

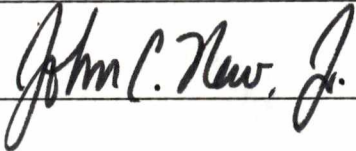
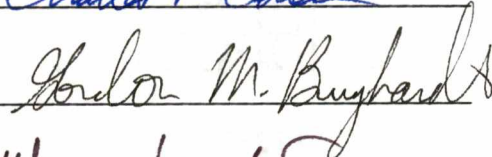
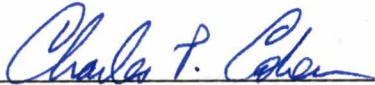
To The Graduate Council:

I am submitting herewith a dissertation written by Margaret Mary Del Monaco entitled "An Evaluation of the Benefits of a Companion Animal to Chronic Psychiatric Inpatients." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

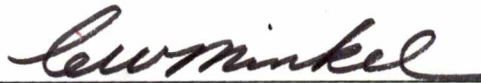


Alvin G. Burstein, Ph.D., Major Professor

We have read this dissertation  
and recommend its acceptance:



Accepted for the Council:



Vice Provost  
and Dean of The Graduate School

AN EVALUATION OF THE BENEFITS OF A COMPANION ANIMAL  
TO CHRONIC PSYCHIATRIC INPATIENTS

A Dissertation  
Presented for the  
Doctor of Philosophy  
Degree  
The University of Tennessee, Knoxville

Margaret Mary Del Monaco

August 1985

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## ABSTRACT

Many authors have presented the viewpoint that animal companions fulfill needs for affiliation and affection while enhancing self-reliance and self-esteem. Several researchers have investigated whether there are measurable positive effects of providing companion animals to elderly persons, incarcerated criminals, and psychiatric patients. Although some studies report positive results of having companion animals, much of the research has been methodologically weak.

The current study was an attempt to evaluate the relative therapeutic effect of a dog placed on a ward of chronic psychiatric inpatients as compared with a human therapist placed on a similar ward. Patients were assessed with the Psychotic Inpatient Profile and behavioral observations were made over the three-month period of the study. Ward morale was assessed with the Ward Atmosphere Scale. While statistical analyses did not support the hypothesis that an animal companion would be of greater benefit than a human companion in bringing about positive behaviors in chronic psychiatric patients, the study proved to be valuable as a field study of the effects of introducing a live animal to a psychiatric ward.

Although the presence of the dog itself had no statistically significant impact on patients' functioning, patients responded to other events related to the research. They were sensitive to changes in staff reactions to the research in that they exhibited more

positive behaviors when staff members were relaxed about the study, and they became more hypervigilant when staff members were strongly opposing the study. In addition, patients seemed animated by media coverage of the study, and at times showed a lively interest in the experimenter.

Patients' lack of interest in the dog in part might be attributable to staff members' undermining of the project by overt and covert discouragement by staff of patients from interacting with the dog. Moreover, staff members seemed persistent in reinforcing the dog's undesirable behaviors, presumably so that they could maintain their dissatisfaction with the project, which further discouraged patients from developing an interest in the dog. The dog became increasingly maladjusted on the ward but recovered when removed from the setting.

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CHAPTER I

REVIEW OF THE LITERATURE CONCERNING  
HUMAN-ANIMAL INTERACTIONS

The Human-Animal Bond

Throughout history humans have maintained connections with animals in their environment. Fossil discoveries in China indicate that man's association with wolflike animals dates as early as 500,000 years ago. Humans captured wild animals and raised them in captivity as companions prior to actual domestication of animals, which is estimated to have begun 10,000 years ago, at the end of the last global ice age. During that period, humans began to control the care, feeding, and breeding of dogs, the first species to be domesticated. Estimates of the time cats were first domesticated run as early as 4,000 B.C. At that time large agrarian societies, as in ancient Egypt, presumably recognized cats as valuable in controlling rodents (Fox, 1975; Messent and Serpell, 1975).

Five bases of domestication are presented by Messent and Serpell. Humans domesticated animals such as sheep, goats and cattle for food; dogs for guards, because of their instinctive territorial barking; wild dogs and wolves for hunting; and cats, as mentioned earlier, for control of rodents. Even though these four utilitarian motives for keeping animals contributed to the human-animal bond, the initial formation of this bond probably arose out of the tendency of primitive man to adopt young wild animals, such as wolf cubs, as animal

companions. At the end of the last ice age humans began a more productive and settled way of life. As standards of living rose, there was more leisure time available to engage in such nonproductive activities as taming and cultivating wild animals. In addition to excess time available, a surplus of food made it feasible to keep wild animals as pets.

Levinson (1980) comments:

By domesticating an animal man demonstrated his kinship with nature. . . Psychologically this was the beginning of a symbiotic relationship between pets and human beings in which man supplied the material needs of the pet while the pet satisfied the psychological needs of his master. (p. 63)

Fox (1975) further notes that:

As man became more and more involved in domesticating animals to satisfy various utilitarian needs, the act of creating such animals gave a new dimension to man's relationship with such animals. Investment, both financial and emotional, status and pride of possession, aesthetic appreciation, and the consummate rewards of companionship . . . and of producing highly prized offspring added both depth and diversity to the animal-man relationship. (p. 28)

Keeping animals as companions developed along with keeping them for utilitarian reasons. Dogs and cats became the animals most frequently bred for pet-keeping. According to Messent and Serpell (1975), the features of these animals that have made them popular animal companions include: (1) their ability to form attachments with humans, (2) their range and variability of nonverbal expressive behavior that humans generally interpret as affectionate and friendly, (3) anthropomorphic qualities, docility, and adaptability, which have

been enhanced by selective breeding, (4) availability for play, (5) intelligence without the aberrant, unpredictable destructive behavior of more intelligent primates, (6) ease of house-training, and (7) activity cycles which correspond to waking periods of humans.

The psychological importance of companion animals has increased over the past one hundred years of increased industrialization, due to rising affluence, decreased birth rates, and the decline of the extended family within a multigeneration household (Mugford, 1980). Also, according to Levinson (1978), the increased importance of companion animals in the twentieth century parallels the greater acceptance of children for their own worth and contribution to the family, rather than as merely preparing for adulthood.

Many authors have written about the value and rewards of pet ownership (Mugford, 1980; Ryder, 1973; Levinson, 1969, 1972; Katcher & Friedmann, 1980; Fox, 1975; Feldman, 1978; Corson & Corson, 1980; Bridger, 1976; Wallin, 1978; Brickel, 1980). The most often cited advantage of pet ownership is that of companionship, especially for lonely people who feel alienated from society. Companion animals satisfy humans' needs for affiliation because they are readily available to provide friendly interaction and physical proximity. They also contribute indirectly to self-esteem in that interpersonal relationships often occur with ease in the presence of a pet.

In addition to satisfying affiliative needs, animal companions can meet needs for affection and nurturance. Pets can be hugged and caressed without inhibition, thereby providing contact comfort which

is emotionally gratifying. Expressing affection for a pet involves less risk than expressing affection for a person in that animals do not overtly deprive, frustrate, or criticize their owners. In addition, pet owners often perceive their companion animals as empathically understanding them, particularly at times of distress.

According to Mugford (1980), attachment to a pet can significantly reduce a person's anxiety in unfamiliar situations. While gaining affection and comfort from a companion animal, humans also feel important and needed in caring for an animal that depends on them for protection and support.

### Children and Companion Animals

Since the development of adult pet therapy programs largely grew out of pet therapy programs with children, it is worthwhile to address aspects of the relationship between children and animals, which are relevant to interactions between adults, especially severely disturbed adults, and animals.

Bossard (1944) wrote one of the earliest articles about the advantages for children of having pets. He noted that pets provide an outlet for affection and aggression, as well as companionship, possibly as sibling substitutes. In addition, he noted that a pet can facilitate a child's social contact in providing a topic of conversation. And, as with adults, pets can satisfy power longings and fulfill needs for ego satisfaction and gratification, which derive from the child's taking responsibility for the animal.

Other authors who have written about the importance of pets for children include Levinson (1967, 1972, 1974, 1980), Bridger (1976), Savishinsky (1974), Fox (1975), and Feldman (1978). One advantage frequently cited is that a pet provides contact comfort which represents security and love to a young child, thereby helping the child through stressful times when he may be feeling unloved or unlovable. A pet can therefore provide continuity during transitional periods in his development and at other difficult times.

Levinson (1967) notes, for example, that at a traumatic time of bereavement a companion animal can be a source of affection and stability which can alleviate the pain and fear associated with loss. According to Levinson, the child feels the pet shares his grief and offers hope. The child's fear and guilt are mollified by "the pet's silent, nondemanding acceptance of the child's hidden emotions and his unfailing admiration and love for the child" (p. 199). Levinson further notes that in the case of loss of a parent the pet does not present competition for the surviving parent's affection.

In a reciprocal relationship with a pet, a child also learns to develop empathy and compassion. Ryder (1973) notes that in interacting with a pet, a child learns, for example, that pulling an animal's tail will result in being bitten or scratched, while caressing the pet elicits friendly animal behavior. Therefore, the child becomes aware of the consequences of his behaviors, and in this process he learns that other living creatures have feelings and preferences.

Another aspect of a child's reciprocal relationship with a companion animal is that of developing a sense of mastery, which is most relevant during latency. As a child develops a sense of responsibility in caring for a pet, he moves away from egocentricity toward recognition of others. A pet can therefore help a child to learn self-discipline, impulse control, and the ability to delay gratification. In addition, a child develops a sense of mastery in his creative ability by teaching tricks to a pet. Another aspect of mastery is that of overcoming fears of animals which may have developed from previous traumatic experiences with animals. In having positive interactions with a pet, a child can overcome such fears. Overall, through interactions with a pet, a child develops a feeling of competence which enhances self-esteem.

#### Pet-Facilitated Psychotherapy with Children

In addition to the advantages offered by pets to normal children, many psychotherapists value the use of pets in treating disturbed children (Levinson, 1962, 1964, 1965, 1969, 1972; Douglas, 1977; VanLeeuwen, 1975). Pets are frequently used in the early stages of child therapy to help build rapport, since children seem to relate more comfortably to animals than people. Levinson (1962) wrote about his serendipitous discovery that animals could be facilitative to initiating therapy with severely disturbed children.

In 1954 Levinson was contacted by the parents of a young boy who was becoming increasingly withdrawn. He had been unsuccessfully

treated by other therapists and hospitalization had been recommended. Levinson arranged to meet with the parents and their son, who arrived early for their appointment, while Levinson was in his office with his dog. When the family entered, the dog ran up to the child, who cuddled up to the dog and pet him. The parents wanted to separate their son from the dog, but Levinson fostered the interaction by indicating to the parents to leave the child alone. After the first session the child expressed a desire to return and play with the dog, and this was done in several subsequent sessions. Eventually Levinson was included in the play, which initiated a productive working relationship, and the boy eventually recovered.

After that experience, Levinson began using his dog selectively with certain child patients. In doing so he followed the model that had spontaneously evolved in the case mentioned above. Essentially, Levinson (1964) outlined four phases of pet-facilitated therapy with children. In the first phase the child disregards the therapist and plays with the pet. Eventually the pet becomes the focus of the child's fantasy activity and is assigned a role by the child. In this phase the therapist is ancillary to the fantasy activity and may be assigned a minor role. In the third phase the pet plays a role subsidiary to that of the therapist. In the final phase the pet is no longer used in the therapeutic exchange and the child interacts only with the therapist.

Since emotionally disturbed children are generally fearful of interacting with humans, they are responsive to pets who can provide

physical contact without fear of retaliation. According to Levinson, a child who has been deprived of love may have difficulty accepting affection from a human, and may be more capable of receiving affection from a pet. Furthermore, disturbed children (and adults) are often afraid of human contact due to prior experiences of physical or emotional abuse by humans. Yet they still have a strong need for physical contact. If a withdrawn child can interact comfortably with a pet animal in a therapeutic setting, he may become desensitized to interactions with other living creatures. The child is likely to feel less intimidated and more in control of the situation than he would without the animal present.

In addition to providing a transition to making contact with a therapist and others, pet animals can also allow a therapist to observe and understand children through their play with an animal. For example, a therapist can make inferences about how the child is treated at home. Also, since children can project unacceptable feelings and impulses onto a pet, the therapist can gain insight into a child's inner dynamics through observing the child's interactions with the animal.

In addition to using pets as an adjunct to treatment in the therapist's office, pets can also be used for treatment of disturbed children in their homes. Levinson notes that introducing a pet into the home of a disturbed child often brings about subtle changes in family dynamics. First of all, the pet can divert pressure away from a child who has been identified as a "patient." Also, a pet can

covertly serve to dissolve a pathological symbiotic relationship between a parent and child. In homes where emotional nurturance is lacking, a family pet can provide contact comfort needed by children.

According to Levinson (1969), pet-facilitated therapy is most beneficial for "nonverbal, severely ego-disturbed children." Such children are typically distrustful and avoidant of affectional ties with people, and they lack reality-oriented object relations. An animal companion can provide the child with a real, tangible relationship through which he can begin to differentiate himself from others. Since an animal may not be as threatening to his weak ego boundaries as other humans, a pet can provide a focused interaction which alleviates internal disorganization. Levinson (1962)

summarizes:

Some schizophrenic children are afraid to get physically close to the therapist. Possibly they are afraid that the hostility they emanate will alienate the only person who cares about them unconditionally and is nonjudgmental . . . and getting close may mean that their egos will be swallowed up by the stronger ego of the therapist. A dog presents no such threat. Other schizophrenic children are also preoccupied with "introjected bad me." It is much easier for them to find a "bad me" in the dog that is tolerated, accepted and loved, than in themselves. (p. 62)

#### Adults and Animals: Psychodynamic Formulations

Searles (1960) has written that the nonhuman environment "constitutes one of the most basically important ingredients of human psychological existence." He contends that every human holds a conscious or unconscious sense of "relatedness to his nonhuman

environment" which is a "source of ambivalent feelings to him" (p. 6). Many psychoanalytic writers have noted the significance of humans' relationships with animals, which are often recipients of transference projections, identifications, and feelings.

For example, Menninger (1951) maintains that animals become "totemic<sup>1</sup> representatives" of parents and others and therefore "receive the displaced energies--positive and negative--which remained insufficiently discharged in childhood" (p. 46). He elaborates that conscious and unconscious attitudes toward animals arise from a repressed unconscious displacement from a human object toward whom they are not expressed. That is, attachment to a particular animal may represent an unconscious transfer of feelings for a significant person onto the animal. For example, taboo sexual feelings for family members can be displaced onto a pet animal. Menninger further posits that sports such as hunting and bull-fighting could represent a helpless child's postponed revenge toward an abusive parent.

Heiman (1956, 1965) also adopts Menninger's viewpoint that the domestic animal is civilized man's counterpart to the totem animal of primitive man. Primitive totemism was a means to conceal sexual and aggressive drives. Similarly, according to Heiman, modern man's relationships with animals can also conceal unacknowledged drives.

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<sup>1</sup>According to Menninger (1951), totemism implies "an ambivalent attachment to certain animals and occasionally objects in which there are apt to be considerable conscious elements of love, fear, reverence, detestation, avoidance, and so forth, with corresponding contrary attitudes in the unconscious" (p. 43).

Heiman notes three types of relationships between humans and animals--phobias, perversions, and petkeeping--which involve the defenses of displacement, identification, and projection. He notes that there is no one-to-one correspondence between a particular pet and specific conflictual intrapsychic dynamics. Rather, he states, "The choice of an animal for the expression of a conflict is over-determined" (Heiman, 1956, p. 578). An animal, such as a horse, may have phallic significance. A dog, he notes, can replace a lost human object. The meaning of a particular pet, however, is highly individual in its internal origins and significance.

Leigh (1966) discusses other psychodynamic motives for having a pet. First, an animal companion may serve exhibitionistic needs in drawing attention to the owner. This is apparent in the case of purebred pets groomed for showing, in that the pet owner can be gratified by the successes of the animal. If the pet serves narcissistic needs, the owner may perceive the animal as reflecting his own personality and emotions. In addition, a person may use a pet in an attempt to overcome undesirable aspects of his personality. For example, someone who feels weak and powerless may compensate for these feelings by raising pit bulldogs. Similarly, a person who takes in stray animals may be acting on his own feeling that he needs to be saved from misfortune.

Rynearson (1978) wrote about the importance of pets as attachment figures for human beings. Attachment is most intense and focused between mother and infant, although the need for attachment continues

to be of importance and value through adulthood, particularly at times of stress. In normal development, the individual's need for attachment can be comfortably perceived and fulfilled with others. Under abnormal circumstances the need for attachment becomes uncomfortably intense. In such cases satisfying relationships with others are overly complicated and fraught with distrust. The insatiable need for nurturance which persists into adulthood interferes with the development of satisfying relationships.

Rynearson notes that there are two ways in which this fixation is expressed. First, the anxiously attached person manifests clinging, overdependent behavior with constant apprehension about separation. Second, the compulsive caregiver satisfies his craving for attention by nurturing others in a driven manner. According to Rynearson, if a person displaces an overdetermined need for attachment onto a pet, "the pet's essential, nonverbal acceptance and response to attachment allows the distrustful human to trust" (p. 53). The displacement becomes pathological when it is defensively focused on the pet, which responds narrowly, thereby diminishing mature human interactions and attachment. Caring for the pet vicariously gratifies the individual's vulnerable self without risking interpersonal involvement, so that attachment to a pet could become pathological if the person avoided involvement with humans.

### Pet-Facilitated Therapy with Adults: Theory

Observations of children and adults with pets, in addition to contributions of psychodynamic theory, have formed the backdrop for the use of pet-facilitated therapy with severely disturbed adults. Siegel (1962) maintains that severely withdrawn patients, especially schizophrenics, have withdrawn from human contact out of mistrust, because they have been intensely hurt. Siegel proposed that pets be given to withdrawn patients, with the goal of helping them establish a communicable relationship. She predicted that the patients would eventually show interest in the pets, relate to the pets, and then eventually relate to the therapist who shared their interest in the animals. Her proposed model is strikingly similar to the model of pet-facilitated therapy with children proposed by Levinson. Siegel, however, never carried out her plan.

Rynearnson (1978) noted that pets could be useful in the treatment of both disturbed children and schizophrenics because of the similarities between these two types of patients. Both have an intense need for preverbal attachment and both groups avoid human contact out of mistrust. A pet could provide support as the patient developed trust which would eventually be directed to attachment to the therapist and other humans.

Brickel (1980) agrees that pet animals can be an aid to psychotherapy in facilitating the initiation of therapeutic rapport and in enabling clients to express repressed emotions. First of all, a patient's initial anxiety in a clinical setting can be alleviated by

focusing on a pet as a starting point for discussion, assuming no aversion to the animal. Furthermore, interactions with a pet animal can lead to initiation of a bond between patient and therapist. In ongoing therapy, a therapist can observe patients' interactions with animals and make inferences with regard to psychopathology and prognosis. The patient's expression of emotions toward the animal, as well as the projection of feelings onto the animal, can aid the therapist's understanding of the patient's internal dynamics (Levinson, 1969).

Searles (1960) believes that a psychotic patient's relationship with an animal can ward off psychotic process. He indicates that in some cases psychotic patients can maintain their equilibrium and function adequately because a relationship with an animal supports their fragile defensive structure. He has further observed that some schizophrenic patients can maintain meaningful relationships with animals, plants, or material possessions long after meaningful contact with humans has deteriorated. When they later begin to recover, they regain contact with reality initially through relationships with nonhuman elements of their environment. Searles therefore suggests that therapists pay attention to patients' abilities to relate to animals and other nonhuman objects. He maintains that severely disturbed patients can develop a sense of self through interactions with nonhuman objects.

A companion animal can enhance psychological growth if it functions as a transitional object, thereby allowing movement toward

greater autonomy. In a classic paper, Winnicott (1951) discusses the function of transitional objects. He notes that transitional objects are the first "Not-me" possessions for a child and that they symbolize some gratifying part-object, such as the mother's breast. Winnicott asserts that a child's interactions with a transitional object, such as a blanket, allows him to develop the capacity to form a conception of external reality and to experience a relationship to external reality. This occurs because the transitional object serves as an illusory bridge between the security of the gratifying part-object and external reality.

In common usage, a transitional object is viewed as an object or activity which the child holds on to in the process of separation from the mother. It offers security when the mother is absent, because it reminds the child of the mother and provides an illusion, or sense, that the mother is present. This allows the child to begin to interact more with the environment outside the mother, particularly during the separation-individuation stage of development, as noted by Bergman (1978) and Metcalf and Spitz (1978). Searles (1960) maintains that nonhuman elements of the environment allow a child to become aware of his capabilities and limitations. He notes that disturbed patients are more likely to derive security from the nonhuman environment than are normal adults. For disturbed patients the nonhuman environment can thereby serve a transitional function if the security provided can be generalized to human interactions.

### Adult Pet Therapy Programs: History and Research

The earliest use of pet animals in the treatment of adult psychiatric patients occurred in the early 1800's at the Retreat at York in England. Several small animals, including rabbits and poultry, were placed in a courtyard in order to help patients "learn self-control by having dependent upon them creatures weaker than themselves" (Jones, 1955, p. 61). In addition to helping elicit "social and benevolent feelings" in patients, the animals were considered a source of "innocent pleasure" and a means to keep patients occupied with care of the animals.

It was not until 150 years later that the idea of pet animals as therapeutic agents was revived. Since the 1960's, adult pet therapy programs have been initiated with elderly persons, incarcerated criminals, and psychiatric patients. Despite some of the inconveniences presented by pets in institutions, such as noise, smell, bites, and time and space constraints (Cooper, 1976), many authors have advocated pet therapy programs. According to Brickel (1980), companion animals in caretaking institutions relieve feelings of despondency and depression, provide attentive companionship, prevent withdrawal and isolation, and contribute to the development of independent, responsible behavior through caring for animals.

Rice, Brown, and Caldwell (1973) conducted a survey to evaluate the extent to which animals are used by psychotherapists in the United States. They sent questionnaires to 296 psychologists and received 190 replies. Of these, 40 (21%) reported some use of animals in

conjunction with psychotherapy. Of the 40, 27 reported using pets in the therapeutic location for desensitization, building rapport, and development of relationship skills. Thirteen reported using pets out of the therapeutic location to help patients develop a positive reciprocal relationship with a living object. Rice, et al. presumed that therapists who use pet animals believe that a reciprocal relationship with a pet forms the basis for establishment of meaningful object relationships which can generalize to people. Their study indicated that a number of psychotherapists are willing to expand the parameters of psychotherapy. However, given the self-selection process involved in mail surveys, their results should be viewed conservatively. It is likely that less than 20% of therapists use pet animals in conjunction with psychotherapy.

Several studies have been conducted to evaluate the effects of pet-facilitated therapy with various patient populations. In a well-known study of elderly people (average age of 73) who lived alone, Mugford and McComesky (1974) gave half the group (12 subjects) begonias and the other half budgerigars, a variety of parakeet. Half of each group owned television sets and half did not, as was the case for the control group of six subjects who received no birds or plants. All participants were assessed by a social worker and psychologist at the beginning of the study and after five months. They used an interview consisting of 22 questions, developed by the experimenter. The first part of the interview included questions regarding interpersonal relationships, such as "Do you like having visitors?"

The second part of the interview was more focused on symptomatic concerns, including questions such as, "Are your nerves 'on edge' sometimes?" Responses to the questions on both parts were rated on a four-point scale ranging from "Highly unfavorable attitude or condition" to "Highly favorable attitude or condition."

Only sixty percent of the subjects were available to be interviewed at the end of the study, since several had died or moved. More of the bird-owners were available than the plant-owners. The presence or absence of a television set did not have any significant effect on the data. However, the bird-owners were found to have made significantly more improvement with regard to the assessment of their attitudes toward people and attitudes toward their psychological health. While these findings suggest that bird-ownership had a more positive impact than owning a plant, the low number of subjects involved, as well as the high rate of subject loss, could make these results questionable. Also, the results would be seen as more valid if a standard psychiatric assessment instrument were used to evaluate the subjects.

Corson and Corson (1978) studied the effects of pet dogs on residents in nursing homes. They constructed a questionnaire based upon a ten-point scale on which nurses made weekly ratings of residents' physical and emotional well-being, social interactions, and personal appearance and hygiene. In addition, the Corsons used videotaped recordings of resident-pet-staff interactions to further evaluate social contacts. They concluded that pets were helpful in

alleviating loneliness, hopelessness, and social withdrawal. The animals were also a social catalyst, in addition to initiating increases in physical activity, such as walking and running with the animals. The Corsons further observed that the presence of the pets improved the overall morale of the institution, and that the patients exhibited more responsible, self-reliant interactions, while manifesting fewer infantile, self-neglecting behaviors. As in the previous study, no standard psychiatric rating instrument was used, and the researchers did not specify how the videotaped recordings were rated and evaluated. In addition, the absence of a control group further weakens the study in that there was no control for the novelty of introducing pets in this setting.

Research on pet-facilitated therapy has also been conducted with incarcerated persons. At Lima State Hospital, a maximum-security hospital for the criminally insane, David Lee conducted a pet therapy program. At the time that Trussel (1978) reported on this program there were more than 160 individual pets on 15 out of the 22 wards, with 90 out of 400 patients actively involved with the pets. Trussel's report indicates that the pet animals provided an opportunity for inmates to feel needed, fostered the development of responsible behaviors, lessened patient anxiety, and provided an opportunity to express love without fear of rejection. The pets also provided a common interest and starting point for patients to talk with therapists, in addition to improving the general atmosphere at the facility. These findings, while very positive, are not supported

by quantitative data. In addition there was no control group used in this study.

In recent years, pet therapy programs have been initiated with other (non-criminal) groups of psychiatric patients. In a well-known study (Corson & Corson, 1980; Corson, Corson, Gwynne, & Arnold, 1975), a pet-facilitated therapy program was initiated with fifty patients in a psychiatric hospital. These patients had failed to improve in response to other available therapeutic methods, such as individual and group psychotherapy, drug therapy, electro-convulsive shock therapy, occupational therapy, and recreational therapy. The patients were described as "withdrawn, self-centered, and uncommunicative," lacking in self-esteem, and exhibiting "infantile helplessness and dependence" (Corson, et al., 1975, p. 280). Quantitative measures, based upon recorded interviews taken over the course of therapy, were analyzed for trends. Videotaped recordings were also utilized. The latency of responses to questions about dogs and people were also examined for trends. Questions about dogs were answered within about one second throughout treatment. However, early in treatment questions about people were answered within nine seconds, as compared with one second at the end of treatment. Also, words per answer increased over the course of pet-facilitated therapy, along with number of questions answered. Moreover, silent times decreased in later sessions. Corson, et al. considered their pet therapy intervention a success, stating that 47 out of 50 patients showed "some improvement."

Even though these results sound impressive, the researchers did not clarify whether there were other indicators of improvement other than changes in latency and length of verbal responses. Also, they failed to include a control group and did not use standard psychiatric assessment instruments in their data collection, which weakens their study considerably. Furthermore, their report did not indicate how the videotaped recordings of patient interactions were analyzed. However, they did note that in cases where the videotaped recordings were played back to patients, those who showed no interest in television programs watched their own videotaped social interactions "intensely." Given the absence of a control group, this raises the question as to whether the improvements noted were related to the presence of animals or to the attention and novelty of being videotaped.

In an earlier study, Doyle (1975) placed a rabbit on a psychiatric ward of fifteen chronic adult male inpatients, of which six were studied. She noted that the three regressed (schizophrenic and mute) patients studied exhibited increased conversation on all topics as contact with the rabbit increased. The three less regressed (not diagnosed schizophrenic) patients also manifested improved communication skills, particularly in conversing on the ward about the rabbit.

Doyle used a questionnaire which was completed two weeks prior to introduction of the rabbit and twelve weeks after the rabbit was placed on the ward. The questionnaire responses were used to rate

patients on "self-concept," "attitude toward and need for others," and "responsibility potential." The patients were also observed by staff twice weekly. In addition, members of the staff supplied anecdotal accounts of interactions between patients and the rabbit, as well as "rabbit-related interactions" between patients. Doyle's conclusions were primarily based upon the observational and anecdotal accounts of interactions between patients and the rabbit. While these sources of data are valuable, they lack the reliability and validity of more standard psychiatric instruments, a weakness frequently noted in studies of pet-facilitated therapy. In addition, as in other studies, no control group was used, which makes it difficult to assert that the presence of the rabbit, rather than the attention of being a research subject, was responsible for the improvement noted.

The Doyle study stands out, however, because the researcher noted some of the less favorable aspects of implementing pet therapy programs in caretaking institutions. For example, she noted that the rabbit was "incorporated into some bizarre and negative behaviors" (p. 81). She also noted problems in housebreaking the rabbit, which troubled some patients. This is one of the few studies to suggest that having a pet in an institution does not result in wholly positive responses.

A recent study by Thompson, Kennedy, and Igon (1983) is an example of a well-controlled study which is more methodologically sound than the previously mentioned studies of pet-facilitated therapy with psychiatric patients. Thompson, et al. randomly selected twenty

patients from a chronic psychiatric unit with 60 patients between the ages of 40 and 60. About 75 percent were diagnosed as schizophrenic. There was no indication of their average length of stay on the ward.

The patients who participated in the study were rated on the Physical and Mental Impairment-of-Functioning Evaluation (PAMIE) and the Mini-Mental State Questionnaire (MSQ) at the beginning of the study and one week after the six-week period of the study. The ten subjects assigned to the experimental group were exposed to three hour-long pet-facilitated therapy sessions each week for six weeks. The sessions were "semi-structured" and included a variety of interactions with animals, with a different animal used each week. The ten control subjects continued in their usual group and individual therapies and activities during the six-week period.

Thompson, et al. reported that there was a significant difference between control and experimental subjects with an "intermediate" level of impairment on the overall PAMIE scores. However, there were no significant differences on any of the measures when the experimental and control groups were analyzed as a whole. The researchers recognize the shortcomings of their study in stating, "It is obvious that the retrospective reexamination of the data and the absence of an active control condition weaken the scientific credibility of this research" (p. 430). They recommend a replication of the study over a longer time period with more time for patients to interact with pets to facilitate the forming of a "bond."

In a recent paper, Beck and Katcher (1984) presented an overview of the publications on pet-facilitated therapy. They noted that almost all of the literature on pet therapy is of a descriptive nature, while there are few studies in which a research design is used to test a hypothesis. They further note that while descriptive papers are useful in identifying clinical phenomena and generating hypotheses, they do not demonstrate the value of pet therapy treatment or the existence of causality between pet therapy and patient improvement.

In reviewing the experimental studies, some of which have been discussed above, Beck and Katcher noted that:

The results of the studies showed that pets had either no impact or produced relatively small therapeutic gains. None of these studies revealed dramatic therapeutic results similar to those noted in isolated case reports. (p. 416)

They concluded that there is no evidence that bringing pets into an institution is any more effective than other novel events. They further concluded that while the presence of pets may result in "transient changes in emotional state," there is no evidence that persistent behavior changes result. They suggest that research on pet-facilitated therapy take into account the effect of a novel intervention, underscoring the importance of including control groups in pet therapy research. One type of control is the nonintervention control, as was used in the Thompson, et al. study. The second type of control procedure, noted as "more powerful" by Katcher and Beck is to compare the influence of pets with "some other procedure that

augments social contact," thereby controlling for the novelty effect and providing an evaluation of the relative effectiveness of pet therapy over other interventions. They further indicate the importance of analysis of the costs and benefits of pet therapy programs.

## CHAPTER II

### THE CURRENT STUDY

The current study attempts to remedy some of the methodological weaknesses of previous studies of pet-facilitated therapy. The inclusion of a comparison group allows for control of the novelty effect. In addition, the study extended for three months, longer than previously cited studies conducted in psychiatric hospital settings. Furthermore, standard psychiatric assessment instruments were used in measuring improvement, along with extensive behavioral observations.

A chronic psychiatric population was studied because these patients are the most withdrawn and apathetic of psychiatric inpatients. Therefore, given this baseline, there is a greater likelihood of a measurable response to an experimental intervention. In addition, their length of stay at the hospital is typically long enough to allow observations over several months of a research study.

A dog was chosen as the pet to be used on the experimental ward since a dog is more interactive than other types of companion animals and is generally easy to care for. Also, it was preferable to choose a homeless pet from the animal shelter, which housed primarily stray dogs. Approximately 12 dogs were evaluated before choosing the dog used in the study. Dogs were evaluated according to criteria presented by Bustad (1980). Several dogs were eliminated because their submissive behaviors, such as cowering and spontaneous urination, suggested that they could later become aggressive in a

setting where they might become fearful. Also, dogs which resisted having their head pressed down were judged as potentially too aggressive to be placed in a hospital setting. A few dogs were eliminated because they were too large for patients to handle. Some were not chosen because they were not interactive enough for the setting. The experimenter did not consider any black dogs because of possible superstitious associations which would cause patients to avoid the dog. For example, some disturbed patients could be prone to associating the color black with evil or badness.

A human therapist was chosen to be the therapeutic agent on the comparison ward, taking into account the goal of assessing the relative effectiveness of a pet in facilitating human contact. Since there was only one person to volunteer as the ward therapist, there was no selection process involved. The therapist was a 21-year-old female senior undergraduate philosophy major who had a potential interest in a career as a mental health professional.

Underlying the rationale for the study is the psychodynamic viewpoint that severely disturbed patients experience profound fear and mistrust in interpersonal relationships. Such fear can be seen as deriving from deficient early experiences with significant others, particularly parents. Many authors such as Shapiro (1981) note that several etiological factors interact and contribute to the onset of severe psychopathology, such as schizophrenia. As Shapiro notes, each discipline offering a theory of psychopathology provides only a

partial explanation. The current study takes into account only the psychodynamic/interpersonal deficits noted in very disturbed patients.

The experimenter posited that an animal companion would be of greater benefit than a human companion in improving the nature of social interactions between chronic psychiatric patients. Since these patients are fearful of humans, an animal would be seen as less threatening than a human and would be more likely to facilitate interactions. In addition, a pet could further stimulate social interactions in providing a neutral topic of conversation and a source of potentially conflict-free activity, such as walking or grooming. A human therapist, if seen as more fear-inducing than an animal companion, would be less likely to be a topic of conversation or social stimulus. The study was therefore conducted to evaluate whether a pet on a ward of chronic psychiatric patients would generate more positive social interactions and other positive behaviors than a human companion on a similar ward. This hypothesis was tested by evaluating patient behaviors on a variety of dimensions. Specifically, patients on the experimental ward were expected to show greater improvement than patients on the comparison ward in the following ways:

- 1) A greater decrease in seclusiveness, as measured by the Psychotic Inpatient Profile,
- 2) A greater increase in involvement, support, spontaneity, and autonomy on the ward as reflected in staff responses to the Ward Atmosphere Scale,

- 3) A greater increase in positive interpersonal interactions and other positive behaviors, and a greater decrease in negative behaviors as rated in structured observation sessions,
- 4) A greater increase in self-reliance as reflected in chart data on chores completed, hygiene, and other ward behaviors, and
- 5) A greater increase in relaxation as reflected in measures of blood pressure and pulse rates.

## CHAPTER III

## METHODS AND PROCEDURE

MethodsHuman Subjects

Experimental group. Subjects were 15 female inpatients on an open ward at Waterside Building, the unit of Lakeshore Mental Health Institute which houses chronic patients. The mean age of the patients was 44 years (range of 29 to 54). The average duration of their stay on the ward as of the beginning of the study was 38 months (range of one to 131 months), and the mean number of previous hospitalizations for the group was eight (range of one to 30). All of the patients were receiving medication. Twelve were receiving antipsychotic medication only, while three received both antipsychotic medication and lithium. Twelve had a schizophrenic diagnosis, two were diagnosed Bipolar Disorder, and one had a diagnosis of Atypical Psychosis.

Comparison group. Subjects were 15 female inpatients on a comparable ward at Waterside Building. The mean age of the patients was 37 years (range of 22 to 53). The average duration of stay on the ward as of the beginning of the study was 23 months (range of 3 to 65 months), and the mean number of previous hospitalizations for the group was seven (range of one to fourteen). Fourteen of the subjects were receiving medication at the beginning of the study. Seven received antipsychotic medication, three received lithium, three received both antipsychotic medication and lithium, and two received

anticonvulsant medication. Four had schizophrenic diagnoses, three were diagnosed Schizo-Affective Disorder, two were diagnosed Adjustment Disorder, two were diagnosed Mental Retardation with behavioral symptoms, one was diagnosed Psychotic Depression, and one had a diagnosis of Primary Degenerative Dementia.

### Live Animal

A medium-sized (15-20 pounds), neutered, mixed-breed (fox terrier and other undetermined breeds) female dog was obtained from the local animal shelter. The dog was examined by a licensed veterinarian to ensure that she was in good health and not a carrier of a zoonotic disease. In addition she had been evaluated for temperament, and was found to be very playful, outgoing, and not likely to bite. The dog had been trained to eliminate outdoors.

The dog was housed on the female ward containing the experimental group of patients for the duration of the study. The patients named her "Muffy," and she is pictured in Figure 1. The experimenter assumed responsibility of seeing that the dog was appropriately fed, groomed, and walked. It was anticipated that patients would incorporate these activities into their daily routine.

### Ward Therapist

An undergraduate student volunteered to act as ward therapist on the comparison ward. She visited the ward regularly (10 hours per week) for the duration of the study. She was available for patients to interact with as they pleased. She spent most of her time on the ward talking with patients and occasionally playing cards or other games.

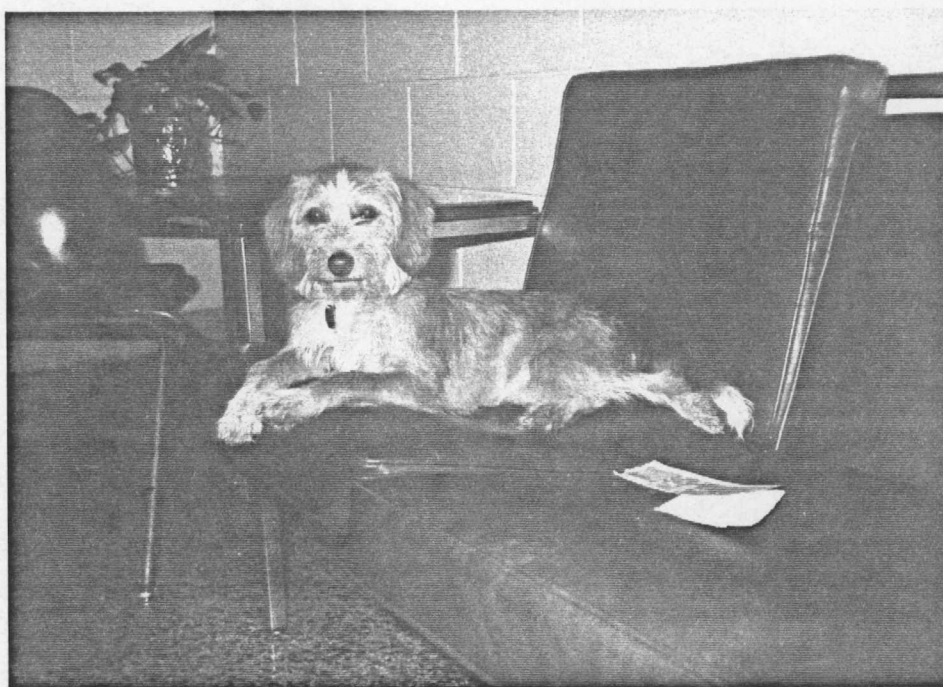


Figure 1. Muffy

GILBERT  
OFFICE  
LANCASTER BOND

### Standardized Materials

Psychotic Inpatient Profile. The Psychotic Inpatient Profile (PIP), developed by Maurice Lorr and Norris Vestre (1968), is a behavior and symptom inventory which measures twelve syndromes of observable psychotic behavior. There are 74 statements which describe several aspects of manifest ward behavior which are rated on a four-point scale based upon frequency of occurrence. In addition there are 22 statements checked true or false depending upon patients' self-report. The PIP items are reproduced in Appendix A. The inventory is designed to be completed by ward personnel, such as nurses and psychiatric aides, who have considerable day-to-day contact with psychotic inpatients being rated. Lorr and Vestre recommend in the manual that these raters observe the patients' behavior and interpersonal interactions for three days and complete the ratings immediately after the rating period.

The scores are weighted and plotted on a profile of the twelve syndromes described below. The first eight are based upon the ratings of the 74 statements regarding ward behavior. The last four are based upon the patient's self-report of the 22 true-false statements. The following description of the twelve syndromes is from the PIP manual (Lorr and Vestre, 1968, pp. 1-2).

Excitement (EXC): The syndrome represents a tendency to be noisy, overtalkative, high in mood and aggressively overactive.

Hostile Belligerence (HOS): Hostile and obscene language, belligerence, and a tendency towards combativeness define this syndrome.

Paranoid Projection (PAR): The syndrome is characterized by suspicion, resistiveness, compliants concerning care and treatment, and ready annoyance to imagined slights.

Anxious Depression (ANX): An anxious bewildered depression is defined in this pattern. Depressive Mood is a correlated pattern.

Retardation (RTD): Movement, speech and response are slowed sometimes to the point of apathy and stupor in this syndrome.

Seclusiveness (SEC): The dimension measures degree of interpersonal interaction. High scores represent seclusiveness or withdrawal from contact.

Care Needed (CAR): The pattern is evidenced by an inability or unwillingness to care for oneself. Low scores may be regarded as a measure of competence.

Psychotic Disorganization (PSY): The syndrome is defined by motor disturbances (bizarre postures and movements) and indicators of conceptual disorganization. The pattern is probably central to schizophrenic withdrawal.

Grandiosity (GRN): A delusional grandiosity is briefly characterized in this syndrome.

Perceptual Distortion (PCP): Hallucinatory experiences usually associated with paranoid tendencies are represented in this syndrome.

Depressive Mood (DPR): The syndrome is characterized by self-reports of dejection, hopelessness, and failure.

Disorientation (DIS): This is a functional disorientation perhaps due to self-proccupation with inner fantasies, conflicts or hallucinatory experiences.

Seclusiveness was the only subscale specifically hypothesized to change significantly on the experimental ward over the course of the study. Nonetheless, patients were rated on the other subscales to explore whether there would be any secondary effects of the greater interpersonal involvement which was expected to evolve with the presence of the dog on the ward.

Validity and reliability of the PIP. There is support for the factorial validity of the PIP according to the manual (Lorr and Vestre, 1968). Four large independent samples of psychiatric inpatients yielded the same twelve factors. In addition, eight of the syndromes were found to correspond with syndromes apparent from data gathered in interviews.

Lorr and Vestre studied a drug-free sample of 412 subjects and found that the twelve PIP syndromes do not correlate highly with each other. The correlations between the syndromes ranged from  $-.25$  to  $.65$ , with only 8 of 66 correlation coefficients being greater than  $.50$ . Lorr and Vestre also found that the PIP discriminated between hospital groups differing in severity of illness more than 75 percent of the time. The interrater reliabilities ranged from  $.74$  for Perceptual Distortion to  $.99$  for Grandiosity.

Ward Atmosphere Scale. The Ward Atmosphere Scale (WAS), developed by Rudolf H. Moos, is an instrument used to assess the social environments of hospital-based psychiatric treatment programs. The scale consists of 100 statements which are descriptive of ward atmosphere. Staff members complete the scale by marking each item true or false. The results are categorized into ten subscales, briefly described below.

Involvement measures the activity and energy level of patients in their daily social functioning on the ward. This subscale includes general enthusiasm.

Support assesses how supportive patients are toward one another and how supportive staff and doctors are toward patients.

Spontaneity measures the degree to which the environment is conducive to open expression of feelings between patients and staff.

Autonomy measure the degree of self-sufficiency, responsibility, and self-direction patients are encouraged to exercise.

Practical Orientation assesses the degree to which the program prepares patients for eventual release from the hospital.

Personal Problem Orientation measures the extent to which patients are encouraged to discuss their problems and feelings in an effort to understand themselves.

Anger and Aggression assesses the degree to which open expression of anger is allowed and encouraged.

Order and Organization measures the importance of order and organization on the ward.

Program Clarity measures how explicit are ward rules and procedures and the extent to which patients are aware of what is expected of them.

Staff Control assesses the degree to which staff must restrict patients.

According to the WAS manual, the first three subscales--Involvement, Support, and Spontaneity--measure a Relationship dimension. Moos considers the four subscales of Autonomy, Practical Orientation, Personal Problem Orientation, and Anger and Aggression as measuring a Treatment Program dimension. The subscales of Order and Organization, Program Clarity, and Staff Control assess System Maintenance dimensions. Staff members on both the experimental and comparison wards were rated only on the first four subscales. The relevant test items appear in Appendix B.

The WAS manual indicates that the subscale internal consistencies all fall in an acceptable range, with correlations ranging from .63 to

.82 for staff respondents, with a mean of .71 (Moos, 1974). The item-subscale correlations average .47 and range from .42 to .53 (Moos, 1974). Moos further reported that the test-retest reliability coefficients averaged .89 for staff respondents on four different wards who took the test four to seven months apart. Moos did not report any external validity studies in the manual.

#### Data Routinely Collected on the Experimental Ward

On the experimental ward, patients' pulse and blood pressure were routinely recorded approximately on a bi-weekly basis. Similar data for patients on the comparison ward were to be compared with that on the experimental ward.

As part of ward routine, patients on the experimental ward were rated on a point-system, with which they receive points daily for oral hygiene, general hygiene, bed-making, room care, laundry, social skills, and ward chores. Points were subtracted for rules broken. The experimenter considered patients' point totals as reflecting their degree of self-reliance. Comparable data were not available on the comparison ward.

#### Categorization of Behavioral Observations

The three lists of patient behaviors, which appear in Appendix C, were developed following several hours of pilot observations on four chronic wards with and without a dog present. The three lists are: 1) Solitary Activities, 2) Interactions with others, and 3) Interactions with a Pet Dog.

Twenty independent judges, who were graduate students in clinical psychology, completed the Inpatient Behavior Assessment form, which appears in Appendix D. The judges rated each patient behavior in the three categories as positive (+), negative (-), or neutral (o). For each evaluation they indicated whether they were very sure, sure, or not sure.

For each behavior the evaluations (+,-,o) were weighted based upon the level of certainty. Those evaluations for which the rater indicated "very sure" were weighted by a factor of 1.5. Those evaluations for which the rater indicated "sure" were weighted by a factor of 1.0. Those evaluations for which the rater indicated "not sure" were weighted by a factor of 0.5. Based upon these weighted ratings, patient behaviors were designated as follows: 1) Positive, 2) Positive-Neutral, 3) Negative, 4) Negative-Neutral, 5) Neutral, and 6) Uncertain. The groups are presented in Appendix E by category.

The following criteria were applied in designating the behaviors:

- 1) If all judges rated a behavior as positive, negative, or neutral, that behavior was designated as it was unanimously rated.
- 2) If ratings for a particular behavior were divided only between neutral and positive evaluations, or between neutral and negative evaluations, the behavior was designated as positive, negative, or neutral when 75 per cent or more of the weighted values were in these respective categories.

- 3) Under the same conditions described in (2) above, if there was less than a 75 percent proportion of weighted value in any one evaluation category (+, -, or o), then the behavior was designated as positive-neutral if the ratings were divided between the positive and neutral categories, and designated as negative-neutral if the ratings were divided between the negative and neutral categories. (In no case was any behavior found to be divided only between positive and negative evaluations.)
- 4) When the ratings were divided amongst all three evaluations (+, -, or o), the following criteria were applied:
  - a) If there was less than a 90 percent proportion of weighed values in any two of the categories, the behavior was designated as uncertain.
  - b) If there was greater than a 90 percent proportion of weighted values in two of the three evaluative categories, the evaluation for which there was less than ten percent of the weighted rating was disregarded. The criteria described in (2) and (3) above were then applied.

### Procedure

#### Prior to the Study Period

1. The experimenter held a staff orientation session on each ward to present the proposed research plan to ward personnel (nurses

and psychiatric technicians). The purposes of the study and the benefits and risks of the project were explained. An optional questionnaire, which appears in Appendix F, was distributed on the experimental ward during the meeting so that staff members could provide anonymous feedback. None of them chose to complete the questionnaire. On both wards staff members who were willing to participate in the study by completing the Ward Atmosphere Scale were asked to read and sign the Staff Consent Form reproduced in Appendix G. On the experimental ward nearly all staff members gave verbal consent, but only one signed the form. About half of the staff members on the comparison ward signed the form and nearly all gave verbal consent. No staff member on either ward expressed direct opposition to the study.

2. An undergraduate psychology major volunteer interviewed patients on the experimental ward and completed the Resident Interview form, which appears in Appendix H, for each patient. Patients were superficially cooperative and gave brief responses. However, the interviews were useful in orientating the patients to the idea of having a dog on the ward.

3. The experimenter met with patients on both wards to discuss the project and to solicit volunteers to participate in the study. On the experimental ward fifteen patients agreed to participate and signed the consent form which appears in Appendix I. The form was read to each patient who agreed to participate to be sure that they understood its content. All of the patients who agreed to participate

were competent to sign the consent form. Of the patients who refused to participate, four refused in order to protest the idea of having a dog on the ward. Two other patients wanted to be in the study but refused to sign any form. Two patients would not speak with the experimenter, and one was mute and unable to understand the nature of the study.

On the comparison ward, fifteen of the first seventeen patients approached were willing to be in the study and signed the consent form which appears in Appendix J. The experimenter presented the form in the same manner as on the experimental ward. There was less apparent resistance to the study on the comparison ward presumably because having a volunteer therapist on the ward was seen as less controversial and less disruptive than having a dog.

4. The Psychotic Inpatient Profile was administered for all patients in the two groups. Patients were rated by staff members who were randomly assigned to complete forms on two to four patients in the study.

5. Staff personnel who were willing to complete the Ward Atmosphere Scale did so.

#### The Study Period

The dog was to be placed on the experimental ward for four months. However, due to problems which arose during the course of the study, which are detailed in the Discussion section, the dog was removed after three months. A licensed veterinarian visited the ward a few days after the dog had been introduced to ensure that there were no

risks or harm to either to the patients or the dog on the ward. He indicated that the dog was appropriate for the setting.

The ward therapist visited the comparison ward two hours per day, five days per week, and she generally followed a regular schedule. She was always present during periods in which behavioral observations were being recorded.

Behavioral observations were made one week prior to the start of the study, and then after one week, two weeks, four weeks, seven weeks, ten weeks, and thirteen weeks. Observations were made more frequently at the beginning of the study because of the anticipation of a novelty effect.

Observers were equipped with a portable audio tape player containing a prerecorded 15-minute tape which announced, through earphones, consecutive 15-second time intervals. There were therefore 60 intervals. During each interval, the observer recorded observed behaviors for each patient according to the scoring manual presented in Appendix K. Behaviors were recorded on the form which appears in Appendix L. Patients were observed in random order.

At the end of the three-month period, each patient was reevaluated with the Psychotic Inpatient Profile, and staff members on both wards completed the Ward Atmosphere Scale. Data from patients' charts (e.g., blood pressure, ward points) were also reviewed.

## CHAPTER IV

## RESULTS

Introductory Note

Some patients who were participating in the study were discharged during the course of the study on each ward. Therefore, in the final analysis of the data,  $n = 12$  on the experimental ward and  $n = 10$  on the comparison ward. This could have affected statistical outcomes in a number of ways. For one, if the patients were discharged because of improvement, then these positive changes would not be reflected in the data analysis, since posttest measures could not be obtained. This would be largely the case on the comparison ward, where four patients in the study were discharged because of improvement, and one was not available due to medical illness. On the experimental ward, two patients eloped and one was discharged to a boarding home, as her condition had improved. There is no statistical basis for stating that the patients who were discharged because of improvement had been positively affected by the interventions of the study. Also, there is no evidence that the experimental ward patients who eloped did so because of the dog.

Psychotic Inpatient Profile Data

The mean pretest and posttest standard subscale scores for each subtest of the PIP appear in Table 1 for the experimental ward and in Table 2 for the comparison ward. T tests were used to test for

TABLE 1  
Psychotic Inpatient Profile: Mean Pretest and Posttest  
Standard Scores by Subscale for Experimental Ward

| Variable                  | Pretest Mean | Posttest Mean |
|---------------------------|--------------|---------------|
| Excitement                | 48.7         | 48.1          |
| Hostile Belligerence      | 50.5         | 50.2          |
| Paranoid Projection       | 49.0         | 46.3          |
| Anxious Depression        | 48.2         | 46.8          |
| Motor Retardation         | 50.1         | 50.2          |
| Seclusivness              | 47.4         | 49.8          |
| Care Needed               | 48.2         | 48.7          |
| Psychotic Disorganization | 49.3         | 49.4          |
| Grandiosity               | 49.2         | 47.1          |
| Perceptual Distortion     | 51.7         | 51.8          |
| Depressive Mood           | 49.9         | 48.4          |
| Disorientation            | 56.2         | 53.2          |

TABLE 2  
Psychotic Inpatient Profile: Mean Pretest and Posttest  
Standard Scores by Subscale for Comparison Ward

| Variable                         | Pretest Mean | Posttest Mean |
|----------------------------------|--------------|---------------|
| Excitement                       | 55.4         | 58.6          |
| Hostile Belligerence             | 59.2         | 60.0          |
| Paranoid Projection <sup>a</sup> | 48.5         | 52.1          |
| Anxious Depression               | 46.5         | 48.7          |
| Motor Retardation                | 48.5         | 48.7          |
| Seclusivness                     | 43.8         | 43.5          |
| Care Needed                      | 48.9         | 49.2          |
| Psychotic Disorganization        | 52.0         | 54.4          |
| Grandiosity                      | 49.7         | 50.7          |
| Perceptual Distortion            | 55.9         | 54.7          |
| Depressive Mood                  | 53.1         | 53.1          |
| Disorientation                   | 40.6         | 41.5          |

<sup>a</sup>There was a significant difference ( $p < .05$ ) between pretest and posttest standard scores.

significance of differences between pretest and posttest scores. For patients on both wards, the difference between mean pretest and posttest scores on Seclusivness was not significant. For the experimental ward,  $t = -1.600$  ( $p > .05$ ). For the comparison ward,  $t = 0.182$  ( $p > .05$ ). Mean pretest and posttest scores on the other eleven subscales of the PIP were also compared for exploratory purposes. Only one significant finding was recorded. On the comparison ward there was a significant increase in Paranoid Projection as measured by the PIP ( $t = -1.821$ ,  $p < .05$ ). Since 24  $t$  tests were done, the one significant result may be due to chance.

#### Ward Atmosphere Scale Data

The mean pretest and posttest standard scores for each subscale of the WAS appear in Table 3 by ward.  $t$  tests were used to test for the significance of differences between pretest and posttest scores. For patients on both wards, the differences between pretest and posttest subscale scores were not significant ( $p > .05$ ). In addition, the differences between the pretest and posttest composite WAS scores was not significant for either ward ( $p > .05$ ). The increase in Autonomy (pretest vs. posttest) noted on the experimental ward is significant at the  $p < .10$  level ( $t = -1.463$ ).

TABLE 3

Ward Atmosphere Scale: Mean Pretest and Posttest  
Standard Scores by Ward

| Subscale              | <u>Experimental</u> |          | <u>Comparison</u> |          |
|-----------------------|---------------------|----------|-------------------|----------|
|                       | Pretest             | Posttest | Pretest           | Posttest |
| Involvement           | 54                  | 50       | 55                | 46       |
| Support               | 41                  | 52       | 41                | 49       |
| Spontaneity           | 44                  | 46       | 54                | 56       |
| Autonomy <sup>a</sup> | 49                  | 60       | 46                | 42       |
| Composite             | 47                  | 52       | 49                | 48       |

<sup>a</sup>Significant difference between pretest and posttest scores at  
 $p < .10$  level on the experimental ward.

### Ward Data Routinely Collected

The point system data routinely collected on the experimental ward was not used because the emphasis on ward chores changes from week to week. Due to this potentially confounding effect, these data were not analyzed.

For patients on the experimental ward, the differences between pretest and posttest blood pressure and pulse were not statistically significant. Mean posttest systolic blood pressure of 116 was not significantly higher than mean pretest systolic blood pressure of 111 ( $t = -1.330$ ,  $p > .05$ ). Mean posttest diastolic blood pressure of 76 was not significantly higher than mean pretest diastolic blood pressure of 73 ( $t = -1.265$ ,  $p > .05$ ). Mean posttest pulse of 79 was not significantly higher than mean pretest pulse of 78 ( $t = -0.991$ ,  $p < .05$ ).

Adequate data on blood pressure and pulse were not available on the comparison ward as the records there were not kept current, and there were too much missing data to allow valid comparisons.

### Data from Behavioral Observations

Data from behavioral observations were compiled into evaluative categories (e.g., positive, negative) according to the groupings presented in Appendix E. Data were analyzed using a ward by time (seven intervals) repeated measures analysis of variance (ANOVA) of each of the variable categories. Specific behaviors which were observed in at least six of the seven time periods were subject to the

same analysis of variance procedure. The specific behaviors analyzed are listed below:

Solitary Activities: Eating, drinking  
Exercising, grooming  
Pacing  
Self-stimulation (Non-destructive)  
Sitting only  
Sleeping  
Smoking  
Talking to self  
Watching TV  
Working on chore or hobby

Interactions with  
Others: Staring/Looking  
Talking with  
Visually tracking

Interactions with  
Dog or Therapist: Staring/Looking  
Talking to  
Visually tracking

In further analysis of the observational data, the behaviors were regrouped into descriptive categories and analyzed using the ward by time repeated measures ANOVA. The solitary behaviors were grouped into the following categories:

Sedentary: Nondestructive Self-stimulation  
Sitting only  
Sleeping  
Smoking

Entertainment: Listening to music  
Singing  
Reading  
Watching TV

Productive and  
Self-Enhancing: Eating, drinking  
Exercising, grooming  
Working on chore or hobby  
Writing

|                |                                                                                                                                                                    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inappropriate: | Destroying objects<br>Laughing (without humorous stimulus)<br>Maintaining bizarre posture<br>Pacing<br>Rocking<br>Screaming<br>Self-destructive<br>Talking to self |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Interactions with Others, and Interactions with Dog or Therapist were grouped into the following categories:

|                   |                                                                                          |
|-------------------|------------------------------------------------------------------------------------------|
| Moving Toward:    | Calling<br>Praising<br>Seeking out<br>Smiling at                                         |
| Moving Away From: | Actively avoiding<br>Hurting<br>Ignoring<br>Making bizarre gestures toward<br>Yelling at |
| Being With:       | Helping<br>Making affectionate contact<br>Playing with<br>Talking with<br>Teaching       |
| Noticing:         | Giving commands<br>Imitating<br>Laughing at<br>Looking at<br>Visually tracking           |

### Analysis of Solitary Behaviors

Behavioral observations indicated that solitary behaviors accounted for approximately 80 percent of patients' time on both wards. The mean number of observed instances of solitary behavior are plotted by ward in Figure 2. Analysis of variance indicated no significant differences between wards on either Positive or Negative Solitary activities. The mean number of time intervals in which Positive and

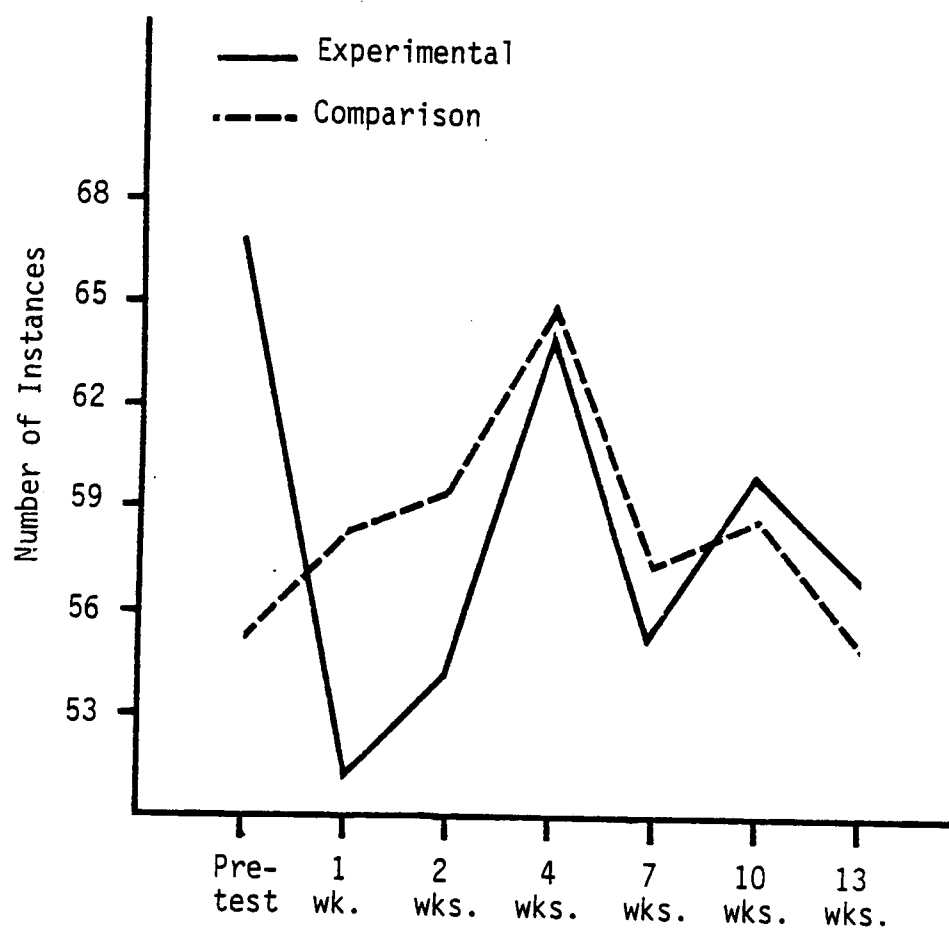


FIGURE 2. Mean Number of Observed Instances of Solitary Behaviors by Ward

Negative Solitary activities were observed are plotted by ward in Figures 3 and 4. There was one significant result of analysis of variance of Solitary activities. There was a significant difference between wards with regard to instances of Nondestructive Self-Stimulation ( $F = 2.85 (6,60)$ ,  $p < .02$ ). The mean number of observed instances of this behavior are plotted in Figure 5 by ward.

The data on Solitary Behaviors observed did not support the hypothesis that instances of positive solitary activities would increase more on the experimental ward than on the comparison ward. However, it is noteworthy that Positive Solitary behaviors observed on the experimental ward were at a low point at the time of strong staff protest against the study (see Discussion, p. 74), and were at a high point during a period of relative satisfaction with the dog, as noted on Figure 3. Furthermore, as shown in Figure 5, instances of Nondestructive Self-Stimulation on the experimental ward were observed most frequently during the period of satisfaction with the dog and positive media coverage. A similar, but less dramatic effect was noted on the comparison ward, suggesting a ripple effect.

#### Analysis of Interactions with Others

Behavioral observations indicated that interactions with others accounted for approximately 15 percent of patients' time on both wards. The mean number of observed instances of Interactions with Others are plotted by ward in Figure 6.

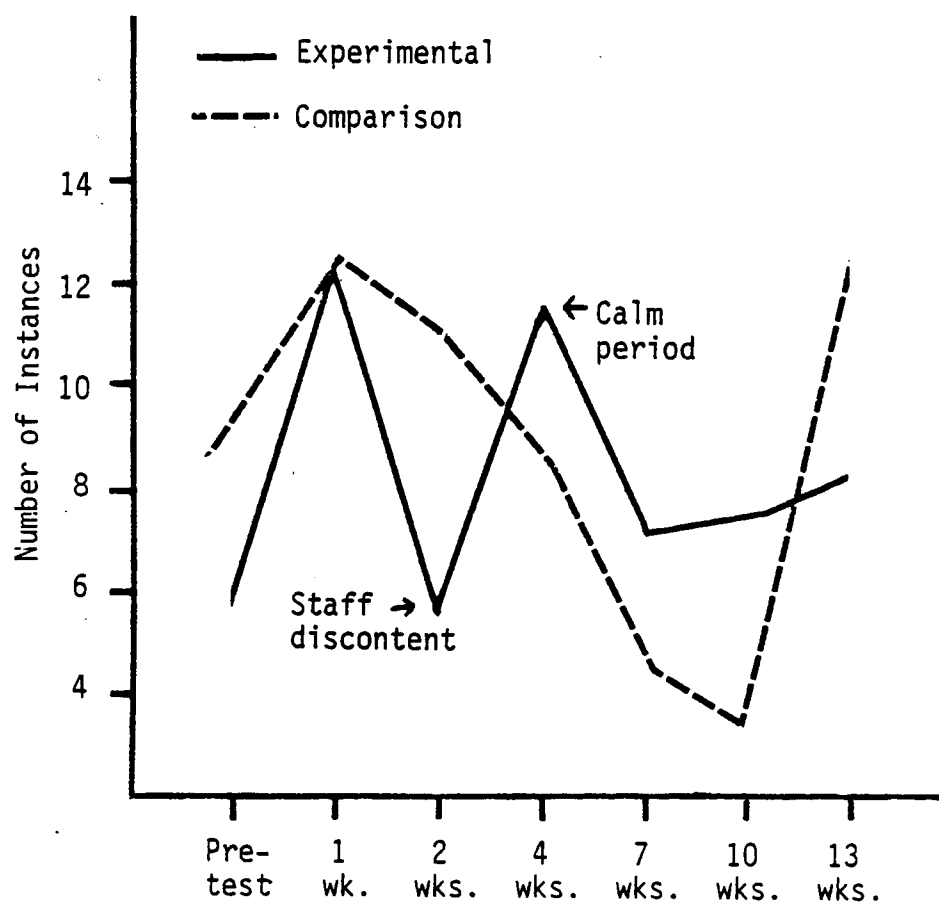


FIGURE 3. Mean Number of Observed Instances of Positive Solitary Behaviors by Ward

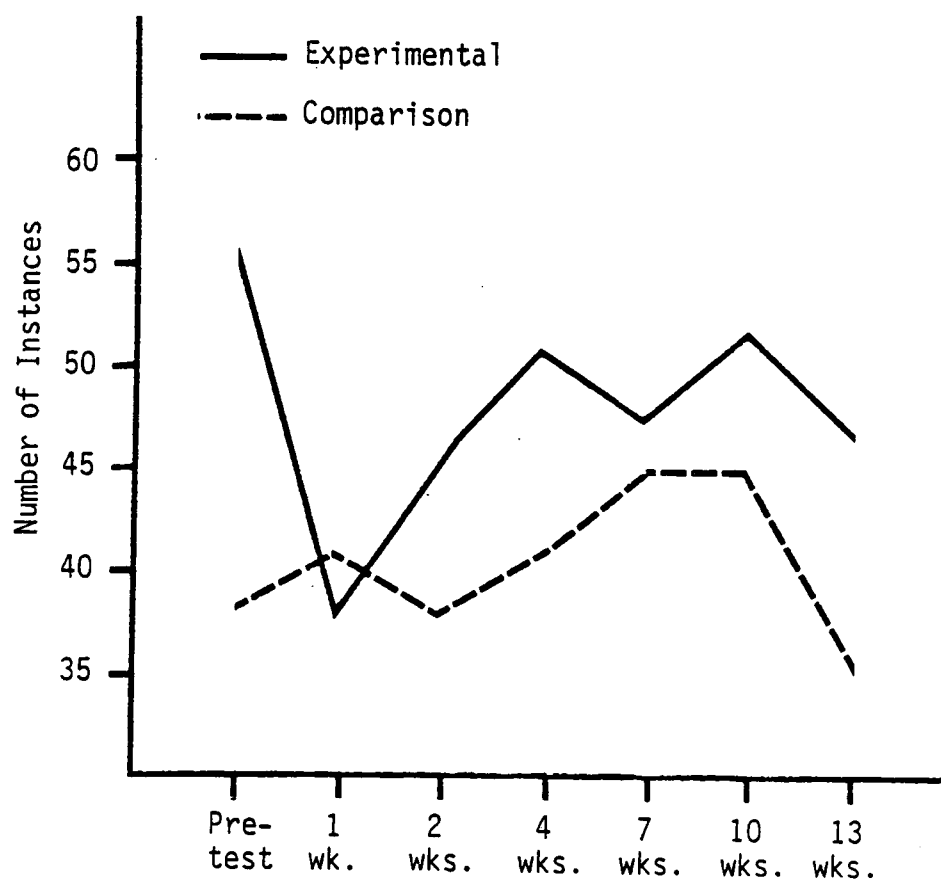


FIGURE 4. Mean Number of Observed Instances of Negative Solitary Behaviors by Ward

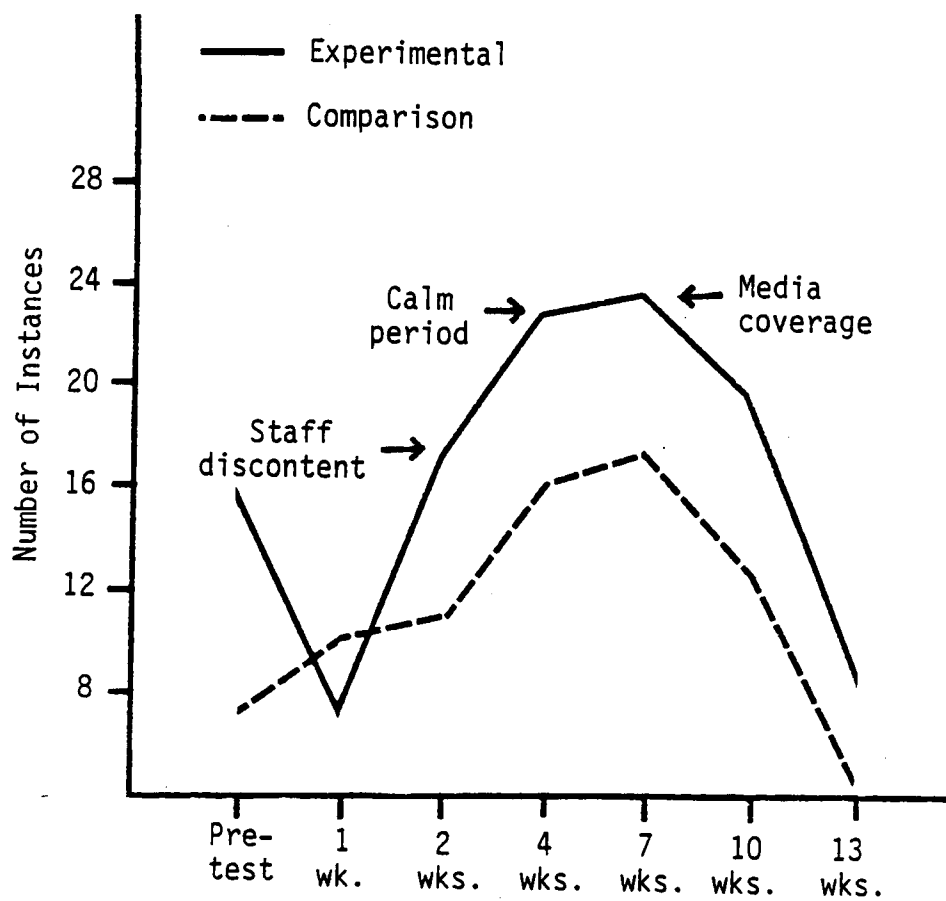


FIGURE 5. Mean Number of Observed Instances of Nondestructive Self-Stimulation by Ward

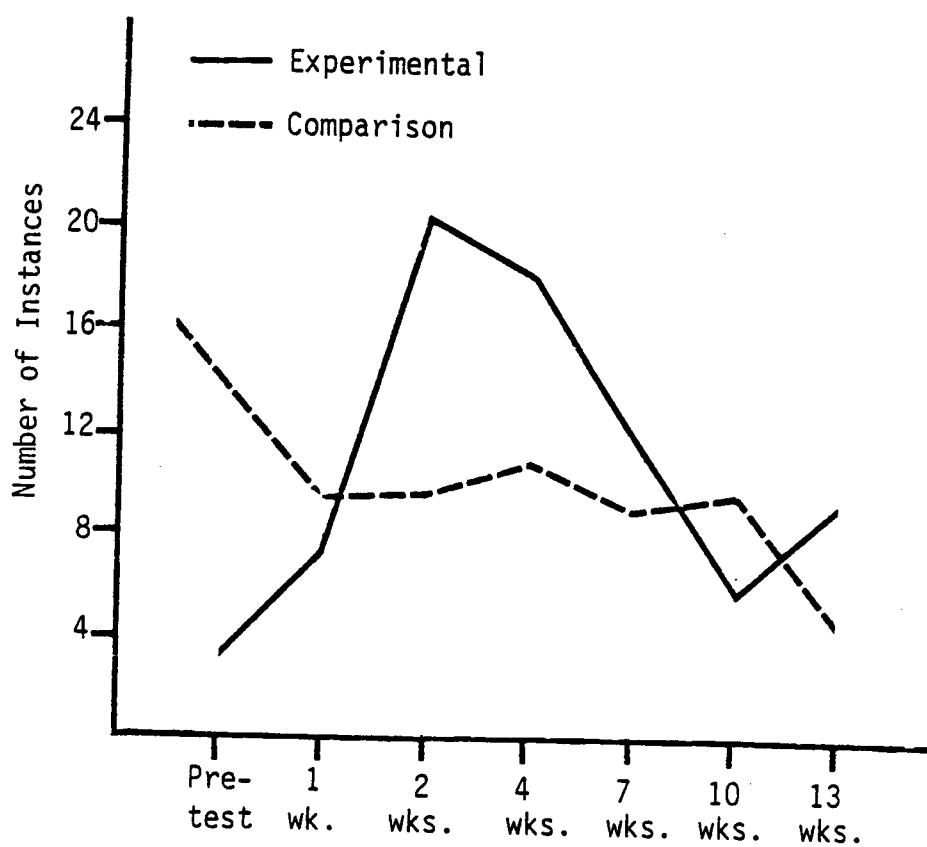


FIGURE 6. Mean Number of Observed Instances of Interactions with Others by Ward

Analysis of variance indicated a significant difference between wards over time on Positive Interactions with Others ( $F = 2.59$  (6,108),  $p < .05$ ). The mean number of time intervals in which Positive Interactions with Others were observed on each ward are presented in Figure 7.

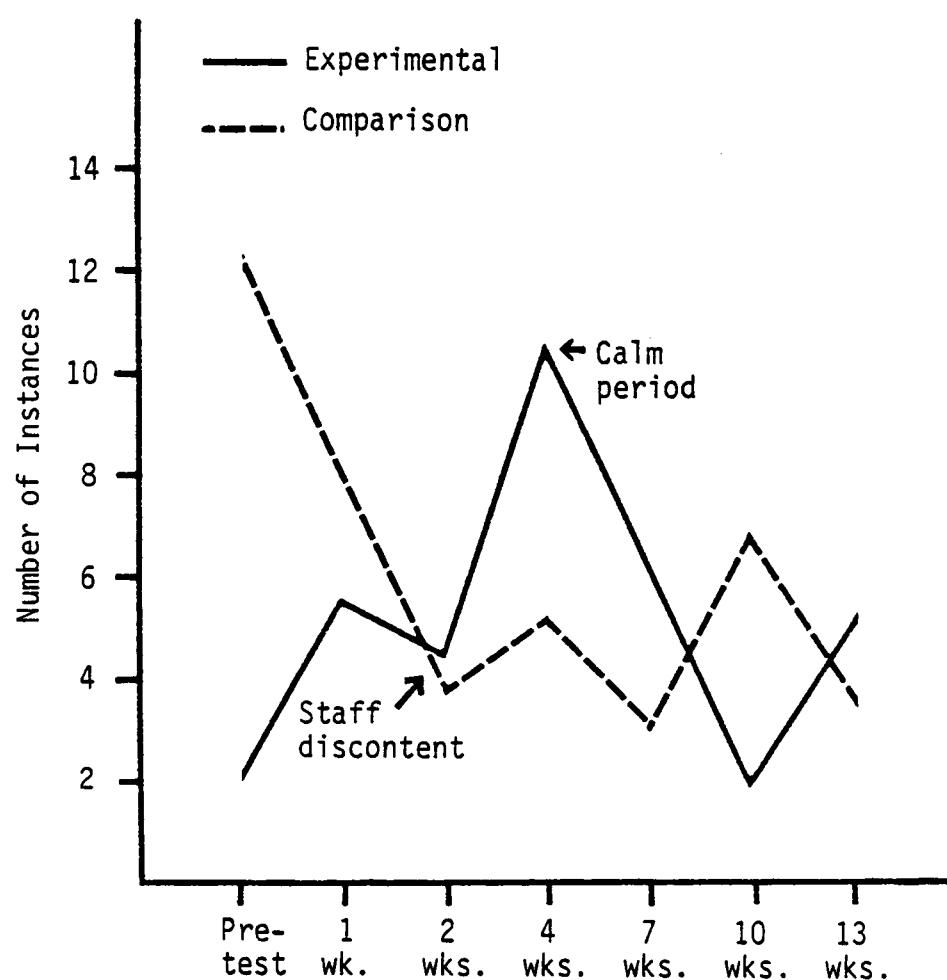


FIGURE 7. Mean Number of Observed Instances of Positive Interactions with Others by Ward

Analysis of variance also indicated a significant difference between the two wards with regard to observed Negative Interactions with Others over time ( $F = 3.43 (6,60), p < .01$ ). The mean number of time intervals in which Negative Interactions with Others occurred are plotted by ward in Figure 8.

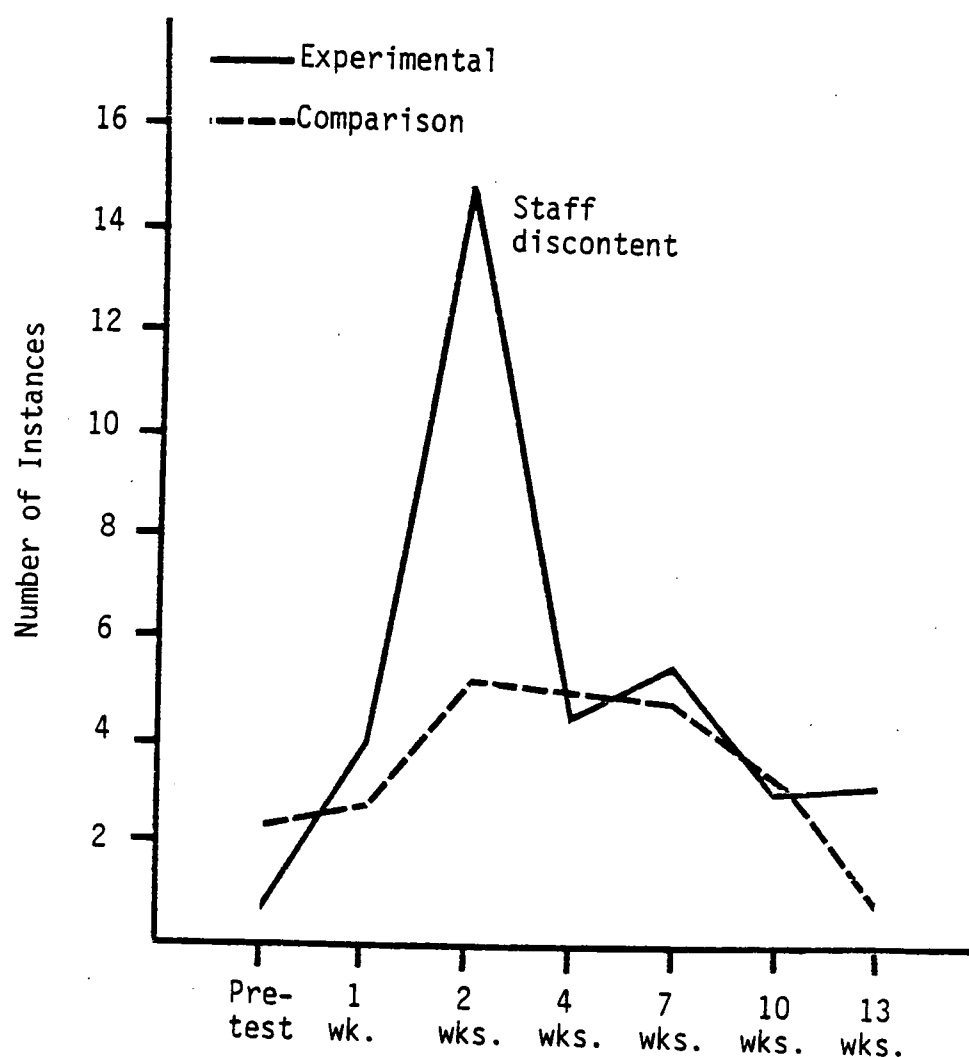


FIGURE 8. Mean Number of Observed Instances of Negative Interactions with Others by Ward

Analysis of variance of specific interpersonal behaviors indicated one significant finding. There was a significant difference between wards on the behavior of Staring/Looking at Others ( $F = 3.12$  (6,60),  $p < .01$ ). The mean number of time intervals in which this behavior occurred are plotted in Figure 9 by ward.

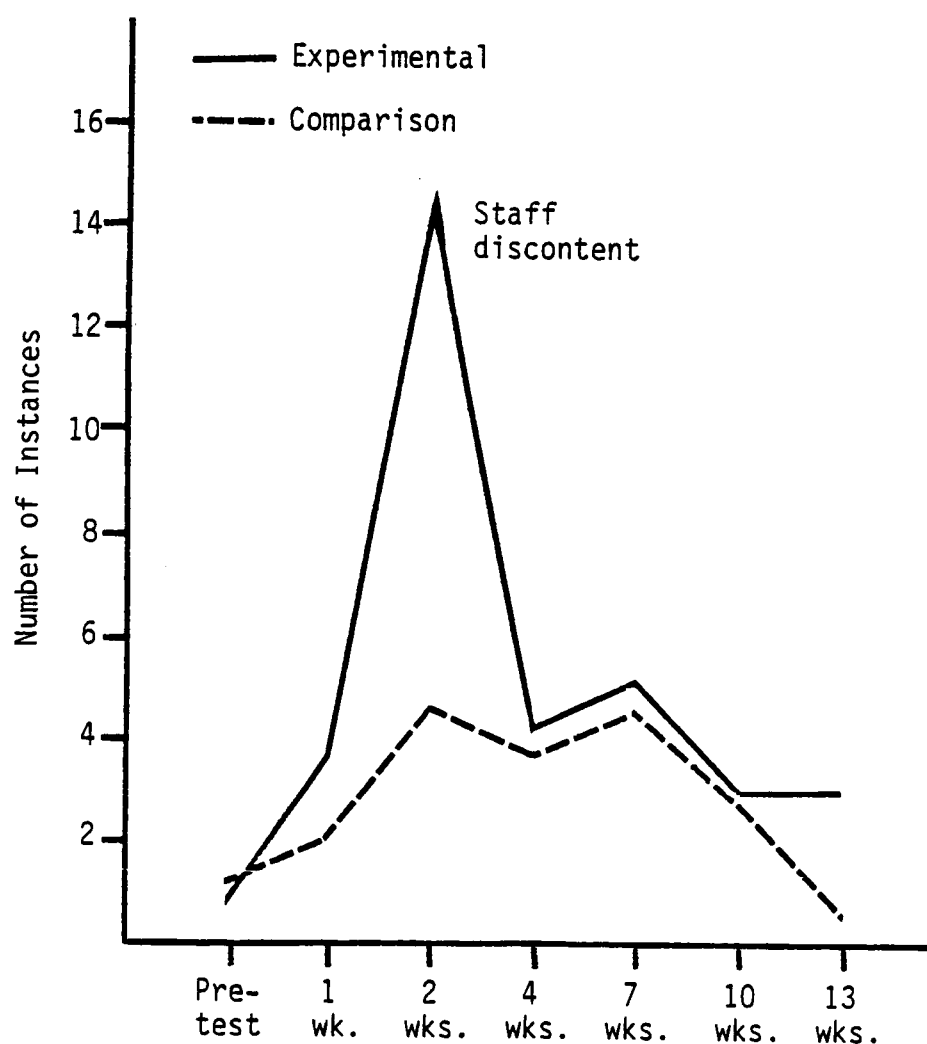


FIGURE 9. Mean Number of Observed Instances of Looking at Others by Ward

The behavior of Looking at Others accounts for nearly all of the Negative social behaviors observed. Differences between wards on this behavior therefore account for the significant findings of a difference between wards on Negative Interactions with Others, as well as the significant finding of a difference between wards on Noticing People ( $F = 4.48 (6,60)$ ,  $p < .001$ ).

Overall, the data on Interactions with Others do not support the hypotheses that positive social interactions would increase more and that negative social interactions would decrease more on the experimental ward than on the comparison ward over the course of the study. It is noteworthy, however, that Positive Interactions with Others peaked on the experimental ward at a time of relative satisfaction with the study when staff members were generally calm. This is noted on Figure 7. Furthermore, Negative Interactions with Others--largely attributable to the behavior of Staring/Looking at Others--peaked on the experimental ward during a time of strong staff protest to the study, as indicated on Figures 8 and 9. This suggests that patients were more vigilant of others at a time of extreme tension on the ward than at other times.

#### Analysis of Interactions with the Dog and Therapist

On the experimental ward 6 percent of the observed behaviors were interactions with the dog, and on the comparison ward 3 percent of patients' behaviors were interactions with the therapist. Analyses of variance indicated no significant findings with regard to ward differences in interactions with the therapeutic agents.

## CHAPTER V

### DISCUSSION

#### Introduction

The current study was conducted to evaluate the benefits of a companion animal to chronic psychiatric inpatients. Various authors such as Levinson (1978), Katcher and Friedman (1980), and Mugford (1980) present their viewpoint that animal companions fulfill needs for affiliation and affection. They also maintain that companion animals enhance self-reliance and self-esteem, thereby providing some therapeutic benefit. Several researchers have investigated whether there are such measurable positive effects of providing companion animals to elderly persons (Corson & Corson, 1978; Mugford & McComesky, 1974), incarcerated criminals (Trussel, 1978), and psychiatric patients (Corson & Corson, 1980; Doyle, 1975; Thompson, Kennedy, & Igon, 1983). While these studies report positive results of having companion animals, such as improved social contact, the research is methodologically weak and the results are therefore questionable. In a review of the literature on pet-facilitated therapy, Beck and Katcher (1984) concluded that there is no clearcut evidence that companion animals are more effective than other novel events introduced in an institution, and that any benefits offered by companion animals are transient. They emphasized the importance of

implementing well-controlled studies to evaluate the relative effectiveness of pet therapy over other interventions.

The current study was an attempt to evaluate the relative effectiveness of a dog placed on a ward of chronic psychiatric patients, as compared with a human therapist placed on a similar ward. In addition, the study presented an opportunity to evaluate the feasibility of implementing a pet therapy program in a State psychiatric hospital. Various measures were used to test the hypothesis that patients on the ward with the companion animal would become more involved in positive social interactions and other positive behaviors than patients on the ward with the human therapist.

The results of statistical analyses did not support the hypothesis that the presence of the companion animal would be more beneficial to patients than the human companion. The statistically significant results of the analyses of variance of the observational data proved to be meaningless in terms of the hypotheses tested. The significant difference between wards on Negative Interactions with Others was directly related to a difference between wards in observed instances of the single behavior of Staring/Looking at Others. The significant difference between wards on time spent in Positive Interactions with Others was also not meaningful in terms of the hypotheses tested. Similarly, the significant finding of a difference between wards on time spent in Nondestructive Self-Stimulation over the course of the study was also not meaningful.

The significant finding of an increase (pretest vs. posttest) in Paranoid Projection, as measured by the PIP, on the comparison ward suggests that the introduction of a human companion increased patients' suspiciousness, resistiveness, complaints concerning care and treatment, and hypersensitivity to imagined slights. Such an increase in suspiciousness was not noted on the experimental ward, suggesting that the presence of a dog did not raise anxieties in the same way that introduction of a therapist increased interpersonal tensions. As mentioned earlier, this finding is questionable because of the number of t tests done on the PIP data.

None of the objective data suggested that during the three-month period of the study the dog or human presented a measurable influence on patients' functioning or the general morale of the ward. However, the data suggested that noteworthy events occurring over the course of the study affected patients' behavior on the experimental ward. These findings will be discussed below. In addition, the study presented an opportunity to discuss the feasibility of a pet therapy program for chronic patients in a State psychiatric hospital, as well as to observe the impact of an ongoing research project on patients, staff, and ward ambiance. Following is a discussion of the reactions of patients, staff, dog, and therapist to the research.

#### Reactions of Patients

In general, patients did not respond to the dog in the same way Katcher (1982) found normal subjects to respond to animal companions.

Katcher reported that 99 percent of people in his sample of 120 subjects talked to pets. Of the patients observed in the current study, only a few talked to the dog. Those who did talk generally made brief comments or summarized events to the dog in a noninteractive manner, which Katcher found to be relatively infrequent (28% of subjects) in his study. In addition, several patients barked at the dog in an apparent effort to relate to Muffy or to get her attention.

It was difficult to assess how satisfied patients were with their pet, since they were not consistent in their verbal reactions. They tended to tell staff members, who were opposed to the project, that they did not like the dog. In contrast, they frequently told the experimenter they did like the dog. About a month into the study patients were asked, "What do you think of Muffy?" by a staff member who was very opposed to the project. The responses she received were very different from the responses the experimenter received when patients were asked the same question a few days later. Their responses suggested that they were sensitive to the attitude of the person posing the question and responded in a way that was consistent with such perceived attitudes. Some of the diverse responses they gave are presented in Table 4 on the following pages.

TABLE 4

Patients' Opinions of Muffy as Told to a Staff Member and  
to the Experimenter

| Opinion Given to Staff Member                                                               | Opinion Given to Experimenter                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I can't walk it. It will get to the lobby and kill me.                                      | He's alright. I like him.                                                                                                                                                                                                                                                                        |
| I haven't enough confidence. I fear it.                                                     | I think it's a sweet little dog. A little pet.                                                                                                                                                                                                                                                   |
| I don't like to walk her.                                                                   | I like her.                                                                                                                                                                                                                                                                                      |
| I'm afraid of it.                                                                           | I think it's a very friendly little dog. Don't you?                                                                                                                                                                                                                                              |
| I don't mind the dog.                                                                       | To each of us he's a different person. Out of my eyes I see her as a nice personality--raring to to active. She cooperates with me. She has pretty eyes and she's a good dancer, good conversation, good entertainment, and she loves to play with my shoes (laugh). And she loves potato chips. |
| I don't think it should be here.                                                            | I think she's a nice dog and friendly, but I don't like her enough to walk her.                                                                                                                                                                                                                  |
| I love it but it doesn't love me. I'm afraid of it. It will get me in the lobby and eat me. | I'm afraid of it. I'm afraid she'll bite me.                                                                                                                                                                                                                                                     |
| I love it. It won't mind me. It walks too fast.                                             | I like him. I don't think he would fit in with patients, but he fits in much better than I thought. He's like one of us. He's a sweet doggy.                                                                                                                                                     |
| I think it's nice to have a pet around. I will not walk the dog.                            | I like the dog very much. It's a wonderful dog, a kind dog.                                                                                                                                                                                                                                      |
| I will not walk the dog. I don't want to get up for a dog.                                  | I like her.                                                                                                                                                                                                                                                                                      |

TABLE 4 (continued)

| Opinion Given to Staff Member                                       | Opinion Given to Experimenter                                                                                                                                                                                                             |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I don't want the dog.                                               | I don't like that dog and I don't like you either.                                                                                                                                                                                        |
| I love the dog. It helps patients. I will walk the dog on weekends. | When Muffy went away I missed her so bad. I didn't realize how much I loved her. I was so anxious for her to get back. I hope we get to keep her. I love Muffy.                                                                           |
| That dog ought to be somewhere else. I'm afraid to take it out.     | It's alright.                                                                                                                                                                                                                             |
| I like her but I don't want to walk her.                            | I like Muffy. I don't sit on the ward with Muffy because I don't like to sit on the ward.                                                                                                                                                 |
| (Wouldn't comment.)                                                 | I think he's alright, but I don't want to take him out though.                                                                                                                                                                            |
| She needs to be some place else with other dogs.                    | I love her. I think she's wonderful. I'm good to her. She chewed on me. I love her to do it.                                                                                                                                              |
| I'm willing to walk the dog.                                        | I love that dog. He's the best dog I've ever seen. The greatest dog. That dog is smart.                                                                                                                                                   |
| I like that dog. It bit me. I'm not willing to walk it.             | I like Muffy. Muffy's a loving dog. I think she worries some.                                                                                                                                                                             |
| I don't want any part of it.                                        | I like the dog. The dog's fine. I was a little afraid of her last night. She started barking--quite viciously....I think the dog was trained to figure out that we're different from people in the community--that we're mental patients. |

Many patients seemed to respond to staff members' dissatisfaction with the dog by avoiding the dog themselves, presumably so that they would not alienate staff members who were in control. Their awareness of staff members' tensions about the project is reflected in the very high number of observed instances of the experimental patients Looking at Others when staff protest against the study was very strong (Figure 9, p. 59). This hypervigilant response to interpersonal tension is typical of chronic psychiatric patients who frequently develop an adaptive reaction of hypervigilance out of a history of physical and emotional abuse.

Staff members' reactions to the study seemed to influence patients in other ways. As noted in Figure 3 (p. 53) and Figure 7 (p. 57), when staff members were strongly protesting the presence of the dog, patients engaged in very few positive behaviors. In contrast, at a time when staff members were generally calm about the dog, the positive behaviors observed reached a high point. This is particularly the case with regard to positive social interactions (Figure 7).

Staff members' opposition to the project also seemed to influence patients' reactions to the dog and the study in other ways. For one, some staff members openly discouraged patients from interacting with the dog. One patient who showed a strong interest in the dog early in the study was told by staff members not to become "too attached" to the dog since she (the patient) was to be discharged in a few months. Staff members' open criticism of the dog and the research project made

it difficult for patients favored by the staff to show an interest in the dog, since that would place them in opposition to the staff.

Given these influences of the staff, it was not surprising that most patients exhibited little interest in Muffy. Overall, patients observed spent only six percent of their time on the ward in some activity with the dog. Only five of the 25 patients on the ward were actively involved with the dog, frequently volunteering to walk her. Only three of the five revealed other frequent interest in her, such as holding her or playing with her. It was difficult to assess how much of patients' general indifference to Muffy was attributable to a genuine lack of patient interest in the pet therapy project and how much was related to staff members' apparent undermining of patients' interest in the dog.

The degree of patients' interest in Muffy was reflected in their handling of the dog, as illustrated in Figures 10, 11, and 12. In Figure 10, patients who spent a lot of time with Muffy appear to be very comfortable handling the dog, and they hold her closely. The patients pictured in Figure 11 spent less time with Muffy. They seem somewhat comfortable with the dog, although less so than the patients pictured in Figure 10. In Figure 12 a patient who rarely paid attention to the dog seems awkward in handling Muffy. The other photograph in Figure 12 captures a typical scene on the ward in which patients are ignoring Muffy (and each other). The patients in this photograph did not show interest in Muffy at any time.

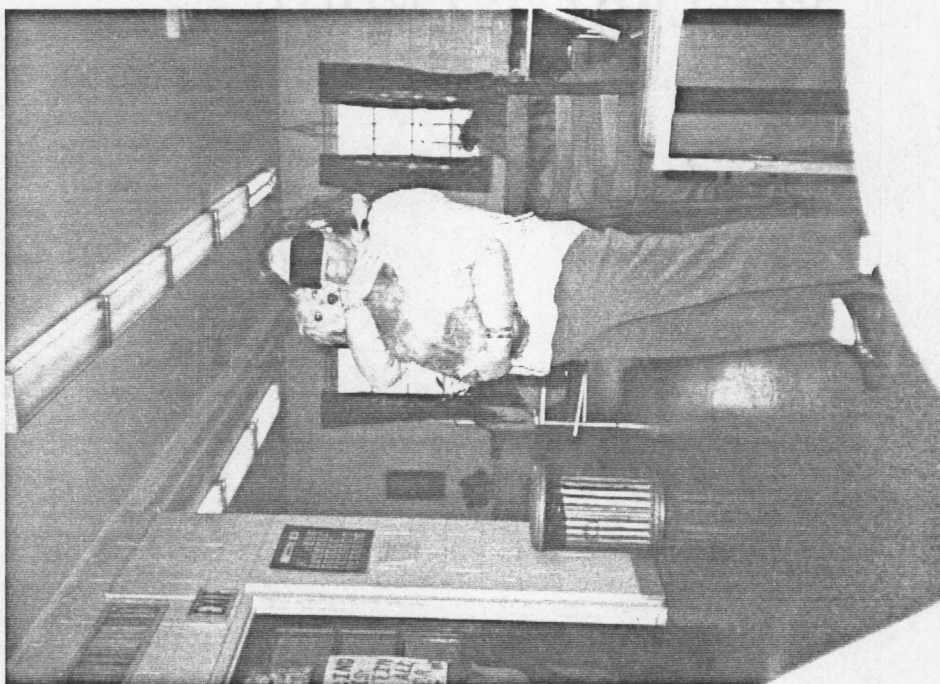


FIGURE 10. Patients Who Frequently Interacted with Muffy



FIGURE 11. Patients Who Showed Moderate Interest in Muffy

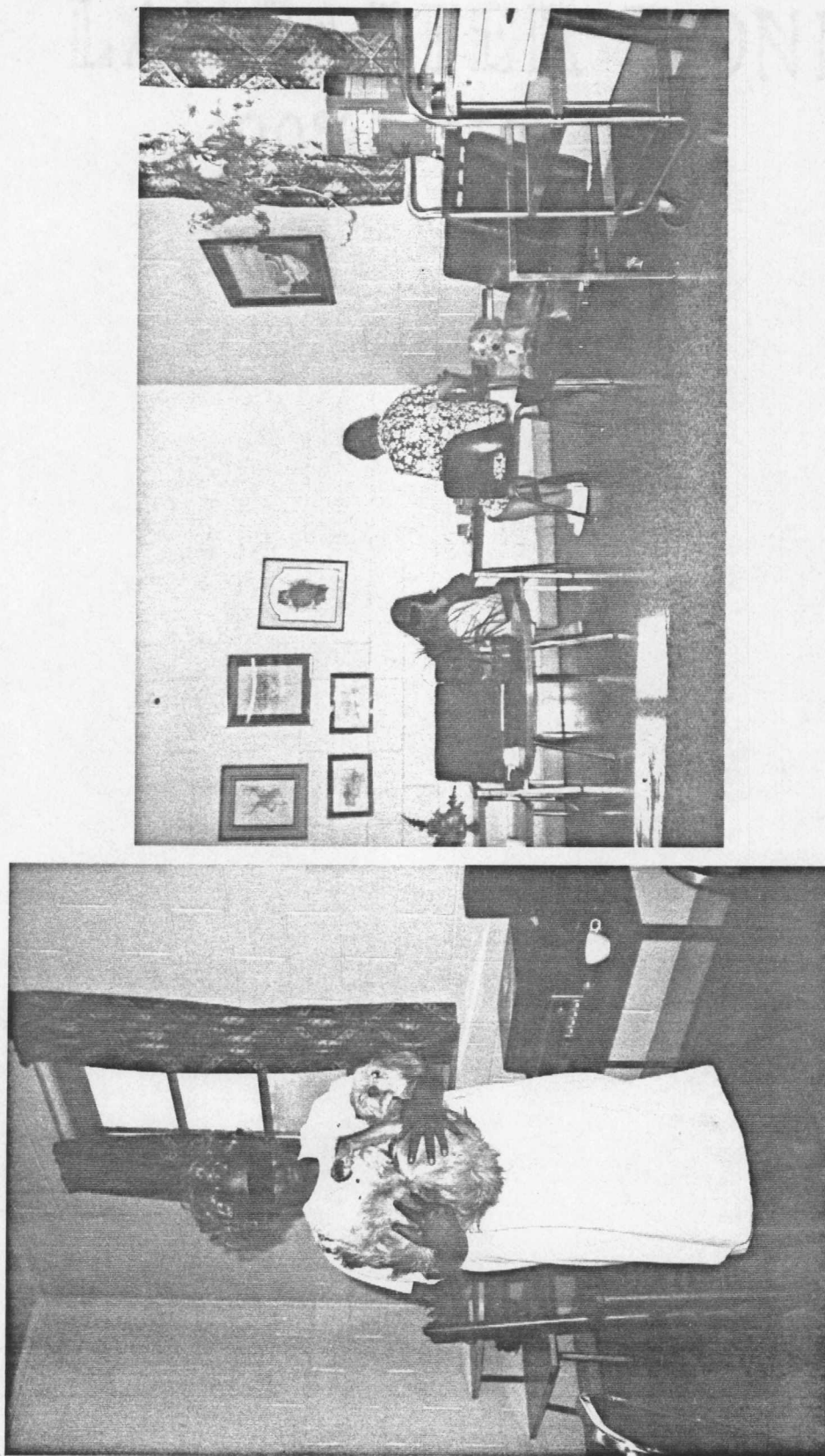


FIGURE 12. Patients Who Rarely Interacted with Muffy

The presence of the dog had no noteworthy impact on patients' propensity to engage in sedentary behaviors, of which sitting, smoking, sleeping, and self-stimulation accounted for between 70 and 80 percent of behaviors observed on the experimental ward. While such a high level of inactivity could be seen as directly related to the effects of schizophrenic process, it is more likely to reflect the results of long term hospitalization and continuous medication with major tranquilizers. An interaction with one of the subjects in the study captured the patient's own resignation to a sedentary lifestyle. While behavioral observations were being made, the patient asked, "Why are you observing us?" The experimenter answered, "To find out how you spend your time." The patient was straightforward in asserting, "I can tell you what we do. We sit here, smoke cigarettes, and drink coffee. Occasionally we talk." Clearly, more than a pet dog would be required to transform the pervasive inactivity noted in these patients.

While the presence of the dog itself did not noticeably animate patients, they were enthusiastic when newspaper and television reporters visited the ward to report on the study. They were attentive and enthusiastic when they saw the story on the evening news and responded with applause and cheers. This brief period of good spirit on the ward corresponded to an increase in the number of observed instances of Nondestructive Self-Stimulation (Figure 5, p. 55). This suggests that patients' self-stimulatory behaviors were an outward manifestation of inner enthusiasm. The increase in

self-stimulation could also reflect some anxiety about the presence of outsiders (newsmen) on the ward. The presence of a similar increase in Nondestructive Self-Stimulation on the comparison ward reflects the enthusiasm expressed by comparison patients about the media coverage. In fact, the newspaper coverage included their ward, although the television coverage did not.

Patients' positive response to the media coverage raises the question of what it was about seeing their ward on television that animated patients. Such a response is reminiscent of Corson and Corson's (1980) informal finding that patients who were generally not interested in watching television, intensely watched themselves on videotape. Perhaps for schizophrenic and other severely disturbed patients who are generally out of touch with their bodies, to see themselves is an integrating, if not fascinating, experience. These patients are unable to observe themselves at an abstract level, i.e., are presumed to have no observing ego. Perhaps the concrete activity of seeing themselves has some internal impact, such as feeling more a part of the real world. Patients' interest in how they looked to themselves raises possibilities for future research. In his work with adolescent drug abusers, Wilmer (1970) found that videotape experiences allowed the patients a unique opportunity for self-observation. Perhaps schizophrenic patients could benefit from participating in a program in which they see themselves on videotape or in photos.

### Reactions of Ward Staff

When the experimenter first met with the ward staff prior to the study, there were no objections raised to the idea of having a dog on the ward, and the charge nurse indicated that she felt her staff would be cooperative. However, once the study was underway, staff members' opposition to the project surfaced and became a source of continuous difficulty throughout the study, so much so that the study was ended a month earlier than originally planned. Except for brief periods of good relations with the experimenter, the staff members were generally opposed to the study for the time Muffy was on the ward.

At the beginning of the study, ward staff were not overt in their opposition to the research. When Muffy was brought to the ward for a trial visit about a month prior to the beginning of the study, the staff members on duty indicated no objections when asked if they noted any problems with the dog. However, several weeks later the experimenter learned that ward staff had been displeased with the dog on that first visit. The charge nurse then admitted that a few people had objections, and she recommended that the experimenter meet with staff members individually. However, even when asked individually how they felt about the project, staff members denied any discontent and were overtly friendly, although the experimenter sensed that they were reluctant to discuss objections.

When the experimenter brought Muffy for an introductory visit six days prior to the official beginning of the study, the dog was quite friendly and there were no problems noted. A few days later she

returned for her first overnight stay on the ward. At that time the research assistant in charge of Muffy had a serious auto accident while with the dog. Following this incident, staff members' initial objections to the dog were temporarily replaced with concern for the research assistant, who eventually recovered. The staff were cooperative and friendly when Muffy returned to the ward. They noted that she was fearful, and they speculated that perhaps she was associating the ward with the auto accident.

Within a week, staff members' concern for Muffy and the research assistant gave way to complaints that the dog was defecating and urinating on the ward. This was surprising behavior because Muffy was fully housetrained. Some staff members insisted that Muffy leave the ward, and two of them wrote an angry letter to the building director demanding that the dog be removed. Before the letter was sent, the experimenter removed the dog for five days so that she could be medically evaluated to determine whether her eliminating indoors had a physiological basis.

While the dog was gone, the experimenter met with staff members to negotiate plans to have the study run more smoothly. Some concrete measures were taken, such as establishing a dog-walking schedule, with various patients volunteering to walk the dog at different times during the day. The staff members seemed to appreciate these measures, and responded even more favorably to the opportunity to tell their grievances to the experimenter. In addition to ventilating feelings about the research, they revealed considerable

dissatisfaction with their work, along with their negative feelings about the experimenter, and psychologists in general. One staff member who was particularly candid became the spokesman for the group. She told the experimenter her biases about psychologists, including her contention that "they think they know all the answers and don't get along well with others themselves," "they use their knowledge in destructive ways," and "they blame parents for all the problems their children have." It seemed that in having an opportunity to air some feelings and beliefs, staff members became temporarily more cooperative with the experimenter.

When Muffy returned there was a two-week period of friendly relations between the experimenter and ward staff. Muffy stayed housebroken for most of that time, except in rainy weather when patients would not walk her. Staff members reported many incidents of patients enjoying the dog or making humorous comments about the dog. When patients were observed following this period, there were more positive behaviors noted than at other times. This was discussed in the previous section.

When Muffy again began to urinate and defecate on the ward, staff members became alarmed. Various measures were taken to attend to the problem, but without success. First, the experimenter asked staff members to chart Muffy's eliminations and other behaviors in a log book to check for consistent patterns. Staff members recorded the times Muffy was walked, who walked her, how long she was kept outside, and whether or not she defecated or urinated. The log book was also

used to record any other behaviors worth noting, such as vomiting or destructive behavior on the ward. Some staff members also used the log to ventilate any pleasure or displeasure about Muffy's stay on the ward. Keeping a log on the dog, similar to the log they kept on patients, led up to their humorously referring to Muffy as another patient. They even made a record card for her and placed it in the rack with patients' cards. Their descriptions of Muffy's behavior in the log were similar in format to the types of comments they made about patients. Some examples of their comments are listed below:

Muffy had BM x 3 in different places. Verbally reprimanded.

The dog done (sic) two piles in day hall. The patient D.S. cleaned it holding her nose saying shu-shu that makes me sick.

Dog lying on side in her cage. She appears to be asleep. No vomiting noted.

Muffy walked. Vomitted x 4 partially undigested food. [Experimenter] called and informed of dog's condition.

Muffy defecated in middle of floor x 2 piles in dayroom directly across from chart room and, about 1 foot (sic) on the side of the long table in dayroom in front of TV approximately 3 feet from TV.

While staff members were meticulous in recording Muffy's eliminations and other behaviors as noted above, they were less inclined to encourage patients to walk Muffy according to her schedule. Even though the experimenter often reminded them that it would take much less effort to remind patients to walk Muffy regularly than to recruit people to clean up when Muffy eliminated on the ward, staff members were quite resistant to this feedback. In fact, two staff

members angrily told the experimenter that they felt "bossed" and criticized.

The veterinarian in charge of Muffy's care proposed several measures to modify Muffy's elimination behaviors, and none were effective. First, it was proposed that Muffy be rewarded with a piece of cheese for eliminating outdoors. The first patient to walk Muffy under the revised regime was given the cheese and told it was a reward to be given when Muffy eliminated outdoors. When Muffy eliminated, the patient ate the cheese! Her comment to staff on how good the cheese was allowed for some comic relief at a time when there was considerable tension between staff members and the experimenter, yet it reflected the difficulty of implementing a plan to modify Muffy's elimination behaviors.

The next plan was to use dog biscuits instead of cheese as a reward for Muffy. However, staff members frequently forgot to give patients a biscuit to take outside with Muffy, and Muffy was therefore rewarded when she came inside. She was also given dog biscuits at other times, and without a consistent reward system, the reward value of the biscuits was minimal. The next measure proposed by the veterinarian was to give Muffy half a doggie burger 30 minutes prior to two of her scheduled walks to stimulate defecation while outside. Staff complained vehemently about this plan, indicating that they "never heard of such a thing." They did not adequately follow through with the plan, and often gave Muffy the burger just before her walk. By the time Muffy would return to the ward, the burger would be

digested and she would eliminate indoors. Therefore the plan had the opposite effect of what had been intended. After several attempts to properly implement this plan, the idea was not pursued further.

The tendency of staff members to direct more energy toward reacting to Muffy's misbehavior rather than in attempting to prevent undesirable behaviors paralleled their response to patients on the ward. They had become adept at writing up incident reports in response to patients' infractions of rules, but made no noteworthy attempt to respond constructively to patients. This type of reaction was evident in their response to a very troublesome patient, L.J., who had frequent angry and disruptive outbursts. A hospital psychologist attempted to intervene by placing the patient on a behavior modification program in which she was given one cigarette on the hour if she did not have an outburst during the previous hour. Several staff members were opposed to the plan and complained that "nothing can help this patient," and that "these psychologists have these ideas that they think will help and they don't know what the patients are really like." These comments may have been an indirect expression of staff members' opinions about the pet therapy project.

Despite their protest, the staff members went ahead with the behavior modification program and followed the psychologist's plan to the letter. They charted in detail the exact time of any outbursts by L.J. and followed the instructions for rewarding her with cigarettes. However, the experimenter noticed that at times they provoked L.J. into having outbursts by responding to her in a hostile and begrudging

manner. It seemed that their hostility toward L.J. was a displacement of their hostility toward the psychologist who was trying to help her. Their scorn of his efforts and their apparent undermining of his plan allowed them to maintain their notion that "nothing can help these patients." Inevitably, L.J. became increasingly frustrated and angry, her outbursts intensified, and she was transferred to a more disturbed ward.

The reactions of the staff to L.J. and the psychologist who tried to help her clearly paralleled their reactions to Muffy, the idea of pet therapy, and the experimenter. They seemed to need to maintain the idea that nothing could help the patients on their ward, and it appeared that on some level they attempted to sabotage constructive attempts to provide something positive for patients. With regard to the current study, staff members seemed persistent in their refusal to attempt to make the pet therapy project beneficial to patients. In fact, the only staff member who was strongly in favor of the study was reprimanded for "inappropriate concern for the dog." Moreover, by refusing to encourage patients to care for and interact with Muffy, staff members undermined any potential benefits of having a pet on their ward. Their expectation that the project would not be beneficial influenced patients' responses to the dog in a manner suggestive of the Rosenthal effect (Rosenthal and Jacobson, 1968). That is, their belief that the project would not help patients contributed to patients' lack of interest in the dog.

Several possible explanations for the staff members' opposition to the study could be proposed. First, there were some immediate concerns of staff members which created an unreceptive environment for research. At the time the study began, staff members were angry because they had been lectured by the hospital administration, in a manner they perceived as infantilizing, following an incident of patient abuse which had been uncovered on an adjacent ward. They were told that anyone who witnessed patient abuse and did not report it would be considered as guilty as the person doing the abusing. One staff member revealed to the experimenter several weeks into the study that some of them initially believed that the experimenter was a "spy" from the administration sent to observe staff, and that the pet therapy study was an excuse for the experimenter to spend time on the ward. They believed that the tape player was being used to record interactions. After a staff member listened to the tape and discovered that the tape only had numbers from one to sixty recorded, the suspicion about the experimenter's presence on the ward was alleviated.

In addition to staff members' immediate concerns creating an unreceptive environment for research, there are other more longstanding characteristics of psychiatric institutions and their employees which present obstacles to implementing treatment programs. Goffman (1961) notes that many institutions "seem to function merely as storage dumps for inmates" (p. 74) and that the patients are treated as inanimate objects. Searles (1965) also discusses how the

conflictual needs of mental hospital staff interfere with patients' treatment. He notes that staff members "project upon the patient some unconscious emotion or unconscious self-image which would cause internal conflict if it were recognized as an ingredient of the staff member's own personality" (p. 331). He further notes that such projection brings about regression in the behavior of both the patients and staff members, making them ineffective. Consequently, patients do not receive therapeutic benefit. Stanton and Schwartz (1954) also discuss how the ward integration in a mental hospital is disturbed in such a way that constant turmoil actually reflects a pathological "group symbiosis." They note that patients become more fragmented over the course of their hospital stay because of the dissensions among staff members.

The staff members observed in the current study were ineffective both in helping patients themselves and in allowing patients to be helped by others. By opposing the pet therapy project and by discouraging patients, both overtly and covertly, from interacting with the dog, they undermined any potential benefit or enjoyment to patients. Also, by failing to adequately implement plans to modify Muffy's eliminating indoors, they reinforced their own idea that Muffy's presence was unacceptable. It is also noteworthy that they often referred to Muffy as another patient, because Muffy herself became regressed on the ward.

### Reactions of the Dog

About two months into the study, the experimenter began to note that Muffy was showing signs of being stressed. Her apparent distress was of particular interest because of speculations made prior to the study concerning the possible effects of the hospital environment on the dog. While no behavioral changes in the dog were hypothesized, the experimenter was not surprised to note behavioral changes in Muffy which seemed to reflect distress.

Most prominent, and most annoying to the staff, were Muffy's frequent eliminations on the ward, even though she was fully housetrained prior to her introduction on the ward. The experimenter charted Muffy's elimination behaviors for the first two months of the study, using information from the log book kept by staff. It was initially suspected that the dog was not being walked according to her schedule. While failure to walk Muffy at certain times accounted for some of her eliminating indoors, this did not account for the times this occurred when she had been walked according to her schedule.

In studying the log book, the following variables were considered: who was walking Muffy, how long she was kept outside, how much time elapsed between walks, the times of day she eliminated indoors and outdoors, and the time elapsed between eliminating and being taken outside again. There was no consistent pattern to the data, which led the experimenter to speculate that the staff might not be logging accurately or that there was some other variable affecting Muffy's behavior.

In time, it became apparent that at times Muffy eliminated on the ward in response to stressful events. On one occasion the experimenter was making routine behavioral observations when a scuffle began between a patient and staff member. When the patient became belligerent, Muffy became excited and followed the action around the ward. She remained alert and continued to be excited in following the action when a security officer arrived and intervened. Shortly after this incident she urinated on the ward.

The experimenter further noted that the frequency of Muffy's eliminating on the ward increased during stressful periods, such as when L.J., the difficult patient mentioned earlier, was on the ward. At times when there was improved morale on the ward, as when there was some positive media coverage, Muffy did not eliminate indoors as frequently as she did at other times. Since stressful events were not charted in a scientific manner, it was not statistically verified that there was a correlation between the frequency of Muffy's eliminating indoors and the amount of stress on the ward.

Muffy exhibited two other behaviors which further suggested that she was affected by stress on the ward. First, her eating patterns changed. Before going to the hospital she ate with gusto. In contrast she ate little food while at the hospital. Initially, staff members complained that she was not being fed good dog food. (While this appeared to be a reaction suggesting fondness for the dog, it was more so a criticism of the experimenter.) When other dog foods were tried, Muffy ate little regardless of the quality of the dog food. In the

last few weeks of the study she ate little or no food from her dog dish, but would eat if fed by hand. A few patients took an interest in feeding her, but they were not consistent. Attempts to bolster interest in feeding Muffy by hand were not successful and raised additional problems, as with one patient who began to eat the dog food herself.

In addition to eating less, Muffy's mood seemed to become more depressed. Early in the study she was extremely active and playful. In her third month on the ward she slept much of the time, except for spurts of intense activity when she would run wildly around the ward, at times shredding magazines with her teeth, or gnawing shoes with voracity. Most of the time, however, she was very inactive and interacted very little with patients and staff. This was in marked contrast to her behavior early in the study when she actively sought out people. As mentioned earlier, this quality made her a desirable dog to be placed with withdrawn patients who generally do not seek out others themselves. However, instead of patients becoming more interactive, Muffy became less interactive. Some of the staff members commented that patients' behaviors had "rubbed off" on Muffy.

After leaving the ward, Muffy went to stay with one of the research assistants and her family. She reported that within a week, Muffy was eating well, was fully housetrained again, and was more animated. Muffy's recovery underscores the observations that being on the hospital ward was a detrimental experience for her. Without an attachment or bond to anyone on the ward, her reaction to the stress was exacerbated.

### Reactions of the Ward Therapist

Early in the study, the volunteer therapist on the comparison ward was very enthusiastic about her participation in the project. However, her enthusiasm waned over the course of the study as she began to feel frustrated and defeated in working with the chronic patients. She felt she was not helping them, and she found it burdensome and depressing to be with the patients at times. About halfway through the study she wanted to quit, but reluctantly agreed to stay. Her interest and enthusiasm increased in the last few weeks of the study, with the knowledge that the study would soon be ending. Unlike Muffy, who did not become animated again until leaving the hospital, the ward therapist was relieved just in knowing she would be leaving. As an aside, this underscores an important difference between animals and people regarding the ability to be aware of forthcoming changes in circumstances. It seemed that both the ward therapist and Muffy experienced similar reactions to being placed in the hospital environment. The ward therapist could verbally express her feelings of frustration and defeat, while Muffy's distress was apparent from nonverbal behaviors such as lethargy and loss of appetite.

The experimenter did not experience the same sense of futility as did the ward therapist in interacting with the patients. However, role differences must be taken into account. The experimenter had an investment in completing the study and therefore maintained a high level of energy and enthusiasm. The ward therapist, on the other

hand, was a hospital volunteer who was interested in gaining experience with patients, and she had no personal investment in the research project itself.

The experimenter noticed that many patients sought her out, even though they did not take an active interest in the dog. Some patients, who would not otherwise walk the dog, welcomed the opportunity to walk Muffy if the experimenter was going with them. In addition, several patients actively sought out the experimenter to make conversation on a regular basis. It seemed that the experimenter was more interesting to patients than the dog, and that patients felt more comfortable with the experimenter than with the dog. As suggested by Levinson (1969) and Brickel (1980), it is possible that the presence of the dog on the experimental ward made it easier for patients to interact with a person, since the dog serves a transitional function. In fact, the experimenter noted that when patients conversed with her, they frequently talked about Muffy or the research study. While patients on the comparison ward did not develop as strong an interest in the experimenter, when they did interact with her they frequently asked how Muffy was doing on the other ward. These informal findings suggest that the presence of a dog facilitated some interpersonal interactions.

### Conclusions

While statistical analyses did not support the hypothesis that an animal companion would be of greater benefit than a human companion in

bringing about more positive behaviors in chronic psychiatric patients, the study nonetheless proved to be valuable as a field study of the effects of introducing a live animal to a psychiatric hospital ward. The effects of the introduction of the dog on the patients, staff, and dog were discussed above.

In summary, it was found that the presence of the dog itself had no noteworthy impact on patients' functioning. However, patients seemed to respond to other events related to the research. For example, patients were sensitive to changes in staff reactions to the research in that they exhibited more positive behaviors when staff members were relaxed about the study, and they became more hypervigilant when staff members were strongly opposing the study. In addition, patients seemed animated by media coverage of the research study, and at times showed a lively interest in the experimenter.

Patients' lack of interest in the dog was in part attributable to staff members' undermining of the project by overtly and covertly discouraging patients from interacting with the dog. Moreover, staff members seemed persistent in reinforcing Muffy's undesirable behaviors, particularly eliminating indoors, so that they could maintain their dissatisfaction with the project. Their dissatisfaction further discouraged patients from developing an interest in the dog. The dog became increasingly maladjusted on the ward but recovered when removed from the setting, which underscores the observation that a chronic psychiatric ward does not benefit living creatures.

If further research of this type is conducted, there are several ways to methodologically improve the current study. First, the addition of a nontreatment control group would make this type of research more methodologically sound. Also, matching patients on critical variables such as length of stay in the hospital and diagnosis would also improve the study and allow for more valid findings. Furthermore, the comparison of the effects of a pet animal present 24 hours a day to a human companion present only ten hours a week also needs to be considered. Use of a visiting pet might be more appropriate, especially given the resistance of hospital staff to a live-in pet. It would also be appropriate to assess staff members' receptivity to a research project of this sort prior to undertaking another study, so that staff resistance does not become a cumbersome obstacle to effective research. Finally, to improve the study, follow up data would be useful in evaluating whether there were any aftereffects of the interventions.

In any study of pet-facilitated therapy in a hospital setting, it is important to consider that a strictly experimental study cannot be conducted in a naturalistic environment, since it is impossible to control factors such as randomization of subjects into groups. Therefore, a researcher must choose between an analogue study with experimental control or a naturalistic study which can be at best a quasi-experimental study.

## LIST OF REFERENCES

## LIST OF REFERENCES

- Beck, A. M. & Katcher, A. H. (1984). A new look at pet-facilitated therapy. Journal of the American Veterinary Medicine Association, 184, 414-421.
- Bergman, A. (1978). From mother to the world outside: The use of space during the separation-individuation phase. In S. A. Grolnick & L. Barkin (Eds.), Between Reality and Fantasy, (pp. 147-165). New York: Jason Aronson.
- Bossard, J. H. S. (1944). The mental hygiene of owning a dog. Mental Hygiene, 28, 408-413.
- Brickel, C. M. (1980). A review of the roles of pet animals in psychotherapy with the elderly. International Journal of Aging and Human Development, 12, 119-128.
- Bridger, H. (1976). The changing role of pets in society. Journal of Small Animal Practice, 17, 1-8.
- Bustad, L. (1980). Animals, Aging, and the Aged. Minneapolis: University of Minnesota Press.
- Cooper, J. E. (1976). Pets in hospitals. British Medical Journal, 1, 698-700.
- Corson, S. A. & Corson, E. O. (1980). Pet animals as nonverbal communication mediators in psychotherapy in institutional settings. In S. A. Corson & E. O. Corson (Eds.), Ethology and Nonverbal Communication in Mental Health, (pp. 83-110). New York: Pergamon Press.
- Corson, S. A. & Corson, E. O. (1978). Pets as mediators of therapy. Current Psychiatric Therapies, 18, 195-205.
- Corson, S. A., Corson, E. O., Gwynne, P. H. & Arnold, L. E. (1975). Pet-facilitated psychotherapy in a hospital setting. Current Psychiatric Therapies, 15, 277-286.
- Douglas, M. (1977, November). Getting Billy to talk. American Humane, 28-29.
- Doyle, M. C. (1975). Rabbit--therapeutic prescription. Perspectives in Psychiatric Care, 13, 79-82.
- Feldman, B. M. (1978). Pets and mental health. Cereal Foods World, 23, 306-309.

- Fox, M. (1975). Relationships between the human and nonhuman animals. In B. Fogle (Ed.), Interrelations Between People and Pets, (pp. 23-40), Springfield, Ill.: Charles C. Thomas Publisher.
- Goffman, E. (1961). Asylums. Garden City, NY: Anchor Books, Doubleday & Company, Inc.
- Heiman, M. (1965). Psychoanalytic observations on the relationship of pet and man. Veterinary Medicine/Small Animal Clinician, 60, 713-718.
- Heiman, M. (1956). The relationship between man and dog. Psychoanalytic Quarterly, 25, 568-585.
- Jones, K. (1955). Lunacy, Law, and Conscience: The Social History of the Care of the Insane. London: Routledge & Kegan Paul Ltd.
- Katcher, A. H. (1975). Interactions between people and their pets: Form and function. In B. Fogle (Ed.), Interrelations Between People and Pets, (pp.41-67). Springfield, Ill.: Charles C. Thomas, Publisher.
- Katcher, A. H. & Friedmann, E. (1980). Potential health value of pet ownership. The Compendium on Continuing Education, 2, 117-121.
- Leigh, D. (1966). The psychology of the pet owner. Journal of Small Animal Practice, 7, 517-521.
- Levinson, B. M. (1980). The child and his pet: A world of nonverbal communication. In S. A. Corson & E. O. Corson (Eds.), Ethology and Nonverbal Communication in Mental Health, (pp. 63-81). New York: Pergamon Press.
- Levinson, B. M. (1962). The dog as a "co-therapist." Mental Hygiene, 46, 59-65.
- Levinson, B. M. (1972). Man, animal, nature. Modern Veterinary Practice, 53, 35-41.
- Levinson, B. M. (1967). The pet and the child's bereavement. Mental Hygiene, 51, 197-200.
- Levinson, B. M. (1965). Pet psychotherapy: Use of household pets in the treatment of behavior disorder in children. Psychological Reports, 17, 695-698.
- Levinson, B. M. (1974). Pets and environment. In R. S. Anderson (Ed.), Pet Animals and Society, (pp. 8-18), London: Bailliere Tindall.

- Levinson, B. M. (1978). Pet and personality development. Psychological Reports, 42, 1031-1038.
- Levinson, B. M. (1969). Pet-Oriented Child Psychotherapy. Springfield, Ill.: Charles C. Thomas, Publisher.
- Levinson, B. M. (1964). Pets: A special technique in child psychotherapy. Mental Hygiene, 48, 243-248.
- Lorr, M. and Vestre, N. D. (1968). Psychotic Inpatient Profile Manual, Western Psychological Services.
- Menninger, K. A. (1951). Totemic aspects of contemporary attitudes toward animals. In G. B. Wilber & W. Muensterberger (Eds.), Psychoanalysis and Culture, (pp. 42-74). New York: International Universities Press.
- Messent, P. R. & Serpell, J. A. (1975). An historical and biological view of the pet-owner bond. In B. Fogle (Ed.), Interrelations Between People and Pets, (pp. 5-22). Springfield, Ill.: Charles C. Thomas, Publisher.
- Metcalf, D. R. & Spitz, R. A. (1978). The transitional object: Critical developmental period and organizer of the psyche. In S. A. Grolnick and L. Barkin (Ed.), Between Reality and Fantasy, (pp. 97-108). New York: Jason Aronson.
- Moos, R. H. (1974). Ward Atmosphere Scale Manual, Palo Alto: Consulting Psychologists Press, Inc.
- Mugford, R. A. (1980). The social significance of pet ownership. In S. A. Corson & E. O. Corson (Eds.), Ethology and Nonverbal Communication in Mental Health, (pp. 112-122). New York: Pergamon Press.
- Mugford, R. A. & McComesky, I. G. (1975). Some recent work on the psychotherapeutic value of cage birds with old people. In R. S. Anderson (Ed.), Pet Animals and Society, (pp. 54-65)., London: Bailliere Tindall.
- Rice, S. S., Brown, L. T. & Caldwell, H. S. (1973). Animals and psychotherapy: A survey. Journal of Community Psychology, 1, 323-326.
- Rosenthal, R. & Jacobson, L. (1968). Pygmalion in the Classroom. New York: Holt, Rinehart and Winston.
- Ryder, R. D. (1973). Pets in man's search for sanity. Journal of Small Animal Practice, 14, 657-668.

- Rynearson, E. K. (1978). Humans and pets and attachment. British Journal of Psychiatry, 133, 550-555.
- Savishinsky, J. S. (1974). The child is father to the dog: Canines and personality processes in an Arctic community. Human Development, 17, 460-466.
- Searles, H. F. (1965). Integration and differentiation in schizophrenia. In H. F. Searles (Ed.), Collected Papers on Schizophrenia and Related Subjects, (pp. 320-341)., New York: International Universities Press.
- Searles, H. F. (1960). The Nonhuman Environment, New York: International Universities Press.
- Shapiro, S. A. (1981). Contemporary Theories of Schizophrenia: Review and Synthesis, New York: McGraw-Hill Publishers, Inc.
- Siegel, A. (1962). Reaching the severely withdrawn through pet therapy. American Journal of Psychiatry, 118, 1045-1046.
- Stanton, A. H. & Schwartz, M. S. (1954). The Mental Hospital: A Study of Institutional Participation in Psychiatric Illness and Treatment, New York: Basic Books, Inc.
- Thompson, M., Kennedy, R. W., & Igou, S. (1983). Pets as socializing agents with chronic psychiatric patients: An initial study. In A. H. Katcher & A. M. Beck (Eds.), New Perspectives on Our Lives with Companion Animals, (pp. 427-430). Philadelphia: University of Pennsylvania Press.
- Trussel, V. L. (1978, June). Lima State Hospital: People helping animals--Animals helping people. American Humane, 27-29.
- Van Leeuwen, J. (1975). A child psychiatrist's perspective on children and their companion animals. In B. Fogle (Ed.), Interrelations Between People and Pets, (pp. 175-194). Springfield, Ill.: Charles C. Thomas, Publisher.
- Wallin, P. (1978). Pets and mental health: Some psychological perspectives on the pet/person relationship and implications for veterinary practice. Gaines Veterinary Symposium, 28, 8-12.
- Wilmer, H. A. (1970). Use of the television monologue with adolescent psychiatric patients. American Journal of Psychiatry, 126, 1762-1766.
- Winnicott, D. W. (1975). Transitional objects and transitional phenomena. In D. W. Winnicott (Ed.), Through Paediatrics to Psychoanalysis, (pp. 229-242). New York: Basic Books, Inc. (Original work published 1951).

## APPENDIXES

## APPENDIX A

## PSYCHOTIC INPATIENT PROFILE

# Psychotic Inpatient Profile

by

**Maurice Lorr, Ph.D.**  
The Catholic University of America

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University of Minnesota

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|                         |                   |            |                |
|-------------------------|-------------------|------------|----------------|
| Patient's Name          |                   | Age        | Sex: M F       |
| Highest Grade Completed |                   | Occupation |                |
| Diagnosis               |                   |            |                |
| Hospital                |                   | Ward       | Type of Ward   |
| Rater                   | Position of Rater |            | Date of Rating |

## INSTRUCTIONS:

- FIRST:** Read all the statements in this form so you will know what behaviors to observe.
- SECOND:** Carefully observe and talk to the patient several times during the next three days. Also try to find out how the patient feels about himself and others. Direct questions will be needed to determine answers to the orientation statements.
- THIRD:** Read the directions and rate what you have observed during the past three days.

W-105A

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2 3 4 5 6 7 8 9



30. Needs help in making his own bed.
31. Swears and uses obscene language.
32. Repeats the same words or phrases over and over again mechanically.
33. Resists treatment from the doctors.
34. Assumes strange or bizarre postures.
35. Starts conversations with aides.
36. Swears or curses in the presence of doctors or aides.
37. Ignores the activities around him, acts dead to the world.
38. Needs supervision on tasks assigned.
39. Becomes noisy and hilarious.
40. Mutters or mumbles to himself.
41. Demands the attention of the doctor.
42. Appears frightened.
43. Makes unusual movements of mouth, eyebrow or other parts of the face.
44. Asks for help from other patients when he needs it.
45. Makes sarcastic remarks to others.
46. Speaks in a slow, drawn out manner when answering.
47. Keeps himself clean and neat.
48. Talks to himself.
49. Demands special privileges from hospital personnel.
50. Shows interest in the problems of others.
51. Hits or assaults others.
52. Face shows no expression or sign of feeling.
53. Clothes are soiled, unbuttoned and/or disarranged.
54. Threatens to assault others.
55. Gives answers or says things unrelated to what you ask him.
56. Takes part in back and forth conversation.
57. Sits or stands motionless in one place or lies in bed.
58. Eats in a sloppy or ill-mannered way.
59. Shouts and yells.
60. Talk is mostly not sensible.
61. Laughs or smiles at funny comments or events.
62. Easily annoyed or made angry.
63. Voice is flat and monotonous (without variation in pitch).
64. Unable to follow instructions or directions.
65. Paces back and forth.
66. Joins others in social activities (checkers, cards, etc.).
67. Makes unfavorable or hostile remarks about other patients.
68. Makes no answer when questioned.

| A                        | B                        | C                        | D                        | E                        | F                        | G                        | H                        |
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69. Talks a lot once started.
70. Friendly with at least one patient.
71. Becomes angry when questioned.
72. Frightens other patients.
73. Acts superior to other patients (conceited and boastful).
74. Wears a puzzled, bewildered expression as if figuring out a problem.

The diagram shows a 16-mer DNA probe as a horizontal bar with 16 segments labeled A through P. Above the bar, a grid of boxes represents the binding of various proteins. The columns are labeled A through H. The rows represent different proteins. The binding pattern is as follows:

| Protein    | A | B | C | D | E | F | G | H |
|------------|---|---|---|---|---|---|---|---|
| Protein 1  |   |   |   |   |   |   |   |   |
| Protein 2  |   |   |   |   |   |   |   |   |
| Protein 3  |   |   |   |   |   |   |   |   |
| Protein 4  |   |   |   |   |   |   |   |   |
| Protein 5  |   |   |   |   |   |   |   |   |
| Protein 6  |   |   |   |   |   |   |   |   |
| Protein 7  |   |   |   |   |   |   |   |   |
| Protein 8  |   |   |   |   |   |   |   |   |
| Protein 9  |   |   |   |   |   |   |   |   |
| Protein 10 |   |   |   |   |   |   |   |   |
| Protein 11 |   |   |   |   |   |   |   |   |
| Protein 12 |   |   |   |   |   |   |   |   |
| Protein 13 |   |   |   |   |   |   |   |   |
| Protein 14 |   |   |   |   |   |   |   |   |
| Protein 15 |   |   |   |   |   |   |   |   |
| Protein 16 |   |   |   |   |   |   |   |   |

After TALKING to the patient, decide if the following statements are mostly TRUE or mostly NOT TRUE. Record your judgement by writing the NUMBER of your answer in the box to the right of the statement. If your answer is:

True, write a "3" in the box to the right.  
Not true, write a "0" in the box to the right.

True=3      Not True=0

75. Says people or machines make him do or say things.
76. Claims he has a divine mission.
77. Says voices say "bad" things about him.
78. Says he wants to die, or wishes he were dead.
79. Says voices threaten punishment or torture.
80. Feels he has let people down (family, wife, children, friends).
81. Makes exaggerated claims of special knowledge or power.
82. Says he is a failure and a disappointment to himself and others.
83. Believes he is a well known present day, or historical personality (The President, Virgin Mary).
84. Says he has lost interest in things (people, social activities, hobbies).
85. Says he is too important to work, or follow rules.
86. Says he feels tired and lacks energy to do anything.
87. Reports that he hears sounds (music, singing, whispers, buzzing), others don't hear.
88. Reports he cannot concentrate or remember things.
89. Reports that voices order or command him to do things.
90. Says voices praise him or say "good" things about him.
91. Feels hopeless and despairing, beyond help.

|        | I | J | K |
|--------|---|---|---|
|        |   |   |   |
|        |   |   |   |
|        |   |   |   |
|        |   |   |   |
|        |   |   |   |
| Mary). |   |   |   |
|        |   |   |   |
|        |   |   |   |
|        |   |   |   |
| SUMS   |   |   |   |

NOTE: Weights here are 3 for Not True and 0 for True.

True = 0      Not True = 3

92. Knows roughly the time of day (morning, afternoon or evening).
93. Knows hospital location (state or nearest city).
94. Knows day of the week (within one day).
95. Knows his own age.
96. Knows the calendar year.

|            | L |
|------------|---|
|            |   |
|            |   |
|            |   |
|            |   |
| <b>SUM</b> |   |

## APPENDIX B

## WARD ATMOSPHERE SCALE

Instructions: To the left of each statement circle T (true) if you think the statement is true of your ward, and circle F (false) if you think the statement is not true of your ward.

- T F 1. Patients put a lot of energy into what they do around here.
- T F 2. Doctors have very little time to encourage patients.
- T F 3. Patients tend to hide their feelings from one another.
- T F 4. The staff act on patient suggestions.
- T F 5. This is a lively ward.
- T F 6. The staff know what the patients want.
- T F 7. Patients say anything they want to the doctors.
- T F 8. Very few patients have any responsibility on the ward.
- T F 9. The patients are proud of this ward.
- T F 10. Staff are interested in following up patients once they leave the hospital.
- T F 11. It is hard to tell how patients are feeling on this ward.
- T F 12. Patients are expected to take leadership on the ward.
- T F 13. There is very little group spirit on this ward.
- T F 14. Nurses have very little time to encourage patients.
- T F 15. Patients are careful about what they say when staff are around.
- T F 16. Patients here are encouraged to be independent.
- T F 17. Nobody ever volunteers around here.
- T F 18. Doctors spend more time with some patients than with others.
- T F 19. Patients set up their own activities without being prodded by the staff.

- T F 20. Patients can leave the ward whenever they want to.
- T F 21. Patients are pretty busy all of the time.
- T F 22. The healthier patients on this ward help take care of the less healthy ones.
- T F 23. When patients disagree with each other, they keep it to themselves.
- T F 24. Patients can wear what they want.
- T F 25. The ward has very few social activities.
- T F 26. Patients rarely help each other.
- T F 27. It is O.K. to act crazy around here.
- T F 28. There is no patient government on this ward.
- T F 29. Very few things around here ever get people excited.
- T F 30. The ward staff help new patients get acquainted on the ward.
- T F 31. Patients tend to hide their feelings from the staff.
- T F 32. Patients can leave the ward without saying where they are going.
- T F 33. Discussions are pretty interesting on this ward.
- T F 34. Doctors sometimes don't show up for their appointments.
- T F 35. Patients are encouraged to show their feelings.
- T F 36. Staff rarely give in to patient pressure.
- T F 37. Patients often do things together on weekends.
- T F 38. Staff go out of their way to help patients.
- T F 39. The ward always stays just about the same.
- T F 40. The staff discourage criticism.

## APPENDIX C

## PATIENT BEHAVIORS

I. Solitary Activities

1. Destroying objects
2. Eating, drinking
3. Exercising, grooming, and other self-care
4. Laughing (without apparent humorous stimulus)
5. Listening to music
6. Maintaining bizarre posture
7. Pacing
8. Reading
9. Rocking
10. Screaming, make loud noises
11. Self-destructive (e.g., nail-biting, hair-pulling)
12. Self-stimulation (nondestructive)
13. Singing
14. Sitting only
15. Sleeping
16. Smoking
17. Talking to self
18. Watching TV
19. Working on chore or hobby
20. Writing
21. Other (specify)

II. Interactions with Others

1. Actively avoiding
2. Calling for someone
3. Helping
4. Hurting (e.g., hitting)
5. Giving commands
6. Ignoring someone's attempt to interact
7. Imitating
8. Laughing at
9. Making faces at or bizarre gestures toward
10. Making affectionate physical gestures (e.g., cuddling)
11. Playing
12. Praising
13. Seeking out
14. Smiling at
15. Staring
16. Talking with
17. Teaching
18. Visually tracking
19. Yelling at
20. Other (specify)

### III. Interactions with Pet Dog

1. Actively avoiding
2. Calling
3. Feeding, grooming, taking for walk
4. Hurting (e.g., hitting, pulling)
5. Giving commands
6. Ignoring dog's gestures for interaction
7. Imitating
8. Laughing at
9. Making faces at or bizarre gestures toward
10. Petting, stroking, cuddling
11. Playing
12. Praising
13. Seeking out
14. Smiling at
15. Staring
16. Talking to
17. Teaching (e.g., tricks)
18. Visually tracking
19. Yelling at
20. Other (specify)

## APPENDIX D

## INPATIENT BEHAVIOR ASSESSMENT

Instructions: In the first column to the right of each behavior, please place a check mark under + (positive) if you believe the behavior to be positive, under - (negative) if you believe the behavior to be negative, and under o (neutral) if you believe the behavior to be of neutral value. Keep in mind that the behaviors pertain to daytime activities of chronic psychiatric inpatients. Indicate with a check mark in the second set of columns how sure you are of your choices by placing a check mark under very sure, sure, or not sure.

| Part I. <u>Solitary Activities</u>                       | + | - | o | very<br>sure | sure | not<br>sure |
|----------------------------------------------------------|---|---|---|--------------|------|-------------|
| 1. Destroying objects                                    |   |   |   |              |      |             |
| 2. Eating, drinking                                      |   |   |   |              |      |             |
| 3. Exercising, grooming and other<br>self-care           |   |   |   |              |      |             |
| 4. Laughing (without apparent<br>humorous stimulus)      |   |   |   |              |      |             |
| 5. Listening to music                                    |   |   |   |              |      |             |
| 6. Maintaining bizarre posture                           |   |   |   |              |      |             |
| 7. Pacing                                                |   |   |   |              |      |             |
| 8. Reading                                               |   |   |   |              |      |             |
| 9. Rocking                                               |   |   |   |              |      |             |
| 10. Screaming, making loud noises                        |   |   |   |              |      |             |
| 11. Self-destructive (e.g., nail-biting<br>hair-pulling) |   |   |   |              |      |             |
| 12. Self-stimulation (nondestructive)                    |   |   |   |              |      |             |
| 13. Singing                                              |   |   |   |              |      |             |
| 14. Sitting only                                         |   |   |   |              |      |             |
| 15. Sleeping                                             |   |   |   |              |      |             |
| 16. Smoking                                              |   |   |   |              |      |             |

|                               |  |  |  |  |  |  |
|-------------------------------|--|--|--|--|--|--|
| 17. Talking to self           |  |  |  |  |  |  |
| 18. Watching TV               |  |  |  |  |  |  |
| 19. Working on chore or hobby |  |  |  |  |  |  |
| 20. Writing                   |  |  |  |  |  |  |

| Part II. <u>Interactions with Others</u>                     | + | - | o | very<br>sure | sure | not<br>sure |
|--------------------------------------------------------------|---|---|---|--------------|------|-------------|
| 1. Calling for someone                                       |   |   |   |              |      |             |
| 2. Complaining                                               |   |   |   |              |      |             |
| 3. Helping                                                   |   |   |   |              |      |             |
| 4. Hurting (e.g hitting)                                     |   |   |   |              |      |             |
| 5. Giving commands                                           |   |   |   |              |      |             |
| 6. Ignoring someone's attempt to<br>interact                 |   |   |   |              |      |             |
| 7. Imitating                                                 |   |   |   |              |      |             |
| 8. Laughing at                                               |   |   |   |              |      |             |
| 9. Making faces at or bizarre<br>gestures toward             |   |   |   |              |      |             |
| 10. Making affectionate physical<br>gestures (e.g. cuddling) |   |   |   |              |      |             |
| 11. Playing                                                  |   |   |   |              |      |             |
| 12. Praising                                                 |   |   |   |              |      |             |
| 13. Seeking out                                              |   |   |   |              |      |             |
| 14. Smiling at                                               |   |   |   |              |      |             |
| 15. Staring                                                  |   |   |   |              |      |             |
| 16. Talking with                                             |   |   |   |              |      |             |
| 17. Teaching                                                 |   |   |   |              |      |             |
| 18. Visually tracking                                        |   |   |   |              |      |             |
| 19. Yelling at                                               |   |   |   |              |      |             |
| 20. Actively avoiding                                        |   |   |   |              |      |             |

| Part III. <u>Interactions with Pet Dog</u>       | + | - | o | very<br>sure | sure | not<br>sure |
|--------------------------------------------------|---|---|---|--------------|------|-------------|
| 1. Calling                                       |   |   |   |              |      |             |
| 2. Complaining                                   |   |   |   |              |      |             |
| 3. Feeding, grooming, taking for<br>walk         |   |   |   |              |      |             |
| 4. Hurting (e.g., hitting, pulling)              |   |   |   |              |      |             |
| 5. Giving commands                               |   |   |   |              |      |             |
| 6. Ignoring dog's gestures for<br>interaction    |   |   |   |              |      |             |
| 7. Imitating                                     |   |   |   |              |      |             |
| 8. Laughing at                                   |   |   |   |              |      |             |
| 9. Making faces at or bizarre<br>gestures toward |   |   |   |              |      |             |
| 10. Petting, stroking, cuddling                  |   |   |   |              |      |             |
| 11. Playing                                      |   |   |   |              |      |             |
| 12. Praising                                     |   |   |   |              |      |             |
| 13. Seeking out                                  |   |   |   |              |      |             |
| 14. Smiling at                                   |   |   |   |              |      |             |
| 15. Staring                                      |   |   |   |              |      |             |
| 16. Talking to                                   |   |   |   |              |      |             |
| 17. Teaching (e.g., tricks)                      |   |   |   |              |      |             |
| 18. Visually tracking                            |   |   |   |              |      |             |
| 19. Yelling at                                   |   |   |   |              |      |             |
| 20. Actively avoiding                            |   |   |   |              |      |             |

## APPENDIX E

## RATERS' DESIGNATIONS OF PATIENT BEHAVIORS

Part I. Solitary Activities

- A. Positive
  - 1. Exercising, grooming, and other self-care
  - 2. Reading
  - 3. Working on chore or hobby
  - 4. Writing
- B. Positive-Neutral
  - 1. Eating, drinking
  - 2. Listening to music
  - 3. Singing
- C. Negative
  - 1. Destroying objects
  - 2. Maintaining bizarre posture
  - 3. Rocking
  - 4. Screaming, making loud noises
  - 5. Engaging in self-destructive behaviors
- D. Negative-Neutral
  - 1. Laughing (without apparent humorous stimulus)
  - 2. Pacing
  - 3. Engaging in nondestructive self-stimulation
  - 4. Sitting only
  - 5. Sleeping
  - 6. Smoking
  - 7. Talking to self
- E. Neutral
  - 1. Watching TV
- F. Uncertain  
No behaviors

Part II. Interactions with Others

- A. Positive
  - 1. Helping
  - 2. Playing
  - 3. Praising
  - 4. Seeking out
  - 5. Smiling at
  - 6. Talking with
  - 7. Teaching

- B. Positive-Neutral
  - 1. Calling for someone
  - 2. Making affectionate physical contact
- C. Negative
  - 1. Hurting
  - 2. Making bizarre faces and gestures
- D. Negative-Neutral
  - 1. Actively avoiding
  - 2. Giving commands
  - 3. Ignoring
  - 4. Laughing at
  - 5. Staring
  - 6. Yelling at
- E. Neutral
  - No behaviors
- F. Uncertain
  - 1. Complaining
  - 2. Imitating
  - 3. Visually tracking

### Part III. Interactions with Pet Dog

- A. Positive
  - 1. Calling
  - 2. Caring for (e.g., feeding, grooming)
  - 3. Petting, stroking, cuddling
  - 4. Playing
  - 5. Praising
  - 6. Seeking out
  - 7. Smiling at
  - 8. Teaching (tricks)
- B. Positive-Neutral
  - 1. Giving commands
  - 2. Talking to
  - 3. Visually tracking
- C. Negative
  - 1. Hurting
- D. Negative-Neutral
  - 1. Actively avoiding
  - 2. Ignoring
  - 3. Imitating
  - 4. Making bizarre faces and gestures

- E. Neutral  
No behaviors
- F. Uncertain
  - 1. Complaining
  - 2. Laughing at
  - 3. Staring
  - 4. Yelling at

## APPENDIX F

## STAFF QUESTIONNAIRE

1. How do you feel about the plan to have a dog live on the ward?
  - ☐ a. Strongly approve
  - ☐ b. Approve
  - ☐ c. No opinion
  - ☐ d. Disapprove
  - ☐ e. Strongly disapprove
2. Do you have an allergy to dogs?
  - ☐ a. Yes
  - ☐ b. Yes, but it is controlled with medication
  - ☐ c. No
3. Do you dislike dogs?
  - ☐ a. Yes
  - ☐ b. No
4. What problems, if any, do you think might arise from allowing a dog to live on the ward?
5. What benefits, if any, do you think there might be from allowing residents to interact with a dog on a regular basis? Do you think there are benefits to the staff?

6. Would you be willing to participate in the study by completing the Ward Atmosphere Scale, a 40-statement, true-false questionnaire which is a measure of ward morale?

\_\_\_\_\_ a. Yes

\_\_\_\_\_ b. No

7. Please write any other comments or suggestions below.

## APPENDIX G

## STAFF CONSENT FORM

We would like you to help us in a study of the effects of a pet dog on psychiatric hospital residents and general ward atmosphere. The purpose of the study is to evaluate whether or not having a ward pet can be beneficial to the patients. We would like you to participate by completing a questionnaire regarding your opinion of the ward on which you work. Your responses will remain totally confidential and will be used for research purposes only. Any information we use for this study will not have your name on it.

If you are willing to help us in the study, please sign on the line below. If you decide later that you do not want to participate you can change your mind.

---

|                           |      |         |
|---------------------------|------|---------|
| Signature of Staff Member | Date | Witness |
|---------------------------|------|---------|

If you have any questions regarding the study or about the presence of the pet in the hospital, please contact:

Margaret Del Monaco  
Department of Psychology  
University of Tennessee  
974-2161

Dr. Warren Lambert  
Waterside Building  
Lakeshore Mental Health Institute  
584-1561

## APPENDIX H

## RESIDENT INTERVIEW

Instructions to Interviewer: Please indicate the patient's response to the following questions.

1. Have you ever been around animals?

\_\_\_\_\_ a. Yes (If yes, go to question 2)

\_\_\_\_\_ b. No (If no, go to question 4)

2. In what situations were you around animals

\_\_\_\_\_ a. Had own pet

\_\_\_\_\_ b. Family pet or pet of other family member

\_\_\_\_\_ c. Farm animals

\_\_\_\_\_ d. Other \_\_\_\_\_

3. What types of animals have you cared for?

\_\_\_\_\_ a. Dogs

\_\_\_\_\_ b. Cats

\_\_\_\_\_ c. Other \_\_\_\_\_

4. How do you feel about having a dog live on the ward?

\_\_\_\_\_ a. Like the idea

\_\_\_\_\_ b. Don't like the idea

\_\_\_\_\_ c. No opinion

5. Are you allergic to dogs?

\_\_\_\_\_ a. Yes

\_\_\_\_\_ b. No

6. Do you dislike dogs?

\_\_\_\_\_ a. Yes

\_\_\_\_\_ b. No

7. Other comments:

## APPENDIX I

## RESIDENT CONSENT FORM: EXPERIMENTAL WARD

We would like you to help us in a study of the effects of a pet dog on psychiatric hospital residents. We want to find out if having a pet in the hospital will make people feel any different. To do this, we would like for you to let us get some information about you. We would like to know things like how healthy you are, how much you spend time with other patients, and how interested you are in taking care of yourself and your surroundings. Some of this information is already written down on your chart and some is not.

Any information we take down to use for our study will not have your name on it, so your responses will remain totally confidential and used for research purposes only. We would not connect the information in our study with your name. That way, no one except the hospital staff would know who the information is about. We would use the information to write an article about how people in psychiatric hospitals respond to having a pet.

Of course, we would like it very much if you would help us, but you certainly do not have to. If you decide you are willing to help us with the study, you can always change your mind. If you decide you do not want to be around the pet, that is fine too.

If you are willing to help us in the study as we have described it above, please sign on the line below.

|                                |               |                  |
|--------------------------------|---------------|------------------|
| _____<br>Signature of Resident | _____<br>Date | _____<br>Witness |
|--------------------------------|---------------|------------------|

|                                                           |               |                  |
|-----------------------------------------------------------|---------------|------------------|
| _____<br>Signature of Family Member<br>(When appropriate) | _____<br>Date | _____<br>Witness |
|-----------------------------------------------------------|---------------|------------------|

If you have any questions regarding the study or about the presence of the pet in the hospital, please contact:

Margaret Del Monaco  
Department of Psychology  
University of Tennessee  
974-2161

Dr. Warren Lambert  
Waterside Building  
Lakeshore Mental Health Institute  
584-1561

## APPENDIX J

## RESIDENT CONSENT FORM: COMPARISON WARD

We would like you to help us in a study of how helpful a therapist is to psychiatric hospital residents. We want to find out if having a therapist in the hospital will make people feel any different. To do this, we would like for you to let us get some information about you. We would like to know things like how healthy you are, how much you spend time with other patients, and how interested you are in taking care of yourself and your surroundings. Some of this information is already written down on your chart and some is not.

Any information we take down to use for our study will not have your name on it, so your responses will remain totally confidential and used for research purposes only. We would not connect the information in our study with your name. That way, no one except the hospital staff would know who the information is about. We would use the information to write an article about how people in psychiatric hospitals respond to having a therapist.

Of course, we would like it very much if you would help us, but you certainly do not have to. If you decide you are willing to help us with the study, you can always change your mind. If you decide you do not want to be around the therapist, that is fine too.

If you are willing to help us in the study as we have described it above, please sign on the line below.

|                                |               |                  |
|--------------------------------|---------------|------------------|
| _____<br>Signature of Resident | _____<br>Date | _____<br>Witness |
|--------------------------------|---------------|------------------|

|                                                           |               |                  |
|-----------------------------------------------------------|---------------|------------------|
| _____<br>Signature of Family Member<br>(When appropriate) | _____<br>Date | _____<br>Witness |
|-----------------------------------------------------------|---------------|------------------|

If you have any questions regarding the study or about the presence of the therapist on your ward, please contact:

Margaret Del Monaco  
Department of Psychology  
University of Tennessee  
974-2161

Dr. Warren Lambert  
Waterside Building  
Lakeshore Mental Health Institute  
584-1561

## APPENDIX K

## SCORING MANUAL FOR OBSERVERS' RATINGS OF PATIENT BEHAVIORS

General Instructions

1. Record observations every 15 seconds.
2. Record all behaviors observed during each segment, except in cases where the scoring manual indicates that momentary behaviors should not be scored.
3. Observe patients in the random order to which they have been assigned. If a patient is not present when her order comes up, go on to the next patient. After going through the order once, repeat the process until all patients have been observed.
4. If the patient being observed leaves the observation area (Day Hall) before the 15-minute observation period is up, indicate the departure with a wavy line beneath the last observation made. After going through all patients, return to those patients which have not been completed and resume where you left off. Continue going through the patients in order until as many observations as possible are made.
5. If a patient is not present for any of the 15-minute periods ask ward staff to request that the patient come to the Day Hall. Only do this as a last resort.
6. Use the following types of notations:

|         |                                               |
|---------|-----------------------------------------------|
| A1, B1  | Consecutive                                   |
| A1 & B1 | Simultaneous                                  |
| A1 B1   | Does A1 the whole time & B1 part of the time. |

## Scoring Instructions

### A. Solitary Activities

#### 1. Destroying objects:

This category is scored for instances in which the subject appears to be purposely destroying some physical object or plant. The category is not scored for activities such as crumpling paper to throw away or unwrapping something.

#### 2. Eating, drinking:

This category is scored for instances in which the subject is consuming edible food or drink.

Examples to score as eating or drinking:

- a. Subject is hold a cup of coffee and taking occasional sips. This would be scored even if no sips were taken during a particular 15-second period.
- b. Subject goes to the drinking fountain for a drink of water.

Examples not scored as eating or drinking:

- a. Chewing gum (scored as "other")
- b. Playing with food (scored as "other")

#### 3. Exercising, grooming, and other self-care

This category is scored whenever a subject appears to be making some attempt to improve her appearance.

Examples scored as grooming:

- a. Smoothing out wrinkles in clothes
- b. Styling hair with comb or fingers
- c. Patient in the bathroom short period (less than 3 minutes)

Examples not scored as grooming:

- a. Rubbing clothes repetitively (scored as "self-stimulation")
- b. Touching hair without apparent attempt to style it
- c. Touching face repetitively

4. Laughing (without apparent humorous stimulus)

This category is scored even if it occurs briefly during the 15-second observation segment.

5. Listening to music:

This category is scored only if the subject is within about five feet of some source of music and is not engaged in some other activity which would probably grossly interfere with listening to music. For example, if the subject were working on some solitary activity such as sewing, then this could be scorable. If the subjects were engaged in conversation, this would not be scorable.

6. Maintaining bizarre posture:

This category is scored if the subject is sitting or standing in a highly unusual way. This is also scored if the subject is making bizarre faces or other imaginary gestures, such as swatting at imaginary flies.

7. Pacing:

This category is scored if the subject appears to be walking aimlessly about without apparent destination. The subject does not necessarily have to be walking back and forth. This is not scored if the subject is headed somewhere.

8. Reading:

Scored if the patient is holding a book and looking at it.

9. Rocking:

Scored only if the patient is rocking in place. This is not scored if the patient is rocking in a rocking chair.

10. Screaming, making loud noises:

Self-explanatory. This is not scored if the patient is calling someone present in a louder-than-average tone of voice.

11. Self-destructive behavior:

This category is scored for behaviors such as nail-biting, hair-pulling, and hitting oneself. This would also be scored if the patient appeared to be intentionally falling down or bumping into things. This category is not scored for grooming behaviors such as plucking eyebrows.

## 12. Self-stimulation:

This category is scored for continuous and repetitive self-stimulatory behaviors which are not self-destructive.

Examples scored as self-stimulation:

- a. Nose-picking or ear-picking
- b. Moving foot or leg repetitively
- c. Shaking hands in front of face

Examples not scored as self-stimulation:

- a. Momentary (few seconds) scratch, touch, or limb movement
- b. Pacing or rocking (scored separately)
- c. Behavior that is clearly grooming, such as hair-combing, even if it appears to be excessive

## 13. Singing:

This category is scored for singing, humming, or whistling a tune or something which sounds like it could be a tune. The category is not scored for random whistling, whistling to call someone, or making MMMMMMMMM sounds in a monotone. The latter would be scored as self-stimulation.

## 14. Sitting only:

By definition, this category cannot be scored with any other.

## 15. Sleeping:

Scored if the subject has her eyes closed for more than 10 or so seconds.

## 16. Smoking:

Scored even if the patient is holding cigarette and has not puffed for the 15-second segment.

## 17. Talking to self:

Self-explanatory.

## 18. Watching TV

Scored if the TV is turned on and the subject's gaze is directed toward the TV set. Also, the subject should be within about 20-25 feet of the TV.

## 19. Working on chore or hobby:

Self-explanatory.

## 20. Writing:

Scored whenever the patient appears to be writing something, which is not in the context of a chore or hobby.

## 21. Other:

Examples:

a. Looking out the window

b. Standing and doing nothing else

Do not simply score A21, but briefly specify what the behavior is.

B. Interactions with Others

## 1. Actively avoiding:

Scored whenever the subject makes gross physical movement away from another person who is attempting to interact in some way.

## 2. Calling for someone:

Self-explanatory. Scored even if it is only a momentary behavior.

## 3. Helping:

Examples of behaviors scored as helping:

a. Lighting a cigarette for someone

b. Bringing something to someone

c. Assisting someone in standing up

Example not scored as helping:

a. Teaching or explaining (scored as Teaching)

## 4. Hurting:

Scored for instances of physical abuse such as hitting, poking, or kicking.

## 5. Giving commands:

Scored for all commands except "Come here," which is scored as Calling.

## 6. Ignoring someone's attempt to interact:

Scored when the subject does not verbally respond to some verbal attempt to interact by another. If the subject gets up and walks away, it is scored as Actively Avoiding.

## 7. Imitating:

Self-explanatory.

## 8. Laughing at:

Scored when it appears that a subject is laughing at the actions of another. The subject should be looking in the direction of the person being laughed at. This behavior should be distinguished from "Laughing without apparent humorous stimulus."

## 9. Making faces at or bizarre gestures toward:

This category includes unusual and ritualistic behaviors made in response to another person.

## 10. Making affectionate physical gestures:

This category includes even brief affectionate gestures such as patting someone on the back, patting their arm, or stroking their hair.

## 11. Playing:

Scored whenever patients are involved in some game or recreational activity.

## 12. Praising:

Self-explanatory.

## 13. Seeking out:

Scored whenever the subject makes gross motor movements to interact with another person.

## 14. Smiling at:

This is to be distinguished from smiling autistically, and is up to the observer's judgment.

## 15. Staring:

To be scored, the subject's line of sight should be directed toward another person. This category is scored for ordinary watching.

## 16. Talking with:

Self-explanatory. Should be scored for interactions that go on for at least three statements. That is, the subject says something, the other person responds, and the subject says something else.

## 17. Teaching:

Scored when the subject is showing another person how to do something.

## 18. Visually tracking:

Self-explanatory.

## 19. Yelling at:

Self-explanatory. The subject's voice should be louder than a conversational tone.

C. Interactions with Pet Dog

## 1. Actively avoiding:

Scored when the subject makes gross physical movements in an apparent attempt to get away from the dog.

## 2. Calling:

Self-explanatory. Included are whistling at the dog or snapping fingers in an attempt to get the dog to come.

## 3. Feeding, grooming, taking for walk:

Scored for any activities which involve caring for the dog.

## 4. Hurting:

Includes hitting, pulling tail, pulling ears, and kicking.

## 5. Giving commands:

Scored for all commands except for "Come," which is scored as Calling. This category is not scored for commands given in the course of teaching the dog tricks.

## 6. Ignoring dog's gestures for interaction:

This category is scored when the subject does not make gross physical movements to avoid the dog. It is scored when the patient says "Go away," or pays no attention to the dog. This category is not scored if the dog is jumping all over the subject and the subject is trying to get the dog to get down.

## 7. Imitating:

Barking.

## 8. Laughing at:

See scoring standards for B8.

## 9. Making faces at or bizarre gestures toward:

See scoring standards for B9.

## 10. Petting, stroking, cuddling:

Scored for any physical affection expressed for the dog.

## 11. Playing:

Scored when the subject is using some object (such as a ball) in interacting playfully with the dog. This category is not scored if, for example, the subject is throwing the ball at the dog (scored as Hurting). This category is also not scored for activities such as rubbing the dog's stomach or letting the dog playfully bite. These are scored as C10.

## 12. Praising:

Scored for praise which does not occur in the context of teaching tricks.

## 13. Seeking out:

Scored when the subject makes gross physical movements in an apparent effort to be near the dog.

## 14. Smiling at:

See scoring standards for B14.

## 15. Staring:

See scoring standards for B15.

## 16. Talking to:

Scored for instances in which the subject is talking to dog, except for giving praise or talking in the context of teaching tricks.

## 17. Teaching (e.g., Tricks):

Self-explanatory.

## 18. Visually tracking:

Self-explanatory.

## 19. Yelling at:

Self-explanatory.

## APPENDIX L

## OBSERVERS' RECORDING SHEET

Date \_\_\_\_\_

Order \_\_\_\_\_

Rater \_\_\_\_\_

Subject \_\_\_\_\_

|    |       |    |       |    |       |
|----|-------|----|-------|----|-------|
| 1  | _____ | 29 | _____ | 57 | _____ |
| 2  | _____ | 30 | _____ | 58 | _____ |
| 3  | _____ | 31 | _____ | 59 | _____ |
| 4  | _____ | 32 | _____ | 60 | _____ |
| 5  | _____ | 33 | _____ |    |       |
| 6  | _____ | 34 | _____ |    |       |
| 7  | _____ | 35 | _____ |    |       |
| 8  | _____ | 36 | _____ |    |       |
| 9  | _____ | 37 | _____ |    |       |
| 10 | _____ | 38 | _____ |    |       |
| 11 | _____ | 39 | _____ |    |       |
| 12 | _____ | 40 | _____ |    |       |
| 13 | _____ | 41 | _____ |    |       |
| 14 | _____ | 42 | _____ |    |       |
| 15 | _____ | 43 | _____ |    |       |
| 16 | _____ | 44 | _____ |    |       |
| 17 | _____ | 45 | _____ |    |       |
| 18 | _____ | 46 | _____ |    |       |
| 19 | _____ | 47 | _____ |    |       |
| 20 | _____ | 48 | _____ |    |       |
| 21 | _____ | 49 | _____ |    |       |
| 22 | _____ | 50 | _____ |    |       |
| 23 | _____ | 51 | _____ |    |       |
| 24 | _____ | 52 | _____ |    |       |
| 25 | _____ | 53 | _____ |    |       |
| 26 | _____ | 54 | _____ |    |       |
| 27 | _____ | 55 | _____ |    |       |
| 28 | _____ | 56 | _____ |    |       |

## VITA

Margaret Del Monaco was born and raised in New Jersey and was a valedictorian graduate of Westfield Senior High School in 1972. She attended Vassar College where she majored in Economics and completed her B.A. degree with honors in 1976. After working for two years as an economic research associate at Citibank in New York, she began her graduate work in Clinical Psychology at Fairleigh Dickinson University in 1978. She completed her M.A. degree there in 1980 and then began her doctoral work at The University of Tennessee in Knoxville. She received her Doctor of Philosophy degree with a major in Clinical Psychology in August 1985. She completed an internship in clinical psychology at Northwestern Memorial Hospital in Chicago in 1985.

The author is a member of Phi Kappa Phi National Honor Society and is a Licensed Psychological Examiner in Tennessee. She studied at the Center for Psychoanalytic Study in Chicago during her internship year.