were also strongly influenced by context. Immediate behavioral changes were seen in the zoo. In the CZ, the clients displayed their best behavior and worked closest to their capacity. In the zoo, there was little that distinguished these children in residential placement from the children one would see in any public school. These obvious behavior changes were reflected in the behavior ratings of the CZ instructors. Their ratings of problem behaviors were invariably lower than the ratings of either the teachers in the regular school program or the counselors in the residences. The externalizing score and total symptom level in the schools were, in turn, always lower than those obtained through the behavior ratings of the residential counselors (Fig. 3).
INFLUENCE OF CONTEXT ON SYMPTOMS
TOTAL PROBLEM AND EXTERNALIZING SCORES RATED 
IN ZOO, SCHOOL AND RESIDENCES 
ACHENBACH TRF AND CBCL

![Graph showing T scores for Total Problem and Externalizing scores across contexts (Zoo, School, Residences)].

FIGURE 3 Influence of context on symptoms: total problem and externalizing scores rated in zoo, school, and residences. Achenbach TRF and CBCL.

We can also illustrate the power of context on assessment by the results that were obtained in measuring client self-esteem with the Piers-Harris Children's Self Concept Scale (Fig. 4). Initially, we attempted to document improvement in the self-esteem of clients following their entrance into the CZ, but unfortunately the children had already completed the Piers-Harris measures in their regular classrooms, prior to the end of the first 6 months. At this measurement, there were no differences in self-esteem ratings between CZ and OB groups. To test this hypothesis, all clients were randomized further into two groups, one of which was administered the self-esteem measure in the zoo setting, and the other in context of their regular school program. At this point, there was a significant difference between context and self-esteem scores, indicating that clients tested in the zoo had higher self-esteem scores than an equivalent group of clients who were tested in their regular school program ($t = 2.82$, 23 df, $p < .01$). These results point to the importance of a type of contextual effect.

We obtained these results while comparing the CZ (same as AAT/E) program against the OB control group. After the study was concluded in May 1991,
we enlisted all of the children in the middle school program into the zoo. We felt that our evidence was strong enough to suggest we had no right to withhold such treatment from any child any longer. The Brandywine admissions office began to bring all prospective students and their parents to the zoo as part of the recruitment procedures. The children were given the explicit promise that the zoo and its nature activities would be part of their treatment program.

Even though we no longer had a control group we still wished to see if the program continued to be an effective treatment intervention. We monitored attendance, which always remained as high as it was in the first months of the study. We continued for 4 more years without the necessity of using a single restraint in the zoo. Children learned their skill cards at the same rate year after year, and became excellent teachers when taken on the now regular visitations to other schools, hospitals, and residences for the aged.

All of this information did not tell us if the children and adolescents were continuing to improve external to the zoo experience. We wanted to know if the improved behavior seen in the zoo generalized to their regular school classrooms and other residential activities. To test for the sustained effects of the zoo program, we contrasted the progress in the regular school of two groups of children: One group was formed from the better performers in the
zoo, and the other from those clients who did not succeed in zoo and nature activities. Performance ranks were made by the zoo teachers, and the total group was divided in half by a median split: those above the median rank and those below. We then compared their Achenbach ratings made by the regular school teachers, at the beginning and ending of the school year (Figs. 5 and 6). We observed that there was no significant difference in symptom level at the start of the school year, but nine months later the children in the high zoo performance group had lower symptom scores and the children in the low zoo performance group had increased symptom scores. These findings gave us firm evidence that the program was still having the same beneficial effects on behavioral symptoms as it did during the clinical trial.

IV. SUMMARY AND CONCLUSIONS

The data presented here suggest that children, especially children who find it difficult to learn in a regular school setting, are more responsive to learning tasks as well as less symptomatic when they are participating in the care of animals and engaged in nature study. As suggested here and elsewhere in this volume, the concept of biophilia is useful in partially explaining these results.

![Effects of performance in the companionable zoo on classroom behavioral pathology: Achenbach total symptom score.](image-url)
EFFECTS OF PERFORMANCE IN THE COMPANIONABLE ZOO ON CLASSROOM BEHAVIORAL PATHOLOGY

ACHENBACH EXTERNALIZING SYMPTOM SCORE

EXT T X PERFORMANCE F (1,43) = 5.82, p < .05

FIGURE 6  Effects of performance in the companionable zoo on classroom behavioral pathology: Achenbach externalizing symptom score.

However, it is important to recognize that the children form social relationships with the animals and that these social processes may be just as important in the therapy. These social processes occur with the animals but are guided by general moral and procedural guidelines set by the zoo instructors. It is also important to realize that there are many processes taking place in the zoo experience, including these:

- The opportunity to reduce arousal by paying attention to animals and natural settings
- Loss of fear engendered by contact with unfamiliar animals
- Social interaction with animals (It is important to recognize that children almost always perceive animals as social others.)
- Care of animals and gardens
- Display of affection toward animals with touch-talk dialogue
- Play with animals
- Mastery experiences through training animals
- Tracking animals (Tracking animals is one of the most ancient of human skills. Fortunately, through the use of cameras to capture prey, our children can hunt humanely. The only animals they actually hunt in the traditional fashion are fish and the worms that they use for bait or as food for the iguanas.)
• Gathering (Just as the children garden, they gather nuts, fruit, and a variety of edible plants. It gives them almost the same thrill of the hunt as does fishing.)
• Orienting (The ability to find their way in wilderness using the sun, stars, and compass makes use of the capacity for spatial orientation.)
• Wilderness experience (The fear mastery, risk exercise, and competence-building facets of a wilderness experience, from 2- or 3-day hikes in forest or simply a night out camping by the pond, can rapidly build a sense of competence and generate pleasurable memories.)
• Species identification and species classification (The building of animal categories may be the best way to train children in categorical classification.)

Because of the nature of the program we have no idea how much each of these activities contributes to the overall effectiveness of the program. The role of all of these processes can be explained, in part, by two broad theoretical constructs that should guide and inform the use of AAT/E in the treatment and the education of children: evolutionary biology and particularly the biophilia hypothesis, and object relationships, specifically, the idea of the transitional relationship (see Chapter 19, Part A).

REFERENCES

Animals and Therapists:  
Incorporating Animals in Outpatient Psychotherapy  

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I. INTRODUCTION

The troubled boy would not speak at all at preschool and barely spoke to his parents. But the boy broke his silence for a conure named Tilly who squawked a greeting in his doctor's office. Tilly squawked: “Pretty baby, hello, pretty baby, hello,” and the 4.5-year-old answered the bird with a shy hello. The boy talked to the bird, he explained “because the bird talked to me first.”

This true story was reported in the Los Angeles Times by Sandra Ferrell Bazrod. She described in her story how a local psychologist in California utilized animals to connect therapeutically to his clients. “Dr. Dolittle may have talked to the animals, but Fine uses the animals to talk to children,
helping them relax, gain confidence and express themselves” (Bazrod, 1993, p. J-4).

The example given is only one of many showing how clinicians have incorporated a variety of multidimensional approaches to enhance therapeutic outcomes with their clients. In particular, the integration of animals as therapeutic change agents provides therapists with an effective alternative for connecting with their clients. The animals appear to act as a viable ancillary in developing a more nurturing and safer environment for clients.

As has been articulated throughout this book, the value of the human–animal bond has been seriously investigated for many decades. Furthermore, the bond between humans and animals has also been paid homage to by the popular press and the film industry. Recently, various films in our pop culture have portrayed the importance of the human–animal bond (films such as Homeward Bound, The Return of the Yellow Dog, Andre, and Free Willy) and its impact. There has also been a proliferation of books focusing on the importance of wildlife to humans as a recognition of the positive impact that animals have on the lives of people: Animals as Teachers and Healers (Chernak-McElroy, 1996), Chicken Soup for the Pet Lover's Soul (Canfield et al., 1998), and The Compassion of Animals (Von Kreisler, 1997). It seems a logical next step for mental health professionals to try to incorporate the human–animal bond connections into their practices where applicable. As Bern Williams once stated: “There is no psychiatrist in the world like a puppy licking your face.”

A. OBJECTIVE OF THE CHAPTER

The objective of this chapter is to provide the reader with practical insight on how animals may be incorporated into a therapeutic practice. Within this context, the author will also provide suggested guidelines to ensure quality control for the client's and animal's safety. Case studies are incorporated to illustrate various situations in which the human–animal bond seemed to enhance the therapeutic outcome.

However, the reader is cautioned not to view this approach as a panacea. McCulloch (1984) strongly points out that there is limited research demonstrating the therapeutic utility of employing the human–animal bond. Fine, in an interview with Kale (1992), pointed out that animals could have a therapeutic impact on children when the approach was integrated with other strategies. “To say that the therapeutic changes occur solely in isolation would perhaps be quite misleading” (p. 14). Despite positive anecdotal examples, the reader needs to recognize that there is limited empirical support and limited research validating the overall effectiveness of this approach. Siegel (1993) as well as Beck and Katcher (1984) point out that although the utilization of animals
may be highly appealing, the evidence that a patient has enjoyed an interaction with an animal does not imply that the procedure is therapeutic. Additionally, an article by Serpell (1993) concurs with this sentiment. Serpell (1983) reported at a meeting of the Society for Companion Animal Studies that animal-facilitated therapy needs to be based on sound theory before it gains any widespread acceptance. Voelker (1995) also noted that the biggest challenge facing advocates of animal-assisted therapy who claim that it improves outcomes can be summed in two words: “Prove it” (p. 1898). Voelker points out that the major difficulty in obtaining outcome data in animal-assisted therapy is that many of the professionals applying these strategies do not see the necessity of conducting outcome research or, possibly, they do not take the time to validate outcomes. This lack of documentation and thorough investigation leaves a large void on the efficacy of this approach. It seems that most clinicians persevere and incorporate the modality primarily on qualitative impressions that have been observed or heard about.

Therefore, I strongly emphasize the importance of empirically investigating the therapeutic utility of animals in clinical practices, serving clients of all ages, in order to demonstrate the efficacy of this modality. The findings from quality-designed studies will help clinicians and researchers answer a variety of questions, including these: Under what conditions are animal-assisted activities the most beneficial? With what populations does it appear to work the best? Under which theoretical orientation (e.g., humanistic, cognitive, behavioral) does the incorporation of animals seem the most effective therapeutically?

Having considered the limitations cited, let us now go on to my template of suggestions of what clinicians might consider when incorporating animals within their therapeutic practice in an effective way.

II. CONSIDERATION 1: WHY CLINICIANS MAY FIND ANIMALS THERAPEUTICALLY BENEFICIAL

A. Animals as a Social Lubricant for Therapy

Early research investigating the incorporation of animals within outpatient psychotherapy was somewhat limited. Nevertheless, Rice et al. (1973) conducted a study to evaluate the extent to which animals were used by psychotherapists in the United States as a whole. Their study also attempted to classify the ways in which animals served psychotherapeutic roles. One hundred and ninety members (64% of the sample) of the APA's Division of Psychotherapy responded to the survey. The findings of their study suggested that 40 clinicians
(21%) indicated that they used animals or animal content in conjunction with their psychotherapy.

The most powerful finding from this study pertained to the specific uses of the animal within the therapeutic setting. The researchers reported that some therapists found some utility in actually having animals present in therapy, whereas others utilized animals in a conceptual manner. Common commentaries about the utilization of real animals pertained to employing an animal as a vehicle for cultivating or modeling the positive nature of interpersonal relationships. Most of the responders pointed out that animals were used to ease the stress of the initial phases of therapy to establish rapport. The researchers also reported isolated uses of animals such as suggesting that a patient obtain a pet as a means of introducing practical caretaking responsibilities. The conceptual use of animals by most reporting clinicians was most frequently symbolic. Therapists often incorporated animal content to formulate interpretations of patient's fantasies or underlying themes in their discussions.

Mallon (1992) points out that the animals should not be considered as substitutes for human relationships but as a complement to them. It has been noted that animals appear to decrease the initial reservations that may develop from initially entering therapy. Arkow (1982) suggested that the animal may act as a link in the conversation between the therapist and the client. He called this process a rippling effect. Others such as Corson and Corson (1980) describe this process as a social lubricant. It appears that the presence of the animal allows the client a sense of comfort, which then promotes rapport in the therapeutic relationship.

Case Study

Linda (not her real name) was referred to Dr. Fine for suspected selected mutism. Linda was 7 years of age and only spoke in her own home. She appeared to be very shy and uncomfortable in public settings. Naturally, her selective mutism impacted her school performance, where she interacted very little in class.

When her parents initially met to explain Linda's symptoms, they were quite certain that she would not speak in the office. Ironically, at our first meeting, Linda was greeted at the door by a loving, warm-hearted golden retriever named Puppy. It was amazing to watch Linda immediately become attracted to Puppy. Puppy, not being bashful, went full barrel into Linda. She wouldn't let Linda alone. She expected Linda to keep up the petting and constant attention. In observing Linda's reaction, I decided to take clinical advantage of the immediate bond between the child and Puppy. I called the golden retriever over to me and asked her to go to the back room. I alluded to Linda that if she wanted Puppy to continue to play with her, all she had
To do was call her over. To Linda’s parents’ surprise, they watched and listened to their daughter call Puppy over. Tears rolled from the parents’ eyes as they watched in shock as Puppy returned to interact with their daughter. From that day forward, Linda made remarkable progress. It appeared that Puppy had reached within her and made it easier for her to speak. Our interactions were made easier. Through an approach that included successive desensitization, Linda began to speak very clearly in my office and outside. Goals were established and Linda soon began to speak more outside her home.

To help Linda speak at school, Puppy visited her class. Linda was responsible for introducing Puppy to her classmates (this was practiced in earlier therapy sessions). Although she spoke quietly, she amazed her classmates by speaking. After the class, Puppy, her teacher, Linda, and myself had a short meeting to discuss how we could make it more comfortable for her to participate in various class meetings. Although Linda seemed apprehensive in our discussions, she did speak briefly. During the next few months, Linda spoke more descriptively. She appeared more willing to open up and interact. Her grades also improved.

One cannot only attribute Linda’s growth to her contact with Puppy. However, it appears that her relationship with Puppy acted as an early catalyst for change. It seems the elderly golden retriever made Linda more comfortable in engaging.

Beck et al. (1986) suggested that a therapist who conducts therapy with an animal present may appear less threatening and, consequently, the client may be more willing to reveal him- or herself. This perception was also found by Peacock (1986), who reported that in interviews in the presence of her dog, children appeared more relaxed and seemed more cooperative during their visit. She concluded that the dog served to reduce the initial tension and assisted in developing an atmosphere of warmth. Numerous studies have elicited similar findings. Baun et al. (1984) suggested that animals appear to have a calming effect on humans and reduce arousal. In their study, the data linked tactile contact with a dog with experimentally induced low blood pressures.

B. BENEFITS OF ANIMALS AS AN EXTENSION TO A THERAPIST: A METHOD FOR RAPPORT BUILDING

Animals are often known for the zealous greetings they provide to visiting clients they encounter. Levinson (1965), in a pioneer article on the use of pets (in the treatment of children with behavior disorders), implied that bringing in the animal at the beginning of therapy frequently assisted in helping a reserved client overcome anxiety about therapy. Many therapy dogs are more than willing to receive a client in a warm and affectionate manner.
For example, in most cases animals can become an extension of the therapist. Personally, the animals that work with me are very responsive to greeting visitors. Children look forward to seeing Puppy (a golden retriever), Hart (a black Labrador), Boomer (a dusky conure), or Snowflake (an umbrella cockatoo). The dogs eagerly walk over to the children, encouraging attention. These initial encounters ease the tension at the beginning of every meeting. As an initial icebreaker, the therapeutic environment seems to be enriched. The animals seem to regulate the emotional climate.

Levinson (1964), a pioneer of utilizing animals in therapeutic relationships, suggested that the animals may represent a catalyst in helping a child make more progress in a clinician's setting. It seems evident that the animals' presence may make the initial resistance easier to overcome.

Case Study

Several years ago, a 15-year-old boy, who was diagnosed as being depressed, was referred to my office. When he entered the waiting room he became very intrigued with the fish tanks. It seemed that over the years he had developed a strong interest in tropical fish. This common interest appeared to enhance our therapeutic rapport quickly. During the next 6 months, our common interest went beyond talking about and observing the fish to a higher level of involvement. After careful consideration and planning, we both believed that putting together a 60-gallon saltwater tank would be therapeutically beneficial for him. Indirectly and directly, his involvement and efforts in helping select the fish, plants, scenery, and rocks not only enhanced our bond but definitely appeared to diminish his sense of demoralization. Jeff had something to look forward to. His drive to fight off his lethargy and helpless thoughts seemed to be impacted by the sight of a new environment that he helped design and build. He would frequently stop at the office to check on the fish, taking pride in his accomplishments. Although Jeff continued to battle with his depression, he also continued to find refuge and support in the tank he established. The partnership we established in developing the tank was a definite asset to our working relationship.

C. THERAPEUTIC BENEFIT OF ANIMALS IN THERAPY: A CATALYST FOR EMOTION

Brody (1988) reported in the New York Times that a growing number of mental health and health professionals had applied the human expression of laughter and joy therapeutically to reduce stress and foster recovery in patients with various illnesses. Animals within therapeutic settings can also elicit a range
of emotions from laughter to sorrow. Often in the literature on animal-assisted therapy more attention has been given to the softer emotions, which the human–animal bond instills. Nevertheless, recognition that animals can exhibit humorous behaviors is relevant. Norman Cousins (1989), in his premier writing of *Head First: The Biology of Hope*, has emphasized for decades that humor is not only beneficial in improving an individual’s mental state, but also his or her physical constraints. Laughter and joy are two ingredients that positively impact a person’s quality of life. It seems apparent that not only do animals promote warmth within a relationship, they may also bring joy and a smile.

Numerous examples can be applied to illustrate this phenomenon. For example, a playful cockatoo or a puppy getting itself into mischief can always garner a smile. There have been numerous occasions where the animals incorporated therapeutically get themselves in comical/playful situations. It seems that when this occurs, the laughter generated has therapeutic value.

Selectively, animals are in a unique situation to display emotions and behaviors that may not be deemed professionally appropriate for a human service provider. For example, in difficult periods within therapy, a client may be in need of comforting and reassurance. The presence of an animal may become that catharsis. The holding of an animal or the petting of an animal (whether a cat, dog, or a bunny) may act as a physical comforter and soothe many patients. The touching of the animal and the proximity to the animal may also represent an external degree of safety within many clients.

Moreover, an additional benefit of the animals may be their contribution in helping clients gauge excessive emotion and reactive behavior. On numerous occasions, the author has witnessed that when a dispute would take place, the animal’s presence seemed to lend some comfort and stability to the environment. The adults seemed to regulate their reactiveness, possibly because they were aware of the animal’s presence. Furthermore, in working with children who are quite active and impulsive, it is amazing to observe how large birds (cockatoos and macaws) seemed to help promote a decorum for what is or is not considered acceptable behavior. It seems that most children gave tremendous respect to the birds’ presence (possibly some unconscious intimidation), and the reduction in their disruptive behavior was evident. Most children seemed to realize that their escalated behaviors would cause an uneasiness in the birds, which they did not want to cause. In addition to this one benefit, as a follow-up to the child’s outbursts and the bird’s ability to help reduce the tension, discussions on self-control and behavioral regulation were introduced.

D. ANIMALS ACTING AS ADJUNCTS TO CLINICIANS

Mallon (1992) emphasizes that the animals must be considered as adjuncts in the establishment of a therapeutic relationship and bond. Hoelscher and
Garat (1993) suggest that when relating to a therapist with an animal, people with difficulties sometimes find the animals to be a catalyst for discussion. For example, several years ago, an 8-year-old girl visited the office. She was very intrigued about the birds she saw and wanted to hold a few of the small lovebirds. Without asking if she could hold the bird, she eagerly put her hand toward the animal. To her dissatisfaction, the bird hissed at her. Shortly after this experience, I explained to the girl that she needed to ask the bird's permission (and mine) to touch the animal. Ironically, this was followed by a powerless response of "I know what you mean." Her response to my statement piqued my attention, since she was referred for depressive symptoms. I picked up the lovebird and began to scratch her head. I told the girl that the bird was very sensitive to touch, and there were certain spots that she didn't like to be touched. At this point, the girl became very teary eyed and responded by saying once again (very sadly this time) "I know what you mean." Shortly after, she began to reveal a history of sexual abuses by one of her grandparents. It was apparent the serendipitous use of the bird acted as a catalyst to promote a discussion on feelings that she had buried. During the course of her treatment, we used the example of the bird to help her gain insight on the importance of giving people permission to embrace you, and how you have the right to tell people that your body is private.

E. Vicarious Use of the Relationship with Animals: Role Modeling

A valued benefit of incorporating animals clinically is the vicarious outcomes that a client may develop as a consequence of the interaction between the clinician and the animals. For example, the loving relationship between the animal and the therapist may explain by example to the client some of the caring traits of the clinician. This outcome may enhance the development of the therapeutic relationship and alliance. Personally, over the years, this writer has been amazed by the comments he has received from clients observing his interaction with the animals. The most common response pertains to the interaction with the animals and how some clients compare these interactions with their own child–parent relationships (since most of his clients are children and their parents). Other clients comment on how well the animals are treated, including the elements of compassion, consistency, firmness, and love. These scenarios can be used to demonstrate to the client appropriate interactions and responses to behaviors.

Experienced clinicians will attest to the numerous occasions (during sessions) on which boundaries need to be placed on the animals. This demonstration of limit setting should be a valuable teaching tool for the clients. The
therapist can use these episodes as opportunities to model specific discipline or problem-solving strategies. For example, within my office, one of the many therapy birds that I use is a sulfur-crested cockatoo. She periodically has a tremendous need for attention, and one approach that she uses is to screech. Parents are always amazed with my approach and the explanation that I give to them. The most common approach applied is extinction, and the eventual reinforcement of the appropriate behavior when it is demonstrated (verbal praise and petting the bird). The outcome to this interaction eventually leads to an informal discussion on behavior management, which may have implications to their own child-rearing practices.

As can be seen, numerous episodes occur on which a clinician could draw. It is of utmost importance that the therapist take advantage of teachable moments and learning opportunities. Discussions with adults on boundary setting, the need to be loved and admired, and appropriate ways of interacting are all relevant.

III. CONSIDERATION 2: THE THERAPEUTIC ENVIRONMENT—ANIMALS AS AN ASPECT OF MILIEU THERAPY

Modifications to the work environment may also be considered a valuable contribution that animals can influence. The perceived environment appears to be more friendly and comfortable to incoming clients. Barnard (1954) pointed out that it was Ernst Simmel’s pioneer work that gave serious thought to the manipulation of the environment to meet the unconscious needs of clients. In her paper, Barnard (1954) reported that in ancient times, even pagan temples (which promoted healing) provided an atmosphere of encouragement and hope. She noted that in an ancient institution in Cairo, patients were entertained daily with musical concerts as one source of their therapy. The underlying force within milieu therapy is a recognition of the “climate” within the environment and its impact on the client. Sklar (1988) points out that there is a constant interaction between the client and the therapist that is impacted by the physical and emotional environment that is created in the clinician’s office. Sklar’s writings as well as Langs’ (1979) suggest that the development of an effective therapeutic alliance may actually begin with the creation of a proper therapeutic environment. Sklar reports that many outpatient clinics neglect attention given to the physical plant in which the therapeutic process unfolds. Goldensohn and Haan (1974) report that client’s readiness for psychotherapy could be disturbed by the simplicity of a clinic’s decor and perhaps by its disorder.
Sklar (1988) also reported that many facilities that provide mental health services appear to be proud of the happy, affectionate family atmosphere that the clinic attempts to create. He suggested that one must not only focus on the client's internal dynamics for treatment to become successful, but in addition the therapists must address the clinical space within which treatment is ongoing.

As the research suggests, little attention appears to be given by most therapists to the elements that enhance their therapeutic environment. Light music, lighting, and climate control have always been intuitively associated with a more comfortable environment. These ingredients seem to promote a sense of security and comfort. It seems obvious that living beings could also be utilized to complement the work environment by making it more appealing and relaxing. Of utmost value is that the animals appear to bring a certain sense of security and warmth into the environment. For example, Katcher, et al. (1984) reported, in their study on anxiety and discomfort before and during dental surgery, that subjects viewing the aquarium appeared more comfortable and less anxious than those subjects in a control group not viewing an aquarium. Watching a school of fish swim harmoniously can be quite relaxing for some. With proper lighting and an attractively designed tank, clients might feel more at ease when they enter an office or while undergoing a therapy session. Over the years, I have found fish tanks to be extremely enticing. The gentleness of the fish and the ambiance developed can be truly beneficial to a therapy session.

Unfortunately, when schools in a fish tank are not properly selected, the outcome can make people feel uncomfortable, especially if the fish incorporated are aggressive and hyperactive. For example, early in my own personal utilization of fish tanks for the ambiance they promote, my selection of fish was not appropriate. Two fish in the school were quite active and aggressive. They would often be observed fighting and chasing each other. Rather than finding the fish tank to be relaxing and comforting, many of the clients noted that they felt uneasy watching the fish. One adult was overheard saying that the activity level of the fish reminded her of the chaos that she witnesses within her own home, especially with her children. Although this event serendipitously led to a discussion about her concerns with her children, it didn't put her at ease.

With the importance of a therapeutic environment now established, it is notable to appreciate how animals can be viewed within this dimension. Beck et al. (1986) suggests that animals have the capacity to modify a person's environment. Friedmann et al. (1983) have demonstrated that people appear to exhibit lower blood pressure and verbally express feelings of relaxation in the presence of a dog, while Katcher et al. (1983) have been able to correlate a similar phenomenon in people viewing a tank of fish. Lockwood (1983) hypothesizes that this outcome may occur because people perceive most situa-
tions with animals as safer and perhaps more benign than situations involving humans.

Very few studies have been implemented investigating the impact that animals have in altering the therapeutic effects of an environment. Beck et al. (1986) initiated a study in Haverford, Pennsylvania, where their initial hypothesis speculated that the animals would alter the therapeutic environment and make it less threatening to patients with various mental illnesses. These patients (who met in a room containing birds) attended sessions more faithfully and became more active participants in comparison to a control group. The researchers' findings reported that the experimental group (who had their therapy in the presence of the birds) had a greater rate of attendance and demonstrated more frequent participation than did the nonbird group. In addition, their findings from the Brief Psychiatric Rating Scale identified a reduction in hostility scores in clients within the experimental milieu. The researchers believed that this outcome was enhanced due to the impression the clients had about the birds (that the animals were perceived by the patients as less hostile, and therefore the clients felt more at ease in the presence of the animals).

Not only can animals be used to perhaps enhance the milieu as well as the relationship between the client and the therapist, but in addition the therapist can also observe how the client relates and interacts with the animal. The client may unconsciously be overbearing and controlling to the animal or for that manner may act coldly and unresponsively. These experiences may provide a therapist with an alternate diagnostic window through which to view a client.

IV. CONSIDERATION 3: INCORPORATING THEORY IN PRACTICE: ANIMAL-ASSISTED THERAPY FROM A LIFE STAGE PERSPECTIVE

A clinician's theoretical orientation will have a strong bearing on the incorporation of animals within his or her therapeutic approach. An explanation that seems to naturally align itself is Erikson’s theoretical orientation. Erikson views development as a passage through a series of psychosocial stages, each with its particular goals, concerns, and needs. Although the themes may repeat during a life cycle, Erikson noted that certain life concerns were more relevant during specific eras. For example, as people age and experience new situations, they confront a series of psychosocial challenges. This author recommends that clinicians should consider the various eight stages of psychosocial development and reflect on how the application of animals may be appropriate. Table I (adapted from the findings of Hall and Lindzey, 1978) illustrates the major
TABLE I  Erik Erikson's Eight Stages of Development

<table>
<thead>
<tr>
<th>Stage</th>
<th>Comparison</th>
<th>Virtue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic Trust vs. Basic Mistrust (First Year)</td>
<td>Hope</td>
<td>Estrangement, Separation, and Abandonment</td>
</tr>
<tr>
<td>2</td>
<td>Autonomy vs. Shame and Doubt (Second Year)</td>
<td>Will</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Initiative vs. Guilt (3–5 Years Old)</td>
<td>Purpose</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Industry vs. Inferiority (Sixth Year to Puberty)</td>
<td>Competence (Workmanship)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Identity vs. Identity Confusion (Adolescence)</td>
<td>Fidelity</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Intimacy vs. Isolation (Young Adulthood)</td>
<td>Love</td>
<td>Elitism</td>
</tr>
<tr>
<td>7</td>
<td>Generativity vs. Stagnation (Middle Adulthood)</td>
<td>Care</td>
<td>Generational (Parental Responsibilities toward Youth)</td>
</tr>
<tr>
<td>8</td>
<td>Integrity vs. Despair (Older Adulthood)</td>
<td>Wisdom—Integration of life experiences</td>
<td>Ritual—Integration</td>
</tr>
<tr>
<td></td>
<td>Perverted Ritual—Sapientism (Pretense of Being Wise)</td>
<td></td>
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</tr>
</tbody>
</table>

elements found within each stage. The following subsections provide an interpretation of how Erikson's theory can be applied to animal-assisted therapy.

A. SUGGESTED DEVELOPMENTAL GOALS AND TREATMENT PURPOSES FOR CHILDREN

Within the first series of life stages, the primary goals that need to be achieved pertain to a child's needs to feel loved and to develop a sense of industry and competence. In a practical sense, animals can assist the clinician in promoting unconditional acceptance. The animal's presence in therapy (as discussed previously) may assist a child in learning to trust. Furthermore, the animal may also help the clinician demonstrate to the child that he is worth loving. Unfortunately, for some children, their reservoirs of life successes are limited and they feel incompetent. This sense of incompetence may be acted out aggressively toward others or internally against oneself. A therapist may utilize an animal to help a child see value in life.
Animal-assisted therapy can eventually go beyond the office visits. A clinician may suggest to a family the value of having a pet within the home. The animal may help a child develop a sense of responsibility as well as importance in life.

For instance, the case study of Scott comes to mind when considering this position. Scott was 12 years old when I first met him. He could be described as functioning in the borderline range of intelligence as well as demonstrating a severe learning disability. Perhaps Scott's greatest barrier to successful integration was his inability to relate with peers. Scott lacked social savoir faire. He was constantly bullied by others and was the brunt of their vicious jokes. He was friendless. I had worked with Scott over a 2-year period. Our visits were interrupted for a short while because he moved away. When he was 15 he returned to my practice, still demonstrating many of the same undeveloped social behaviors.

Throughout our visits, our major treatment goal was to help Scott develop social insight. Unfortunately, he had difficulty generalizing the skills and continued to suffer. During the course of the treatment, Scott became very intrigued with the birds that I had in my practice. He seemed attentive to their behaviors, especially their speech. Because all the birds were hand raised, they were receptive to Scott picking them up and gently stroking their heads. Eventually, Scott asked if he could take one of the birds home for a few weeks. The bird was great company for Scott. They were inseparable. Scott accepted his role graciously and took great care of the bird. After a month, Scott wanted his own pet. Through the gracious assistance of a bird breeder, I was able to secure a bird for Scott. During the next year, Scott started to come out of his shell. He joined an aviary club, and also began breeding birds on his own. Although he still didn't possess effective social skills, the birds allowed Scott to get out on his own. Through the birds, Scott was able to have some substance to talk about. He also had purpose in his life. The birds became Scott's counterparts. They gave him attention and made him feel worthwhile. As noted earlier, the primary goal of Erikson's stage for childhood is developing a sense of industry versus a sense of inferiority. The birds in Scott's life helped him feel more competent and capable. Utilizing Erikson's terminology, the birds seemed to impact his sense of industry.

Therapists may use the experience of the interaction between the child and the therapy animal as an opportunity to observe and assess if a child may psychologically benefit from having a pet within the home. Levinson (1965) reported that a pet within the home may be an excellent extension to therapy. The pet could provide the child with constant solace and unconditional joy and warmth.

Bryant (1990) reports that animal companions have been cited as providing important social support for children. Bryant reports that animals within a
home may assist children in developing a greater sense of empathy for others. Further studies such as those of Poresky and Hendrix (1990) and Covert et al. (1985) have documented similar outcomes. These researchers suggest that pet ownership may be extremely valuable in enhancing a child's self-esteem and social skills, as well as a sense of empathy. Although Paul and Serpell (1996) are in agreement with these findings qualitatively, they indicated that most of the research conducted has not demonstrated any firm causal relationship between childhood pet ownership and alterations in the psychological well-being of children. It is interesting to note that many researchers seem to agree that there appears to be qualitative support for the value of the human–animal bond but that there are difficulties in quantifying this value. Perhaps some of the challenges that researchers are being confronted with pertain not only to quality research protocols presently under investigation, but also a possible measurement problem.

However, some studies such as Bryant's (1990) do demonstrate some promise in promoting the therapeutic benefit of pets for children. In her study, Bryant studied the potential social-emotional benefits and liabilities of children having pets. Although the study and its implications were based on children, it is important for clinicians to consider some of the findings as being pertinent for adolescents and adults. Two hundred and thirteen children were surveyed as part of the sample under investigation. Furman's (1989) "My Pet" inventory was utilized to assess the subjects' interests. A factor analysis of Furman's inventory indicated that from a child's perspective, there are four factors in which the child–pet relationship can be viewed as potentially beneficial. The factor of mutuality was defined by Bryant (1990) as having to do with the experience of both giving and receiving care and support for the animal. Furman (1989) originally identified these variables as companionship and nurturance. The enduring affection factor identifies the child's perception of the lasting quality of the relationship with his or her pet. This factor focuses on the child's perception of the permanence of the emotional bond between the child and the animal. The third factor, titled enhanced affection, identifies the perception from the child that the child–pet relationship makes him or her feel good, as well as important. This factor is a crucial element that clusters the admiration and affection between the animal and the child. Finally, the factor of exclusivity focuses on the child's internal confidence in the pet as a confidant. This factor appears to be extremely crucial for therapists to underscore. It is within this factor that a child may rely on the pet companion to share private feelings and secrets. This may be an important outlet, especially when there are limited friends and supports within the community or the home. Mallon (1994b) also points out that there is evidence that a child may use an animal as a confidant. In his study on the effects of a dog in a therapeutic setting treating children with behavior disorders, the staff observed that the
children would often utilize the dog as a sounding board or a safe haven to discuss their problems and troubles.

Bryant (1990) suggests that the viewing of the child–pet relationship may be extremely valuable in understanding the dynamics within the family. Negative relationships may also be indicative of existing or impeding crises within the family.

On the other hand, within the study, Bryant (1990) also pointed out some of the limitations to the child–pet relationship. Some of the constraints included distress associated with taking care of the pet, the unfair grief of a pet acting mean, or the rejection of the child by the pet. These data are in agreement with other researchers such as Kidd and Kidd (1980, 1985) who point out that the choice of animal for a child has to be a proper match. Different breeds of animals (dogs, cats, and birds) may offer unsuitable physical and psychosocial benefits to their owners. Unfortunately, if the wrong animal or breed is selected as a pet for the child, the effective bond described earlier may not develop.

B. Suggested Developmental Goals and Treatment Purposes for Adolescents

Erikson views the period of adolescence as a time where the teenager must achieve a sense of identity. The teen goes through many physical and mental changes in his or her quest to secure an adult-like status. The developmental period appears to be the first time that a conscious effort is made to define a sense of self. During this period, the teen begins to organize drives, beliefs, and ambitions toward a consistent and clear image of self. It is during this time frame that the emotional stability of the youth may be extremely fragile. Some teens may be unable to cope with the many physical, social, and developmental expectations that come with this passage. Their strong need for affiliation and the need to be wanted and able to fit in may become primary goals within therapy. A clinician may find an animal's presence valuable in making the teen feel more at ease during a visit. The teen may be more willing to take down some of the barriers, if she or he feels more comfortable. Furthermore, although a teen may project the need to be adult-like, the teen may appreciate the free spirit of an animal. The comfort the youth may receive may allow him or her to feel more appreciated.

The value identified earlier with regard to the psychosocial benefits of having a pet as a child may also be pertinent to a teenager. A therapist may strongly suggest to a family the consideration of having a pet with teens that appear to be experiencing some social isolation. Kidd and Kidd (1990), in their study on high school students and pets, suggested that pet ownership
may be beneficial both to adolescents who are having challenges in personal independence as well as mature interfamilial relationships.

C. SUGGESTED DEVELOPMENTAL GOALS AND TREATMENT PURPOSES FOR ADULTS

Therapists who focus more on adults may also find Erikson’s insight beneficial. With young adults, their need to recognize that they can also take care of others may become a great starting point for discussion. A therapist may use a therapy animal as a starting point to discuss decisions about having children or, for that matter, child-rearing practices. It is not uncommon for some therapists to suggest to young couples that they try to rear a pet as a precursor to deciding if they are ready for children. The animal’s presence may be an ideal introduction to this topic. Furthermore, adults experiencing parenting challenges and couples who are experiencing marital dysfunction may find the metaphors and the stories related to bringing up children and learning to share one’s life with another person to be appropriate topics. The presence of animals, and examples incorporating animals, may give some clarity to the subject of generativity versus self-absorption.

D. SUGGESTED DEVELOPMENTAL GOALS AND TREATMENT PURPOSES FOR THE ELDERLY

Finally, animals may tremendously impact a clinician’s ability to interact with elderly clients. Similar to the role that an animal may have in treating a child, a therapist may find an animal extremely useful in securing a positive relationship with an elderly client. Clients who have had a history of animals within their lives may find the animal’s presence extremely advantageous in reminiscing past life events. It is amazing how a lifetime growing up with an animal may make it easier for some people to reflect major milestones in their lives. Reflections of the past may become more crystallized as a consequence of compartmentalizing specific events, which may have revolved around or included pets. A clinician may ascertain that the presence of the animal may act as a catalyst for reliving past events.

Furthermore, the clinician may also recommend to an elderly patient that they consider purchasing a pet. Research such as that by Ory and Goldberg (1983), Friedman et al. (1980), Kidd and Feldman (1981), Jenkins (1986), and Garrity et al. (1989), as well as the information noted in the chapter on aging, all suggest the inherent value of seniors having pets. A client's sense of
value could be tremendously enhanced as a consequence of feeling needed once again. In addition, many individuals will thrive from the positive attention they will receive from their companion animal. In some cases, the human–animal relationship may become the necessary ingredient, which alleviates a perceived sense of loneliness and isolation. Findings from research by Hunt et al. (1992) suggested that unobtrusive animals evoked social approaches and conversations from unfamiliar adults and children. It is apparent that the presence of an animal may become a social lubricant for spontaneous discussions with passing strangers. Furthermore, the walking of pets would also possibly enhance an individual’s physical health and stamina. Kidd and Fellowman (1981) point out that since dogs require considerable energy in care, their survival rate might be associated with the greater physical activity on behalf of their owners.

V. CONSIDERATION 4: THE EXTENSION OF LIVE ANIMALS—UTILIZING SYMBOLISM AND METAPHORS OF ANIMALS

Mallon (1994a) discovered that animals have been symbols of power and nurturance. The metaphors of flight with birds and strength of horses can be used therapeutically by therapists to help their clients uncover internal concerns. McMullen and Conway (1996) and Angus (1996) point out that metaphors are extensively utilized by clients in their conversations with therapists. Their research suggests that the incorporation of metaphor themes throughout the course of therapy may actually represent a productive indicator of the therapeutic relationship. Kopp (1995) pointed out that metaphors are similar to mirrors in their ability to reflect inner images within people. Metaphor therapy resides on the position that people in general structure their reality metaphorically. Both the client and the clinician can apply metaphors as a method of discovering and understanding client’s concerns. The imagery generated from the metaphors can be used to help the client uncover how she or he is coping or feeling. For example, a client could be talking to a therapist about feeling overwhelmed about her daily life. When asked what she plans to do about it, the client responds quickly by stating “I really don’t want to open that can of worms right now.” The metaphor of the “opening of the can of worms” may represent the client’s unwillingness to scramble and try to clean up the mess that she is in right now (rushing around trying to prevent the mess that would be made when the worms squirm out). She doesn’t want to face the formidable task of putting her life in order. The metaphor helps to accentuate that position.
Angus and Lawrence (1993) point out that in positive therapeutic outcomes, both the client and the therapist are able to draw on a primary set of metaphoric scenarios in which the ongoing events within the client's life can be truly understood and integrated. For example, a mother of a child with a serious behavior disorder utilized the metaphor of feeling caged as an expression of the restrictions she felt as a consequence of her son's disruptive behavior. Throughout the course of her treatment, we embellished the metaphor with not only problem-solving strategies but also with stories, which edified similar scenarios. The stories were incorporated to lend some support or alternatives to strengthen the therapeutic discovery.

A poignant story of Eli Wiesel, the 1986 Nobel Peace Prize recipient, comes to mind when discussing the mother's metaphor of being caged. Wiesel was a keynote speaker in January 1987 at an annual dinner of 600 survivors of the Holocaust. At the reception, he shared his insightful perceptions on the struggles of humanity to provide equal access to all its citizens. The audience was moved by an anecdote, which captured his feelings. When Wiesel was a student, he once came across a man carrying a bird in a cage. The man was taking a birthday gift to a friend. "Does your friend like birds?" Wiesel asked. "I don't know," replied the man, "but come with me and see what happens." As the man was about to present the gift to his friend, the friend asked him to open the cage and set the bird free. The wish was granted and the man immediately beamed with internal joy. That was his gift. Wiesel went on to explain that there was no greater joy, no greater reward, or act of faith than setting another creature free or at least promoting its salvation or welfare. This was the woman's major goal. She wanted to feel free of her restraining emotional cage and more effective as a mother.

Throughout my years of utilizing birds therapeutically, I have also used birds metaphorically. None of my birds is ever caged, but with the clients we talk about cages as boundaries. Probably the most effective metaphors and stories about birds pertain to their grace in flight. Therapeutic discussions range from the majestic eagle soaring freely to the beauty in the flight of a flock of birds. Equally as beneficial are the sad metaphors that can be applied to a clipped (wings) or grounded bird.

Additional metaphors may include feeling chained or leashed, smothered, or being in a cocoon. Clients may develop therapeutic gains when the metaphors applied also suggest a resolution. For example, the entire process of metamorphosis is an excellent metaphor that illustrates a transformation. The caterpillar goes through the arduous task of spinning its cocoon that initiates the metamorphosis from its present state to the magnificent butterfly. For months the caterpillar leads its sheltered existence as its body is transformed. Therapeutically, the process of metamorphosis can be valuable in explaining two challenges. Numerous insightful dialogues can be developed on either of these
two themes. Some clients will benefit from a discussion of the process of transformation, whereas others may gain some insight into themselves while discussing the sheltering of a being in a protective environment. Furthermore, the short-lived life of a butterfly can also be related to the price that some will take for the outcome.

A. STORYTELLING

De Shazer (1994) and Combs and Freedman (1990) imply that embellishing a client's thoughts through storytelling stems from the narrative psychotherapy tradition. The insights from this approach suggest that meaning is given to our lives and movement occurs in therapy when we have transformational stories that help put our lives in a new context. The narrative approach to therapy suggests that some clients appear to be stuck in their lives and the new stories generated help them gain a better understanding of their life conditions. Furthermore, the various stories may also lend credible approaches and provide insight for possible resolution. It seems that for some clients, the previous stories they rehearse in their heads to cope with their challenges aren't effective any longer or lose their meaning. Therapeutic storytelling that takes advantage of thematic concerns can integrate narratives that pertain directly to the client's concerns.

Experientially, since the author's practice incorporates animals, he also applies metaphors and uses stories with animals to help clarify certain positions to his clients. Freeman (1991) points out that stories are appropriate in different manners at all stages of life. A clinician's ability to care for and maintain effective communication between his or her patients can be augmented and enhanced by the stories we hear and share. The use of tales can be utilized as a source of support and expression as a child or an adult works through a specific concern. The story may reflect a specific dilemma that the individual is attempting to confront and provide some insight on methods for resolution. Fine (1999) suggests that stories help us see the world from the inside perspective of other people. Through stories, outcomes and consequences of decisions are illustrated. Stories of events concerning people or animals can be an inspiring approach to apply with our clients. The stories can therapeutically illustrate and uncover specific concerns and issues, and also help our clients unravel their concerns from other perspectives.

The incorporation of metaphors, storytelling, and puppetry is a definite extension to traditional usage of animals. Nevertheless, it seems logical for therapists with training in storytelling as well as AAT to combine both procedures. When a carefully selected story is matched with a child's or an adult's
needs, the process can be tremendously cathartic. Stories that incorporate animals may be easier for the child client to identify with.

B. PUPPETFY

In addition to simple storytelling, the use of puppets to act out the stories seems to strengthen this process. For example, Haworth (1968) suggested that animal puppet characters appear to provide a basis for identification but, at the same time, allow a disguise so that a child has less of a need to be guarded. Linn et al. (1986) and Linn (1977) identify several attributes of puppetry that may contribute to its efficacy. The articles both advocate that the process of puppetry is immediately involving, active, and quit.e intimate. Puppets may serve as a catalyst for a child’s interaction as she or he manipulates the puppet. Secondly, puppets can be used to talk directly with the child, and the child doesn’t assume any other character. Therapists who have therapy animals within their practice could use puppets of the same breed as the animals. These puppets could act as “a talking extension” for the animal with which the child has bonded. The author has found this approach very valuable with his younger primary school-aged clients.

Irwin and Shapiro (1975) point out that although there is a wealth of qualitative writing with regard to the diagnostic and therapeutic value of puppetry with children, there is little research on how it can be effectively applied in clinical settings. He does suggest that puppetry, because of its stimulating qualities and manipulative material, readily stimulates children in revealing both private symbols and thoughts. The scenarios applied and the fantasies acted out may provide the clinician with a clearer picture of the child’s inner world and she or he copes. The process may also be therapeutic in its release of expression and emotion, without the child having to take personal responsibility for what has been said. As stated earlier, the animated animals could be viewed as an extension of the live animals and could make discussing hard subjects an easier option.

The content of the puppet therapy sessions could be loosely focused on the recurring themes identified in previous therapy sessions. Themes for the puppetry should relate to the client’s goals but could include scenarios that act out behavioral control, anger, fear, rejection, social skills, as well as abandonment. The therapist should be observant of the types of animals the child selects in the puppet sessions. Diagnostically, this can shed a great deal of insight; that is, does the child select timid or aggressive animals? Furthermore, the therapist can observe the child’s interaction with the puppets and assess how the child is reacting. For example, if the puppet scenario were open ended, the child would have a choice of developing a fantasy that either
demonstrated a nurturing, caring personality versus an aggressive style. The style in which the child interacts with the puppets may shed tremendous clinical insight. Finally, a clinician could use the puppetry sessions as an opportunity to help the child develop problem-solving alternatives for various challenges.

VI. CONSIDERATION 5: THERAPEUTIC ALTERNATIVES UTILIZING ANIMALS—EXPANDING OUR CLIENTS’ TRADITIONAL THERAPY

A. WALKING THERAPY

Serendipitously, I discovered what I have called “walking therapy.” Clinicians may find many pleasant routes where they can walk with their clients and find privacy. As discussed in Chapters 2, 8 and 16, biophilia is a fundamental human need to affiliate with other living organisms (Kahn, 1997). The Kahn research reveals that children have an abiding affiliation with nature. Combining the therapeutic usage of animals along with nature exploration could be a powerful approach with some clients. A natural outcome of having a therapy animal is to walk the animal. While walking, not only does one have the opportunity to engage in discussion, but also to experience the surroundings. At times, the serendipitous observations may enhance or stimulate the ongoing conversation between the clinician and the client. The writer has found walking to be a productive part of therapy in some cases. When working with clients whose concerns are nonthreatening, the walk may put the client at ease. While working with children, most do not appear to become distracted while on a walk, but rather engage in discussions freely. While taking a walk, many life examples can be illustrated. For example, if the dog needs to relieve him- or herself, the client must learn to be patient and understanding. Furthermore, the clinician can model responsible behavior and bring materials to clean up the mess.

The two types of animals that I utilize the most frequently on these sojourns are birds and dogs. While walking, children seem to display a great sense of pride in leading the animal. In fact, on numerous occasions I stop the walk and make a point out of how important the child appears leading the animal. This redirection emphasizes the importance of the special bond. They are periodically stopped by a pedestrian who may ask them a question about the animal and, in most cases, the interactions are quite pleasant.

Over the years, I have experimented with different variations of walking with the animals. Sometimes, it is just a casual stroll through the community,
eventually returning to the office after a period of time. Sometimes our walks bring us to a schoolyard or a park, where we sit at a park bench or table and continue our therapeutic discussions. This alternative complements the therapeutic option by continuing the therapy and by taking advantage of the outdoors. Personal experience has found that some children begin to reveal their thoughts while our walk has started, but the discussion is enhanced when concentrated attention is given to the dialogue while sitting at the park. Sitting at the bench or around the table gives both the client and the clinician a chance to elaborate on the specific topics as well as to problem solve the concerns. Practically, therapists will find it valuable to have a pad of paper and a pen to document discussions and appropriate goals for follow-up. The natural environment, along with the animals, seems to be an added benefit in strengthening the rapport with the child. This approach need not be applied often and could be used on special occasions or with clients who appear to gain the most through it.

B. CLINICAL APPLICATIONS

Over the years, walking therapy has been applied with many of my clients. A population that seems to have had the greatest gains is children with selective mutism and those with separation anxiety. By using the walk as an excuse to leave the office, children who experience separation anxiety begin to practice leaving their parents. The ventures beyond the office can be used as true experiences for separation. The client can be instructed to develop alternative cognitive structures that promote optimal thinking.

In the several cases of treating children with selective mutism, the walks with the dogs or birds are initially utilized as an opportunity to get the child to talk louder. While walking, there may be many competing sounds, which may impede our ability to hear each other. Requesting that the child speak louder is simply a reality of the environment. Amazingly, as the children become more comfortable with the animals, and begin to enjoy our walks, their comfort and confidence seem to increase.

A natural occurrence during the walk is the occasional interruption from another pedestrian walking by. The animal seems to stimulate greetings from passers-by. This outcome may eventually be a planned goal for the walk. Early in treatment, a clinician may select a route where there likely will not be any people on the road. However, as the client's confidence seems to build, a clinician may plan to take a route where interaction will be generated. A clinician may use some time prior to the walk to prepare the client with strategies in the event that a civilian may try to start up a conversation. The
walk then could represent a true test to assess progress. The client then can return to the office and, with the clinician’s support, evaluate the outcome.

Some clinicians may live in communities where there are established dog parks. It is now quite common in various cities to find parks where dogs interact. The clinician is advised to investigate and visit these parks (to learn about the protocol of entering the park as well as to observe the various dogs attending) prior to incorporating this procedure as part of his or her practice. This initial step could help avert unexpected pitfalls. The clinician could develop an action plan prior to therapeutically instituting this component. Vicariously, so much can be observed and learned in the dog park. The animals represent a small microcosm of the real world. There will be large and small dogs, hefty and lean dogs, playful and docile dogs, and finally aggressive and passive species. The observation of all of these animals can be applied to discuss the importance of understanding individual differences. Specific behaviors observed in any given dog may become valuable lessons for clarification with the clients. For example, when observing an aggressive encounter between two dogs, a generalization can be formulated by comparing this clash with human examples. A client may be more willing to initiate a personal exploration on the topic when it is initially disguised in discussing the observed battle. The framework of the discussion could eventually be modified to focus more directly on humans, and then more specifically on the client. One of the most teachable lessons from the interactions at the dog park pertains to the compatibility of most of the dogs. In most cases, all the dogs get along. This outcome easily translates to a major lesson underlying the visit: That if all the dogs can learn to get along, so can children who may presently have social challenges.

The most pertinent discussions pertain to the dogs that are overactive. Clinicians who primarily serve children will find the vicarious observations illuminating, especially when they are watching dogs that are hyperactive. The clinician can help the child observe how the impulsive and intrusive behavior of the dogs may agitate others. These observations may eventually be a catalyst for further personal discussion and problem solving.

The walks through the community or in the park may be useful for some clinicians. This option will not only help clients feel more relaxed, but the milieu may enhance their willingness to talk and reflect.

C. PETS ARE LOVING PROGRAM

The Pets Are Loving (PAL) project (Fine, 1992) was established to enhance the sense of responsibility and self-esteem of children with learning disabilities
and an attention deficit (Fig. 1). The purpose of the program was to prepare and supervise children to become mentors with their animals for the elderly. The program was cosponsored by a local retirement community. Selected candidates for the program (the children) were screened with their animals to assess their compatibility and suitability. All animals (in this case primarily dogs and cats) were evaluated to assess their efficacy in being viable companion animals. Those animals that did not meet the requirements were not incorporated. Their owners were encouraged to continue in the program but were paired with one of the project's animals.

After careful consideration, a training protocol was established for all participating mentors. The ratio of supervision within this program was five mentors to two staff members. Table II identifies the highlights of the mentors' training:

The PAL program was designed to be 10 weeks long. At any given time, five children were enrolled with two group leaders supervising. The two staff leaders were selected due to their background in both working with children as well as understanding animal behavior. The compatibility of the children as well as their animals was also taken into consideration. Each child was given a manual and a binder (Fine, 1993) to help them collate their materials as well as a writing space for their reflective thoughts. Qualitative evaluations
TABLE II  Major Components of the PAL Training Program

1. The elements of being a mentor:
   A. An overview of the PAL project. What should the mentors expect? (e.g., when the
      program would meet, where the program would be held, the behavioral expectations, an
      explanation of their role, and duration of each visit).
   B. An interactive discussion on how one interacts with the elderly. What should the mentor
      expect when interacting with the seniors? What should a typical visit be like?
   C. Skills of communication.
   D. The code of expected behavior: Guidelines for expected behaviors.

2. An explanation of aging:
   A. An interactive discussion on the myths and stereotypes of the elderly. How to positively
      understand and respect seniors (reducing stereotypical fears and anxieties).
   B. Methods of interacting with the seniors (e.g., learning how to talk quietly and move a
      little slower, how to help a senior with mobility).

3. Expected behaviors of the companion animals:
   A. Guidelines for how to introduce your pet to a senior.
   B. Guidelines for behavioral compliance.

4. Preparation for the session:
   A. Guidelines for grooming the animal as well as yourself.
   B. A discussion of reflective journal writing and weekly compulsory entries documenting
      the experience.
   C. Being an active member of discussion group (reflection discussions held after every
      session).

suggested the program was effective for both the mentors and the elderly. Most children
found the experience valuable. The experience seemed to alter their stereotypes about the aging process. The mentors also appeared to have experienced an enhancement of their behavioral control in public settings. The small group discussions appeared helpful in aiding the children in reflecting on the benefits and purposes of the experience.

VII. CONSIDERATION 6: PRACTICAL SUGGESTIONS FOR CLINICIANS’ USE OF ANIMALS

A. TRAINING AND LIABILITY

Therapists considering incorporating animals within their practice must seri-
ously consider the factors of liability, training, and the safety and welfare of
both the animal and the client. Hines and Fredrickson (1998) and the Delta
Society’s Pet Partners program strongly advocate that health care professionals
must have training on techniques of AAT. Clinicians also need to be aware of best practice procedures ensuring quality, as well as safety, for all parties. Those clinicians living in North America should register through the Delta Society for a 1-day workshop or a home study course. In an effort to achieve the best possible qualitative results, Hines and Frederickson strongly suggest that health care staff receive training. They point out that without adequate training on how to apply AAT, therapists may inappropriately incorporate animals and get poor results. The Pet Partners program developed by the Delta Society includes in-service training on a variety of areas, including an awareness of health and skill aptitude of the animals, as well as strategies to incorporate the animals with the clients. The Pet Partners program should be considered a valuable introductory course. All of the training will aid practitioners in gaining appropriate guidelines for quality practice (Hines and Fredrickson, 1998).

After successfully completing the course (which also includes a written test and an aptitude of the animal) one can become registered by the Delta Society. All those who are registered will receive continued education through bi-monthly newsletters as well as an opportunity to attend various seminars and workshops. A valuable benefit of being registered is the liability insurance program that is incorporated.

B. OFFICE MANAGEMENT AND DECOR

Not a lot of attention needs to be given to the dimension of office management and decor, but it must be discussed. Having animals within one’s therapeutic practice will have an impact on the office’s decor. One must make sure that the work environment still maintains a clean and orderly presence. This is not only a provision for ambiance, but also for health requirements. Those who may want to use birds in their practice should make sure that the cages are cleaned daily and that any food on the floor is cleaned up as quickly as possible. Other animals in cages or using litter boxes should also be monitored for cleanliness. Finally, dogs and cats should be able to access a fresh bowl of clean water whenever they have the need.

C. ANIMAL WELFARE

It is evident that the safety of one’s patient would be the highest priority. Nevertheless, the therapist must also consider the safety and welfare of the animals used in therapeutic practice. In Chapter 5, Hart, Frederickson, and Howie discuss numerous concerns that should be addressed when selecting
animals. Their discussions also highlight the various symptoms that identify whether an animal is becoming stressed. In lieu of repeating a similar commentary, the writer will primarily identify cardinal rules that should be adhered to by all clinicians planning to incorporate animals. However, the clinician is strongly encouraged to review the content of Chapter 5, as well as manuals such as the Pet Partners program for further information.

To assist in identifying guidelines for animal safety and welfare, the author has elected to incorporate some of the guidelines that Hubrecht and Turner (1998) highlighted when evaluating an animal's welfare in all living environments. The conditions noted were originally established by the United Kingdom Farm Animal Welfare Council. All of the categories emphasized by Hubrecht and Turner seem very applicable when evaluating the welfare and the safety of animals utilized in therapy. All clinicians must make a conscious effort to persevere and safeguard their animals’ quality of life. Hubrecht and Turner adamantly argue that if an animal is not properly cared for or, for that matter, if the animal appears stressed while working, the human–animal relationship will not develop effectively. Furthermore, the outcomes from the misuse of an animal will most likely jeopardize any therapeutic benefit or gain.

As clinicians our concerns must be with both the clients we serve and the animals that work with us. We must certify that the physical, mental, and emotional care of our animals is irreproachable. This tenet must be followed at all times! Our animals’ rights (for quality of life and safety) as an active member of the therapeutic team must be addressed and protected.

All animals need to be safe from any abuse or danger from any client at all times. Furthermore, the therapist must be aware of the animal's need for some quiet time and relaxation during any given therapeutic day. The animal must be able to find a safe refuge within the office that he or she can go to if exhausted or stressed. Throughout the day, the animal needs to have a break from actual patient contact and be able to express normal animal behavior. The clients (especially children) need to learn to respect this decision and allow the animal a rest period. In cases of older animals, the animal may need the time to recoup energy. When the animal is ready to return to the therapeutic area, she or he should be allowed to do so. The therapist may need to inform some of the clients (especially children) that they have to respect the animal's need for privacy and rest. Some children may want to smother the animal with love and physical attention. When this occurs, instruct the client in the best manner to hug an animal without being confining.

Numerous other concerns may be thought of in relation to Hubrecht and Turner's (1998) third identified provision. Specifically, our therapy animals must be free from pain, injury, or disease. The therapist must practice good health procedures for all the animals being utilized. All animals should be up
to date on all inoculations and visually appear in good health. If the animal seems ill, stressed, or exhausted, medical attention must be given.

Care needs to be given to the animal's physical appearance. The animal should be properly groomed and look presentable. This can set a good example for all clients. The animals should be under the supervision of a veterinarian who is aware of the therapeutic dimension of the animals' life. The animals should be seen on an intermittent basis to ensure that they are in good health. The veterinarian may also act as a medical adviser, guiding the clinician on any medical concerns that may pertain to the animals' welfare. There are so many variables that must be taken into consideration. For example, if an animal hasn't been well, how do you determine when he or she is ready to return to assisting with therapy?

Additionally, as an animal ages, his or her schedule for therapeutic involvement will have to be curtailed. This may cause some disruption and adjustment to a therapist's method of practice. You may find this alteration a difficult transition for you and your clients to accept. However, this transition may also be emotionally difficult for the animal as well. A dog that is used to an active schedule may initially appear demoralized at the adjustment to the amount of involvement. For example, Puppy (an aging golden retriever), who has worked clinically in my outpatient program for about 8 years, is now about 13 years of age. She tires quickly and naps throughout the day. When she gets tired, she wanders to my office and sleeps under my desk. When she is ready to resume her duties, she wanders back to the treatment rooms. Although she is aging, the response she receives from all her visitors is still strong and affectionate.

D. PRECAUTIONS FOR THE CLIENTS

Therapists must make wise choices when selecting animals for their practice. Not all pets make good adjunct therapists. Many suggestions given in Chapter 4 should be reconsidered in this chapter. Additionally, certain species of animals may be more appropriate for children than adults. A clinician who is considering incorporating animals within his or her psychotherapy must strongly consider what animals will serve the best purpose. This may mean further studying and purchasing of animals that best suit the needs. Unfortunately, a good home pet may not be suitable for therapy.

Wishon (1989) points out that an underestimated problem that may occur in the animal–human bond are the pathogens that can be transmitted from animals to human beings. This process is now known as zoonoses. Wishon (1989) reports that most cats and dogs carry human pathogens, which along with those carried by other animals, have been associated with more than 150
zoonotic diseases. However, Hines and Fredrickson (1998) point out that the data regarding the transmission of zoonotic diseases in any AAT programs have been minimal. Practitioners are advised to work closely with veterinarians and other public health specialists to ensure the safety of the animals as well as the clients involved.

The clinician should be aware of any fears of animals or allergies before utilizing animals adjunctively with specific clients. This will ensure that the addition of the animal will not complicate the therapy.

E. ADDITIONAL CONCERNS

Numerous other concerns must be considered by a clinician prior to introducing animals into a practice. Although some of the concerns cannot be completely planned for, the therapist must be aware of them. For example, a clinician should consider how to handle explaining an illness of the animal to his or her clients and how to explain the death of a beloved animal. Both of these variables are realistic concerns that must be considered seriously. Over the years, concerned attached clients have had difficulties accepting these inevitable problems. Furthermore, the introduction of new animals into a practice will also need attention. A suggestion is to transition gradually all new animals, so that you are comfortable with the behavior. At times, young animals (specifically rambunctious young puppies) will need significant attention until they are capable of being more actively involved.

VIII. CONCLUSIONS

With thought and planning, animals can make a major contribution to a therapist's arsenal in treating clients. Animals can enhance the therapeutic environment by making the milieu more emotionally and physically accessible to clients. Some clinicians may still be skeptical of the therapeutic value of the human–animal bond, and may initially underestimate the clinical utility of animals as an adjunct to therapy. It is understood, as discussed at the outset of this chapter, that the lack of documentation and thorough investigation of outcome research leaves a large void on the efficacy of this approach. Interested clinicians may initially incorporate animals solely to develop rapport with clients. Nevertheless, after reading this chapter, a skilled and well-informed clinician should be able to recognize a multitude of benefits that animals can fulfill. A therapist may have to make some adjustments to his or her practicing philosophy to ease the incorporation of animals into one's professional repertoire.
Those clinicians who craft a place for animals in their therapeutic regime will not be disappointed with their efforts. Their therapeutic milieu and approach will be richer as a consequence. As George Eliot writes in Mr. Gilfil's Love Story, "Animals are such agreeable friends. They ask no questions and they pass no criticism." The unconditional love and devotion that an animal will bring to a therapeutic practice will be an asset that may never be thoroughly understood but should be appreciated and harnessed.

REFERENCES


9 Animals and Therapists


