EFFECTS OF MODELING/ROLE PLAYING COUNSELING TECHNIQUE
ON SECOND-GRADE SOCIALLY WITHDRAWN CHILDREN

DISSERTATION

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By

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This investigation examined the effect of a modeling/role playing counseling technique upon the social adjustment of second-grade socially withdrawn children. The specific hypotheses investigated dealt with changes in the socially withdrawn child's social adjustment as measured by a peer sociometric instrument, teacher rating, trained observer rating, and self-rating which were administered one week prior to the initial session. A one-way analysis of covariance was employed to test the hypotheses.

A modeling videotape was developed which portrayed models engaged in positive social interaction. The models depicted an ascending level of social interaction in terms of initiating social interaction with others and in terms of the number of children involved in the social interaction. Each scene was begun with a descriptive narrative and concluded with a positive social or tangible consequence. Eight scenes were developed for this study.

Thirty-two second-grade children were selected at random from a population of fifty-two children identified as socially withdrawn, from two elementary schools in a north central Texas
city. The children were selected by their respective teachers as those experiencing the lowest level of social interaction with their peers. They were also the children rated lowest by their respective teachers with a social maturity instrument. The thirty-two children were randomly assigned to a comparison and experimental condition. There were sixteen children in each condition with four groups consisting of four members each.

The experimental groups were shown one videotape modeling scene each session for eight sessions. Each session was begun with a narrative by the counselor describing the social interaction that was to be shown. The children in the experimental condition were directed to role play the modeled social interaction. The comparison group observed a native film which was devoid of human figures and human themes. The investigation was carried out over a period of four weeks. Each group met twice each week for approximately thirty minutes. At the conclusion of the last session the dependent measures were readministered.

There was a statistically significant difference between the experimental and comparison groups in terms of frequency of social interaction with the experimental group increasing their level of social interaction. There was a significant increase in the sociometric status of the children in the experimental group. Although not statistically significant, there was a tendency for the teachers to rate the children in
the experimental group as more socially mature than the children in the comparison group. There was no significant change in the self-perception of the children in the experimental group in relation to the comparison group children.

The following conclusions are presented as a result of these findings:

1. The symbolic modeling/role playing procedure as utilized in this study is effective in increasing the frequency of social interaction of socially withdrawn children.

2. The symbolic modeling/role playing procedure as utilized in this investigation is effective in increasing the sociometric status of socially withdrawn children.

3. The symbolic modeling/role playing counseling procedure as utilized in this study appears to be ineffective with respect to changing children's self-perception.
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CHAPTER I

INTRODUCTION

Adequate socialization is one of the most important tasks a society can perform for its members. The socialization process is not precise, and it can lead to varying degrees of social interaction. The absence of positive social contact appears to exert a powerful negative influence over an individual's life. Dahms, in discussing the deleterious effects of emotional isolation stated, "The risk of evolving and maintaining intimacy are worth taking. To the degree that we encourage interpersonal distance instead of intimacy, we seem to create conditions for interpersonal and group conflict" (4, p. 6). Some authors (9, 12) point out that individuals who receive minimal intimate contact with others are prone to periods of depressions, loneliness, and illness. The socially withdrawn person remains upon the fringe of his social environment. His association with others is minimal, and this often precipitates a cycle of negative social interaction often persisting through physical maturity and adulthood (7).

Social behavior begins early in a child's life. Hurlock pointed out that "social behavior begins when the baby first distinguishes between persons and objects" (9, p. 336).
Through interaction with his environment, the individual child learns appropriate methods of successfully attaining social goals. One of the methods of learning appropriate social behaviors is through the process of modeling or observational learning. Again, Hurlock has stated, "He [the child] may learn how to get along with others by imitation—by observing what others do and then by practicing it; pretending to be the other person" (9, p. 336). The absence of appropriate models to emulate in the child's environment can have profound effects upon the child's development. Goldfarb stated in his study that "institution children were less secure, more isolated from other people, and less able to enter into meaningful relationships" (6, p. 20). The lack of an appropriate model from whom to learn social skills can affect the personality development of the child. O'Connor stated:

Social interaction, an obviously important factor in personality development has become the focus of much attention among social-learning theorists, developmentalists, and therapists. There are several reasons for highlighting the role of interpersonal behavior in personality development. First, a child who is grossly deficient in social skills will be seriously handicapped in acquiring many of the complex behavioral repertoires necessary for effective social functioning. Second, children who are unable to relate skillfully to others are likely to experience rejection, harassment, and generally hostile treatment from peers (15, p. 115).

Social-learning theory has predicted that the complex behaviors involved in successful social interaction are learned. Bandura stated:
Research conducted within the framework of social learning theory demonstrates that virtually all learning phenomena resulting from direct experiences can occur on a vicarious basis through observation of the persons and its consequences for them (1, p. 118).

Provision of an adequate social model who can be observed and emulated can provide the basis for improved social interaction for children identified as socially withdrawn. Exposing socially withdrawn children to an appropriate social model can improve the social interaction of the socially withdrawn child. Children who are identified as socially withdrawn often do not have the social skills necessary to cope with their environment. Through observation of an appropriate social model's behavior and then role playing these behaviors the withdrawn child can learn social skills he has not learned adequately previously. Bandura stated, "With the provision of adequate practice and reinforcement of newly established social skill, such behavior would undoubtedly assume greater functional value and endure" (1, p. 162).

Statement of the Problem

The problem with which this study was concerned was the improvement of the social adjustment of elementary school children.

Purpose of the Study

The purpose of this study was to determine whether a modeling/role playing counseling procedure could be used to
improve the adjustment of children identified as socially withdrawn.

**Hypotheses**

To carry out the purpose of this study, the following hypotheses were tested:

1. The adjusted mean for the number of social interactions of the children in the experimental group will be significantly higher than the adjusted mean of the number of social interactions of the children in the comparison group.

2. The adjusted mean of the teacher ratings of the children in the experimental group will be significantly greater than the adjusted mean of the teacher ratings of children in the comparison group.

3. The adjusted mean of the peer rating measures of social adjustment will be significantly greater for the children in the experimental group than the adjusted mean of peer rating measures of social adjustment for the children in the comparison group.

4. The adjusted mean of the measures of personal social adjustment as indicated by self-rating will be significantly greater for the children in the experimental group than the adjusted mean of the measures of personal social adjustment as indicated by self-rating for children in the comparison group.
Significance of the Study

The complex society in which we live demands a great deal in terms of human interaction and the interdependence of one individual upon another. This interdependence and stress upon human interaction is present at every level of human development. It has become essential for an individual to have adequate skills to establish and maintain social relationships.

Goldstein (8) indicated that withdrawal, apathy, and minimal social interaction have been historically accepted as terms descriptive of schizophrenia and other psychological disorders. Most models of personality development recognized the importance of the early phase of social development as a critical period. O'Connor, in a study concerned with socially withdrawn children, stated:

There are several reasons for highlighting the role of interpersonal behavior in personality development. First, a child who is grossly deficient in social skills will be seriously handicapped in acquiring many of the complex behavioral repertoires necessary for effective social functioning. Second, children who are unable to relate skillfully to others are likely to experience rejection, harassment, and generally hostile treatment from peers. Such negative experiences would be expected to reinforce the interpersonal avoidance responses which, in turn, further impede the development of competencies that are socially mediated (1, p. 15).

Researchers (1, 18) have established the importance of such factors as observational learning, behavioral consequences, and imitation to child behavior. O'Connor (15) has demonstrated the effectiveness of the observation of filmed models to increase the positive social interaction of socially...
withdrawn nursery school children. Inappropriate models, lack of meaningful models, and conflicting models are a few of the antecedent conditions of deficient socialization. The value of learning through observation is perhaps more crucial than heretofore anticipated.

The relatively recent interest in social-learning theory for establishing appropriate social behaviors and replacing deficient social behaviors has resulted in studies which focused upon the acquisition of social behaviors. Early studies (5, 11, 14, 18, 19) were mainly concerned with a descriptive approach to parental behavior and child-rearing practices. Sears, Maccoby, and Levin (19) pointed out that child-rearing is not a precise term. Child-rearing refers generally to all interactions between parents and their offspring. The child learned from the parents expressions of attitudes, values, interests, and beliefs. Not only did the child observe and acquire parents' behaviors relevant to child-rearing, but the child's potentialities for future actions were affected by incidental, non-child-rearing behavior. Observation of the parents' social interaction with individuals other than the child also influenced the child's social behavior.

Several factors are thought to be of vital importance in the acquisition of social behaviors. One is that a child acquires behaviors through observation of and interaction with other individuals in his environment. Generally,
behavior patterns characteristic of the parents can be found in the child's behavior (19). Secondly, there has been sufficient evidence gathered to give some indication of the power of reinforcement of behavior through social interaction. Another factor found to be of importance in achieving social development is the reciprocal affect syndrome. This refers to the phenomenon reported by a number of researchers and writers (10, 13, 20) in which an individual's behavior directly influenced the quality of his interaction with others. Rausch (16) found that in seventy-five percent of children's social interactions one child's behavior elicited a similar class response from the other children. For example, hostile behavior resulted in hostile behavior, whereas friendly behavior resulted in reciprocally friendly behavior.

Two techniques have been presented in recent years which have the potential for effecting behavior change in an economical and efficient manner. These techniques are modeling and role playing. Modeling, or observational learning, is a procedure in which the individual's behavior is influenced by the observation of another person. The observer is usually influenced in the direction of becoming more like the model (17). Role playing is a technique which generally allows an individual to enact behaviors not presently in his repertoire or behaviors which are occurring at an extremely low level. Role playing has been defined as a situation in which an individual is explicitly asked to take a role not normally
his own, or if his own, in a setting not normal for the enactment of the role (11).

The separation of modeling and role playing into distinct entities may be artificial as it would appear that role playing is obviously subject to the effects of modeling. Bandura (2) pointed out that role playing comprises a modeling component combined with behavior enactment.

Learning through observation and subsequent enactment is an integral part of acquiring new behaviors at every level of development. Modeling and role playing occurs at all points on a continuum from concrete, manual tasks such as tying shoes to learning extremely abstract classes of behavior such as how to be a counselor or psychotherapist. Early research exploring either modeling or role playing focused generally upon the acquisition of aggressive behavior (3). O'Connor (15), however, found that children who observed a filmed model of prosocial behaviors increased in social interaction. It would appear that modeling and role playing are implicit components of learning occurring at many different levels of development. Modeling and role playing as components of observational learning can be used as therapeutic techniques for increasing positive social interaction.

The acquisition of behaviors through observation is enhanced when the observer is allowed some opportunity to engage in the behavior. Bandura (2) pointed out that:
to achieve generalized and enduring changes through these approaches (modeling and guided participation) would require modeling general strategies of assertiveness that are applicable to diverse situations commonly encountered in everyday life. Moreover, optimal transfer would be devised to ensure that client's initial assertive venture produce favorable consequences (2, p. 701).

The present study, which was designed to investigate the effects of a modeling/role playing counseling procedure upon socially withdrawn children, utilized the empirical evidence established by numerous researchers in the area of observational learning. Using the results of the present study a program could be devised to initiate or improve the social skills of children at all levels of development. It would be particularly adaptable to situations such as public schools where large numbers of children are required to interact daily in a broad spectrum of social situations.

The collective influence and effect upon behavior of observing a model's behavior and subsequent enactment of that behavior was proposed as an efficacious behavior-change technique. The exposure of children identified as socially withdrawn to filmed models engaged in social interaction was presented as a first step to stimulating social behaviors for the socially withdrawn. Increasing the child's repertoire of social behaviors was proposed as a method of improving his personal and social adjustment.
Definition of Terms

For the purposes of this study, the following definitions were used:

1. **Modeling** is the process through which an observer is exposed to the behavior of another individual. The social behavior modeled in this study was presented by videotape.

2. **Role playing** denotes the process of enacting a behavior or sequence of behaviors. In this study role playing specifically referred to the enactment of previously observed behaviors presented visually by videotape of models engaged in social interaction.

3. **Social interaction** is the behavior directed toward another child. This behavior is reciprocal in nature and is generally observed as a child speaks and/or plays with another child.

4. **Personal adjustment** was indicated by the score received on the Feeling of Belonging, Withdrawing Tendencies, School Relations, and Social Skills subscales of the California Test of Personality.

5. **Socially withdrawn children** were those who experienced minimal levels of social interaction. The five children in each classroom who were rated lowest in social maturity by their respective teachers constituted the population for this study of socially withdrawn children.
Limitations of the Study

This study was limited to the population of second-grade children who met the requirements of being socially withdrawn and who were enrolled in the Spring 1975 school term of a city in North Central Texas. Appropriate caution should be utilized in assuming generalization to samples drawn from populations different from the one used in the present study.

Basic Assumptions

For the purposes of this study it was assumed that the children who were identified as socially withdrawn in this investigation were not different from other second-grade children meeting the objective requirements of social withdrawal applied to the present study. It was assumed that the instruments utilized in this study provide valid measures of the characteristics for which they are used. It was further assumed that the training given to the individuals utilized as raters in this study qualified them to perform the task required of them.

Treatment of the Data

To test each of the four hypotheses, a one-way analysis of covariance procedure was used to determine the significance of the change between the experimental and comparison group posttest means. The covariate measure in each analysis was the pretest score for each instrument. The dependent variable
was the posttest score for each instrument. The results were reported in terms of F-ratios and the .05 level of significance was used in the tests of the hypotheses.
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF THE LITERATURE

A review of the relevant literature pertaining to this investigation is presented in four sections: (1) the theoretical basis of social-learning theory, (2) research related to the results of modeling, (3) research related to the utilization of role playing as a therapeutic technique, and (4) the research related to the combined use of modeling/role playing.

Social-Learning Rationale

The process of acquisition of human behavior is the focus of numerous volumes. A large portion of the material now in print supports the theory that most human behavior is learned. This learning occurs in a variety of ways. It can be acquired through a planned approach much as formal education is achieved, or it can be acquired through a less formal method. The less formal manner of learning is perhaps most associated with the acquisition of social skills and the realm of human emotional responding. The literature for such learning has historical roots which extend to the early studies of Ivan Pavlov, John Watson, and Mary Cover Jones. Their work stimulated a divergent investigation of the general process of human response patterns. The investigations which began exploring the acquisition of
man's behavior from a behavioral viewpoint led directly to the development of what has been termed social-learning theory.

The importance of early social and personality development in the young child has received much attention in the social-learning literature. The implications of early parent-child interactions were investigated and were found to contain the potential for the future determination of a particular child. Dollard and Miller (21) have suggested that neurotic conflict was not only a learned condition but was learned primarily as a result of situations created by the parents. It is important to realize that much early child learning occurs in an unintentional manner. Parents often explicitly engage in imparting to their children certain moral or cultural values. The child, however, is involved in a continuous learning process such that the parent often models behavior for the child which the parent does not intend to become a part of the child's behavioral repertoire. Thus we have many instances in which the child repeats an unsavory word or engages in expressive behavior he has acquired through observation. Hurlock stated, "The child imitates the emotional behavior he observes in others and responds in an emotional manner to situations that at one time were incapable of eliciting emotional responses from him" (36, p. 270).

The influence which parents have upon their children is due primarily to the close supportive interactions which occur between parents and their children. Baldwin (1) has pointed
out that the child's physical dependence upon the mother is linked to and precedes the child's psychological dependence upon the mother. Researchers have presented evidence which supported the hypothesis that differential treatment of infants can predictably alter the response patterns of the child (14, 61, 68, 69).

The development of social skills which facilitate social interaction is dependent upon the early development of the child. McCandless stated, "It is thought that socialization (in the sense of control) will not occur at all until and unless the parents, in and of themselves, become reinforcers or rewarders to the child. If this parental role is lacking, social response will also be severely retarded" (51, p. 417).

As the child grows, he becomes subject to the influence not only of his parents but also the diverse social environment which exists outside the family. Hurlock (36) pointed out that "through imitation of the actions, words, and emotions of others, the child tries to conform to a pattern approved by the group to which he belongs" (36, p. 340). If the results of a child's early social interactions produce generally pleasant and satisfying results, he usually wants to repeat them. However, if he has primarily unsatisfactory social contacts, he is less likely to seek similar social experiences. This decrease in social interaction leads to the loss of reinforcement for social behaviors which can and often does result in varying degrees of social withdrawal. An important factor
concerning social interaction is the reciprocal affect syndrome. This refers to the phenomenon reported by a number of researchers and writers (37, 53, 60, 70) in which an individual's behavior directly influences the interactions of others toward himself. It has been suggested that social interaction is a source of positive reinforcement (3, p. 55). The implication is that stimulation through social interaction once initiated can be expected to maintain a continued pattern of social interaction.

A major consideration in the use of social-learning techniques is the extent to which behaviors acquired through this procedure will generalize to less specific situations. Corsini (19) addressed this problem, saying:

Were a roleplaying session to be of specific value only for a specific problem it would hardly be worthwhile as a psychotherapeutic technique. One would then need to have as many roleplaying experiences as problems. The fact seems to be—and this is, of course, not unique to therapeutic roleplaying—that the lessons learned in a single session may not only be applied to a great many other similar situations, but much more important, the whole thinking, feeling, and behavior of the person may change in all possible directions as the result of a single session (19, p. 20).

The degree of generalization of a response from one situation is related to the degree of similarity of the situations and the presence of appropriate behavior facilitating cues. Bandura stated that "studies employing more complex procedures indicate that innovative behavior, generalized behavioral orientations and principles for generating novel combinations of responses can be transmitted to observers through exposure to modeling cues" (3, p. 148).
The appropriate cues for adult behavior are often verbally encoded. The lack of appropriate verbal skills due to lack of or deficient development may hinder response cue acquisition. Hartup and Coates (32) have pointed out that appropriate observational activity facilitated observational learning. This might be true for young children who do not have a verbal repertoire which allows correct labeling of social behavior. When modeling procedures are employed, the desired behaviors must be the focus of the observer’s attention if acquisition is to occur.

Existing literature indicated the acquisition of human response patterns is a primarily learned phenomenon. The unique behavioral repertoires which characterize individuals include behaviors acquired through observation of the individual's social environment. A child's initial social environment is provided by his family; thus, it is consistent that early social behaviors conform and are similar to those of the child's parents. In discussing the underlying basis for the acquisition of behavior through a modeling or observational learning paradigm, Bandura stated:

Observational learning is a multiprocess theory in which modeled stimulus events are transformed and retained in imaginal and memory codes. Later, reinstatement of these representational mediators, in conjunction with appropriate environmental cues, guide behavioral reproduction of matching responses. Performance of observationally learned responses is largely regulated by reinforcing outcomes that may be externally applied, self-administered or vicariously experienced (3, p. 202).
The effects of modeling influence have been summarized into three categories. They are: (1) acquisition of new responses, (2) weakening or strengthening the inhibition of responses already established in an individual's repertoire, and (3) the facilitation through appropriate cues of acceptable responses.

Depending upon the quality and consequences of subsequent social interactions outside the family, a child may develop patterns of social behavior which facilitate further social interaction or which impede and precipitate a withdrawal from social interaction. Facilitation of social interaction can be accomplished through the arrangement of appropriate learning situations in which the individual is exposed to and allowed to engage in social behavior.

Modeling

Modeling or observational learning has been defined by many writers. Modeling is a procedure in which the individual's behavior is influenced by the observation of a model. The observer is usually influenced in the direction of becoming more like the model (3, 44, 67). Researchers have demonstrated that virtually all learning phenomena resulting from direct experience can occur on a vicarious basis through the observation of another person's behavior and the consequences that behavior has for the model (5, 9). Modeling is an explicit and implicit process associated with the transmission of a
wide range of social and cultural information and behavior. Bandura pointed out that "modeling procedures are, therefore, ideally suited for effecting diverse outcomes including elimination of behavioral deficits, reduction of excessive fears and inhibitions, transmission of self-regulating systems, and social facilitation of behavioral patterns on a group-wide scale" (3, p. 118).

The effects of modeling in early infancy and childhood development has been demonstrated in a number of studies. Sears, Maccoby, and Levin (69) in a landmark study found evidence which indicated that a child learned from the parent's expressions of values, attitudes, interests, and beliefs. They further pointed out various aspects of parental behaviors which influenced the child's present and/or future behavior. For example, they indicated that the parent who used physical punishment was providing for his child a model of aggressive, destructive behavior that the child was likely to copy.

The degree to which an infant seeks out social contact is related to early parental behaviors. Schaffer and Emerson (66) found in a study of the social development of infants that maternal caring behaviors were influential to the infants' development of social attachment to others. The authors followed the development of sixty infants from age five weeks until eighteen months of age. Utilizing a maternal interview technique for gaining information, they determined that two principal modes of parent-child interaction could be distinguished.
The first was a personal mode in which the parent interacted with the infant irrespective of the infant's physical needs. The mother would respond to the infant by picking up, handling, cuddling, talking, kissing, cooing, and providing other forms of stimulation which involved a direct and immediate contact between herself and the child. In the second or impersonal mode of interaction, the mother tended to use means of stimulating her child which tended to divert the child's attention away from herself. She preferred to divert the child's attention with toys, food, and other objects in response to his demands for attention. The writers found that it was possible to distinguish children who had formed an intense relationship with the parent from those whose attachment was much less intense.

In a related study, Rheingold (61) found that through close, intensive interaction the social responsiveness of institutionalized babies could be altered. She used six-month-old institutionalized infants and interacted with them in an intensive, systematic manner. She fed, bathed, and played with the children for an eight-week experimental period. At the end of eight weeks, the infants were administered a social responsiveness test. The children who received the intensive care scored significantly higher than a matched number of children who did not receive this treatment. An important addition to this study was the finding that the social responsiveness engendered by the investigator generalized to previously unknown persons.
significantly more for the experimental children than for the control group of children. The finding that an increasingly positive pattern of social interaction with one individual could lead to a generalization of social responsiveness outside the guardian-child relationship was an important implication.

These studies indicated several important aspects of social interaction. The first was that a child acquired behaviors through interaction with other individuals in his environment. Generally, behavior patterns characteristic of the parents could be found in the child's behavior. Secondly, there has been sufficient evidence gathered to give some indication of the power of reinforcement of behavior through social interaction.

The efficacy of a modeling procedure in effecting behavior change has received much attention. Early studies by Jack (40) and Page (59) investigated the use of modeling to alter inhibited behavior in young children. Chittenden (16) found that children's aggressive behaviors could be altered through a modeling procedure. He had children who were identified as highly aggressive observe a series of puppet plays in which the puppet reacted in a non-aggressive manner to frustrating situations. Posttest results and observation of within-school behavior revealed that the children who observed the puppet plays were significantly less aggressive than a control group of children.
More recently, the investigation of the modeling or observational learning phenomenon has resulted in numerous publications reporting modeling effects on a wide range of behavior patterns. These have been far-ranging in the scope and complexity of the behavior patterns being observed. Schwitzgebel and Kolb (67) cited studies which utilized modeling to develop new physical skills in an observer. Such skills as tumbling, knot-tying, and the assembling of automobile parts have been acquired through observation of filmed models.

In a series of related studies, Bandura and his colleagues have used the social learning laboratory to investigate related variables involving observational learning. Among the varied behaviors and aspects of the modeling technique studied are stylistic response patterns (6, 8), distinctive modes of aggressive behavior (7, 33), acquisition and increase of prosocial behaviors (50, 55, 56), and vicarious extinction through observation of symbolic models (69).

In a well-known study, Bandura, Ross, and Ross (9) found that children who observed a film-mediated model engage in aggressive behavior were much more likely to engage in aggressive behavior than a control group. The children in the experimental condition were allowed to observe a filmed model act aggressively toward an inflated toy clown. In a later observation, these children exhibited similar aggressive behaviors. Bandura (2) concluded that while the group assigned to observe a punished model did not exhibit overt aggressive behaviors, learning was
occurring nonetheless. In a follow-up investigation, the children who observed the punished model could, upon request, demonstrate the modeled aggressive behavior. The implication was drawn that response cues (i.e., punished responses or rewarded responses) either facilitated or inhibited the performance of imitative responses.

In a study examining the effectiveness of extinguishing a fear response through a modeling procedure, Bandura, Grusec, and Menlove (7) arrived at several conclusions. They used a fear of dogs as the basis for selecting a population of forty-eight children, ages three to five years, to test a hypothesis concerning the efficacy of vicarious extinction. They established four groups: (1) a modeling group which observed a peer-model interact with the fear stimulus (dog) while the group positively engaged in a party, (2) a modeling group in a neutral situation which observed the model's interactions with the dog, (3) a group which simply observed the dog while they were engaged in a party, and (4) a control group which was placed in the positive context (party) without observing either the dog or the model. Results indicated the modeling procedure produced highly stable and generalized vicarious extinction of the dog-avoidance behaviors. An additional result was the fact that children in a neutral context had gains similar to those of the children who observed the model while in a positive context. Thus the avoidance behavior was reduced without the utilization of an overt reinforcer. A replication
of this study using videotaped models was performed by Hill, Liebert, and Mott (34) and similar results were obtained.

The laboratory exploration of psychological phenomenon usually precedes the systematic application of established learning principles in a therapeutic or naturalistic setting. Bandura, in assessing the importance of modeling, indicated that "modeling influences can produce . . . differential types of effects in observers, each of which has an important therapeutic counterpart" (10, p. 656).

Keil and Barbee (46) examined the effects of modeling, video feedback, and focused rehearsal as a means for developing and enhancing job-interview behaviors in a disadvantaged population. Working with a group of thirty men who were enrolled in a federally funded job training center, the authors sought to improve the trainees' employment opportunities through the improvement of their job interviewing skills. The individual members of the experimental and control groups were placed in a mock job interview session and told to react as though it was an actual job interview. All sessions were videotaped. The experimental group members were shown the video replay of their session, and a critical analysis of their behavior was given by a supervisor. In some instances the trainee and supervisor would engage in role rehearsal to demonstrate more effective interview behaviors. After a twenty-minute break, a second or post interview was conducted. The interviews were rated on several dimensions by personnel directors from various business
sectors. Their ratings indicated the experimental group improved significantly more than their control group counterparts in their ability to present themselves positively in a job interview.

The studies utilizing modeling as the means of developing new behaviors or decreasing negative behaviors have been used in a diverse population. The investigations by Lovaas and his associates (48) and Garcia, Guess, and Byrnes (26) employed the modeling procedure with autistic and mentally-retarded subjects. Garcia, Guess, and Byrnes employed a modeling technique to develop proper syntax in a young retarded girl. The authors sought to develop certain speech patterns in a ten-year-old mentally retarded girl who possessed limited speech capabilities. The procedure included having an adult model exhibit the desired behavior in view of the girl. The model was rewarded with sweets in variable ratio fashion upon successful completion of a cue from the experimenter. The subject was urged to attempt the task following observation. Initially every successful response was reinforced. Upon establishing a high rate of responding, the variable ratio of reinforcement to response was increased. The results of this study indicated the modeling and reinforcement of speech behaviors were useful in developing appropriate speech patterns in a ten-year-old mentally retarded girl.

Nelson, Gibson, and Cutting (54), in a study using a seven-year-old mildly retarded boy, examined the use of symbolic
modeling to enhance appropriate social responses. The researchers examined the utility and effectiveness of presenting the subject with three videotaped modeled behaviors: (1) using of grammatically correct questions, (2) smiling, and (3) speaking about appropriate discussion topics. The investigators also employed reinforcement with candy for correct responses. They concluded that symbolic videotaped modeling and the use of reinforcers did significantly increase the target behaviors in the child.

Investigations have been performed which suggested that altruistic, generous, and sharing behavior could be enhanced through observation (15, 18, 29, 61). In a series of experiments, Bryan and Test (15) found that the opportunity to observe a model engaged in helpful or altruistic behavior influenced observers. One study involved stationing a young lady beside a car, which had a flat tire, alongside a busy highway. In the experimental condition, a model situation was enacted a short distance preceding exposure to the "test" situation. The modeling stimuli consisted of a young lady whose car tire was being changed by a passerby. The hypothesis was essentially that motorists would be more likely to stop if they observed the modeling condition than if there was no modeling situation present. With the time of day and the day of the week varied to counteract for traffic fluctuations, the authors found that significantly more motorists stopped to render aid after observing a modeled situation. In an extension of the
above study, the sharing of money behavior of shoppers was significantly influenced when the shoppers observed another person giving to a charitable organization.

Investigations which examined the influence of modeling upon prosocial behavior have generally been sparse. The experiment conducted by Marshall and Hahn (50) reflected the effectiveness of modeling socially adaptive behavior for children. This study assigned children to one of three groups. One group met with a therapist who used doll-models to discuss conflict situations with the children. A second group met with an adult but played with blocks (placebo), and a third group served as a control group, receiving no treatment. The group which observed the doll-models were found to increase in their dramatic play with peers in daily interaction.

A study which demonstrated the value of modeling procedures with socially deficient children was conducted by O'Connor (55). He identified a population of children who experienced low levels of social interaction and divided them into a control group and an experimental group. The experimental group was shown a film which depicted a graduated series of positive social interactions between child models. The modeling film consisted of eleven sequences which depicted a group of children engaged in varying levels of positive social interaction. The control group observed a nature film devoid of human figures or themes. The children observed a twenty-minute modeling film individually. Posttesting consisted of a naturalistic observation of the
child's social behavior with his classmates immediately after viewing the film. The results indicated a significant increase in the social interaction of the children who had observed the filmed models. O'Conor stated that "the posttest interaction scores of treated subjects were similar to those of non-isolates who had been observed during the pretest period" (55, p. 19).

In a related study, O'Conor (56) compared a modeling treatment of social isolates to a group of children whose treatment consisted of a shaping procedure. He found that the modeling procedure was superior to a behavioral shaping procedure. He also found evidence that modeling was superior over time to a modeling plus shaping treatment.

A study by Clements, Roberts, and Lantz (17) failed to obtain a significant modeling effect with shy, withdrawn children. Using six groups of four boys each, the authors manipulated the modeling, therapist reinforcement, and control variables. The study contained a therapist group, a therapist-plus-reinforcement group, a therapist-plus-reinforcement-plus-modeling group, a therapist-plus-modeling group, a modeling group, and a control group. The dependent measures were (a) the Withdrawing Tendencies and Social Skills subscales from the California Test of Personality, (b) the Social Withdrawal from the Devereux Child Behavior Rating Scale, and (c) four time samples of videotapes of therapy sessions. The authors concluded that the failure of the modeling group to
improve significantly was affected by several factors. In comparing their sample and procedures to the O'Connor study (55), they cited population as well as a lack of modeling film narration and lack of graded social interaction variables as possible causes for the lack of consistency between the findings of the two studies.

Role Playing

Role playing has been defined as a situation in which an individual is explicitly asked to take a role not normally his own, or if it is his own, in a setting not normal for the enactment of that role (28). Role playing has been utilized as a therapeutic technique by a number of philosophically-diverse individuals. Moreno (53) made considerable use of a form of role playing in his application of psychodramatic approach to behavior change. Corsini (19) and Kelly (45) evolved psychotherapeutic technique which involved role playing by the client. Mann and Janis (49) have approached the task of attitude change experimentation through the use of a form of role playing. Bandura (3) has investigated "guided participation," which is a form of role playing. The behavioral therapists Wolpe (71) and Lazarus (47) both employ behavior rehearsal as a therapeutic tool in an effort to achieve client change. Goldstein's structural learning therapy (28) utilizes role playing as a basic behavior-change technique.

The basis for such widespread use of the role playing technique lies in the tremendous teaching potential it entails.
A psychodramatist, Blatner (13), pointed out that:

The function of behavioral practice is to experiment with a variety of new behaviors (1) in a "fail-safe" context, (2) with feedback regarding the effectiveness of these trial behaviors, and (3) with opportunities for repeated attempts until some degree of satisfaction is achieved (13, p. 79).

Role playing is regarded as a multifaceted procedure which accomplishes several therapeutic goals. It allows the client to perform a behavior, thus an opportunity to learn the motor responses involved. It also serves to reduce the internal tension and avoidance tendencies the client may have toward the goal behavior. The reduction of anxiety related to role playing is, of course, contingent upon favorable antecedent and post-behavior consequences. Lazarus (47) reports that "behavior rehearsal, a special form of role playing is often an integral part of assertive training. This procedure enables the therapist to model desirable patterns of behavior and affords the patient a means of learning by imitation" (47, p. 155). The client is urged to assume a role not usually in his repertoire, indeed, a behavior which may cause the client a good deal of anxiety. Wolpe reported that:

The aim of the rehearsal is, of course, to make it possible for him (patient) to express himself with his real "adversary" so that the anxiety the latter evokes may be reciprocally inhibited, and the motor assertive habit established. Actually, a good deal of deconditioning of anxiety frequently takes place during the behavior rehearsal itself (71, p. 68).

Lazarus (47) has reported a quasi-experimental evaluation of the efficacy of behavior rehearsal. Seventy-five patients
experiencing some type of interpersonal difficulty were briefly or individually treated by behavioral rehearsal, direct advice, or by reflective-interpretive therapy. Lazarus reported twenty-three of the twenty-five patients receiving behavioral rehearsal showed improvement; eleven of twenty-five who received direct advice showed improvement; and eight of twenty-five who had received reflective interpretive therapy improved. While these results were subject to experimenter bias, they did appear to attest to the efficacy of behavioral rehearsal.

While the focus of much of the literature and research concerning role playing has been to establish assertive behaviors in the individual, there have been other therapeutic goals. In a series of investigations, Janis and his associates (24, 41, 42, 43) examined the effect of role playing in the reduction of cigarette smoking. The subjects were twenty-six female smokers who were defined as heavy smokers. All of the subjects were measured on their attitude toward smoking, cancer, and their future plans concerning their smoking behavior. All of the subjects were asked to take the part of a medical patient and imagine they had just undergone a series of medical tests. The experimenter played the part of the physician. Thirteen of the "patients" were assigned to role play the part of a smoker who has just been diagnosed as having cancer. The other subjects listened to recordings of the enactments. The role playing subjects enacted five scenes with the "physician," all of which were designed to be fear-arousing. The "physician"
showed them X-rays, and the consequences of their conditions were discussed, including early death. Immediately following the role play sessions, the subjects were posttested. These measures, as well as information on cigarettes smoked per day, were obtained after a two-week period. The role playing subjects were significantly more negative toward smoking and, in fact, smoked significantly less after treatment. In an eighteen-month follow-up (49), there was a sustained significant decrease in cigarette smoking for the experimentally treated subjects. Confirmation of these findings was found in a similarly designed study by Clore and Jeffery (18). The impact of emotional role playing was assessed as being a significant behavior-change technique. Janis and King (42) concluded that "the first observation suggests that more repetition of a persuasive communication may have little or no effect as compared with an improvised restatement" (42, p. 11).

Corsini (19) in a discussion of role playing as a therapeutic procedure indicated that the unique value of role playing depends chiefly on three characteristics: simultaneity, spontaneity, and verdicality. Simultaneity involved the holistic involvement of the individual in the enactment, spontaneity was concerned with the natural appropriateness of a response in situational context, and verdicality referred to the subjective reality of role playing. Insofar as an individual was capable of experiencing these elements, role playing was effective.
Hollander (35) investigated the effect of role playing on patients' attitudes toward their psychiatrists and psychologists. The subjects were forty-five male psychiatric inpatients diagnosed as alcoholic or as having some type of character disorder. They were assigned to a role play group, an exposure group, or a control group. The patients in the role playing group were required to improvise in their role playing. The authors expected ten minutes of role playing time per patient. Instead, each patient managed to role play for approximately one to two minutes. The patient was instructed to take the role of a therapist and convince a fellow patient of the benefits of therapy visits. Goldstein (28) pointed out in a critical review of this article that it was unrealistic to expect patients generally deficient in social and cognitive skills, as these were, to engage in improvisational role playing without any structure or prior modeling exposure. Goldstein stated:

A more positive result would likely have emerged if prior to role enactment each patient was exposed to a vivid, detailed, rewarded repetitive modeling display that depicted a patient-model overtly expressing attraction to a psychologist" (28, p. 93).

Modeling/Role Playing

The application of modeling and role playing in combination is a natural procedure. The prevailing literature has presented evidence of the efficacy of such a therapeutic tandem. Bandura stated, "With the provision of adequate
practice and reinforcement of newly established social skills, such behavior would undoubtedly assume greater functional value and endure" (3, p. 163). The behavioral enactment of previously observed response patterns allows the observer to gain proficiency in the target behaviors. There are other benefits which accrue to role playing observed behaviors. The enactment of a response in a non-threatening situation and in which a natural social reinforcement is present should further ensure the likelihood of learning to occur.

A number of authors have discussed the component elements of modeling (3, 23, 28, 44, 67). Bandura (3) has suggested that role playing was a basic component of the modeling phenomenon. In a study which examined the retention of observed behaviors, Bandura, Grusec, and Menlove (7) found evidence that subjects who actively code modeling stimuli into verbal and imaginal representations achieved higher acquisition and better retention of modeled responses than those subjects who passively observed the modeling stimuli. The subjects of this study were thirty-six boys and thirty-six girls ranging in age from six to eight years. The children were randomly assigned to three groups. The first group was instructed to observe a filmed model who engaged in novel patterns of behavior. The subjects in this first group were told to verbalize every action of the model. The second group observed the same film without instructions, and the third group was instructed to engage in a competing symbolization by counting to themselves as they
observed the film. The children who verbally encoded the model's behavior were subsequently capable of producing more matching behaviors than either the passive group or the competing symbolization group. The passive observers were able to reproduce significantly more matching responses than the competing symbolization group. Similar findings resulted from a study by Gerst (27).

The use of modeling/role playing components as a teaching and therapeutic technique has received only moderate empirical systematic investigation. Ivey (38) has adapted the modeling/role playing procedure for counselor/therapist training. In what is termed a microcounseling approach, the author employed videotaped models to demonstrate appropriate therapeutic skills. Cue discrimination, specific suggestions for improvement, and opportunities to rehearse skills were an integral part of this training procedure.

A study by Ivey, Normington, Miller, Morrill, and Hoase (39) illustrated this approach. The authors investigated the effects of observing videotaped models, instruction, video feedback, and behavior rehearsal on practicum counselor trainees. The authors identified three specific behaviors requisite to the counseling process. These were attending behaviors, reflection of feeling, and summarizing of content. The subjects were thirty-eight counselor trainees randomly placed in either the experimental or control condition. The experimental group was videotaped in a five-minute session with a client. The
experimental group then observed videotaped models who demonstrated effective and ineffective counseling techniques. The experimental group then was instructed to read and discuss a manual which explained the three target behaviors. The control group was videotaped and continued with the normal training procedures. Both groups were pretested and posttested on the Counselor Effectiveness Scale, a rating of the trainee's videotaped session was performed, and a measure of accurate reflection and summarization was taken. In these investigations, the authors found the microcounseling training was significantly superior to the existing form of training counselors for developing critical counselor skills.

Prazak (58), in a discussion concerning training job-seeking interview skills, evaluated an industrial use of the modeling/role playing procedure. She recognized that in order to use this training approach most effectively, specific behaviors must be established. These behaviors must be oriented to the existing labor market and must enable the prospective job-seeker to present himself and his skills in a positive manner. The author has described a training procedure which emphasized a film modeling a desirable interview, discussion of the effective or ineffective behaviors, and role playing and reinforcement in a mock interview. She has presented this approach as an efficient and efficacious method of increasing employment possibilities. In a report previously discussed, Keil and Barbee (46) found significant improvement
of job-seekers' interview skills when the job seekers were trained through a modeling rehearsal procedure.

A study designed to examine the effects of different procedures on client behavior in a psychological interview was conducted by Doster (22). Sixty male college students served as subjects. Six groups were randomly formed from these subjects. They included: (1) minimal instructions, (2) detailed instructions, (3) observation of taped model, (4) role rehearsal, (5) detailed instruction plus observation of model, and (6) detailed instruction plus role rehearsal. Pretest and posttest measures of content rating, duration of client speech, reaction time, and silence quotient were taken. Results generally indicated the major factor related to an effective interview was detailed instruction. The additive influence of observing a taped model and role rehearsal were found to be mildly enhancing. Doster suggested that in this study the role playing element may have had an inhibitory effect due to subject embarrassment during training.

A form of modeling and role playing has been utilized by clinicians in an effort to develop assertive behaviors into their clients' repertoire. The work of Wolpe (71) and Lazarus (47) has been discussed. McFall and Marston (52) conducted a systematic investigation of assertive training. Their subjects were forty-two college men and women placed in four groups. Four experimental conditions were studied: (1) behavioral rehearsal with feedback, (2) behavioral rehearsal with no
feedback, (3) placebo therapy control, and (4) a no-treatment control. A series of assertiveness-relevant situations were developed for use in the two behavioral rehearsal conditions. Modeling in the form of instruction during feedback sessions was an element. The placebo group met with a therapist who discussed the dynamics of being assertive and situations relevant to the client's everyday life. The authors concluded from their findings that there was not a significant difference between the two behavioral enactment conditions. Both of the behavioral enactment conditions were significantly more effective in assertive training than the placebo or control conditions. In a naturalistic follow-up conducted two weeks later, the behavioral enactment subjects exhibited more assertive behavior than the other conditions. The authors concluded there was a generalization of training effect to a real-life situation.

Friedman (25), using one hundred college students, conducted an investigation of modeling and role playing on assertive behavior. The subjects were low scorers on both self-report and behavioral measures of assertiveness. Following pretreatment measurement, six experimental conditions were examined: (1) a directed role playing group in which the subjects rehearsed out loud a prepared assertive script with one of the authors, (2) an improvised role playing group in which the members responded to a threat by improvising, (3) a modeling condition in which the subjects observed two models read an
assertive script, (4) modeling-plus-role playing condition in which the members observed the models exhibit assertive behavior and role-played a situation afterward, (5) assertive script condition in which the members read the assertive script, and (6) a nonassertive script condition in which the members read a neutral script. Upon measurement, the author found that the modeling plus role playing group had improved significantly more than all other groups except the improvised role playing group. All of the assertive groups improved significantly when compared to the nonassertive group. Friedman concluded that "when both modeling and directed role playing are combined, the subject has available to him assertive information, a variety of symbolic cues for assertiveness, and a repertoire of overtly rehearsed assertive responses to emit in the presence of those cues" (25, p. 92).

The elimination of behavioral inhibitions has also been the focus of investigation (3, 12, 62, 63). The emphasis of these reports was on the decrease of phobic behavior through a vicarious modeling and guided-participation procedure. Ritter (63) found that acrophobic behavior was significantly decreased through demonstration of the desired behavior and a guided performance. In the guided performance, the therapist assisted the client to perform the behavior.

Rimm and Mahoney (62) found that a modeling procedure was effective in reducing snake phobic behaviors. They found that a treatment condition in which the subjects observed a fearless
model interact with a snake and then guided the subjects through the procedure resulted in a more significant decrease in snake phobic behavior than did a token-reinforcement approach.

Increasing the social interaction of a sample of psychiatric patients was the focus of a study by Gutride and Goldstein (30). With eighty-seven patients, the experimenters formed an experimental group and a control group. The experimental group participated in a Structured Learning Therapy program designed to enhance their level of overt social interaction. The control group received no particular training. The experimental group was shown four modeling videotapes. These videotapes were in a graduated sequence. The first film depicted approach behaviors initiated by one individual and the responses which follow. The last depicted the approach behaviors of an individual to a group. The experimenters gave a narrative of the model's behavior to aid the observers in obtaining discriminative cues for acquisition of the modeled behavior. They allowed the patients to engage in role playing sequences of the observed behavior. This was followed by a group discussion of the modeling and role playing sequences. The results indicated that the Structural Learning Therapy program was effective in increasing the overt social interaction of a psychiatric inpatient population. A further investigation of Structured Learning Therapy by Gutride, Goldstein, and Hunter (29) again yielded significant results. Goldstein commented:
All three Structured Learning Therapy conditions ... yielded consistent, and at time considerable, increments in social interaction behaviors which were significantly greater than that following companion control and no treatment control conditions (28, p. 130).

The analysis of the components in a modeling/role playing procedure has yielded suggestive, tentative results. Rosenthal and Zimmerman (65) employed an observation and guided practice procedure in a study of concept attainment and concept generalization. The subjects were 144 third-grade and fifth-grade children. The authors found the modeling condition and the modeling-with-guided-participation condition to be significantly more effective than either guided practice alone or a no-treatment control condition. The authors' analysis further revealed that the guided practice accounted for half as much of the variance as did the modeling phase of treatment. Bandura (11) in discussing the relative influence of the modeling and role playing in a study by Blanchard to overall behavioral gain, commented, "Modeling accounted for approximately 60 percent of the behavior change, and 80 percent of the changes in attitudes and fear arousal; guided-participation contributed the remaining increment" (11, p. 687).

The collective impact of research employing the modeling/role playing components suggested that this procedure was efficacious in promoting behavior change in a wide variety of populations. The literature reflected positive results in changing a variety of behaviors, ranging from simple motor responses to complex cognitive and emotional behavior patterns.
Summary

Social learning theorists have contended, with much empirical support, that much human learning has occurred through observational learning or modeling. The collective impact of this review of literature on modeling and role playing indicates that the observation of a model's behavior and subsequent enactment of that behavior was an efficient, efficacious behavior-change technique.

While there is a growing base of empirical evidence to support this contention, the preponderance of related research has dealt with either an adult or atypical population. A number of factors were involved in the successful acquisition of behaviors through modeling. These factors were summarized into four categories. The observer must attend, retain, practice, and be motivated to perform the behavior. The observed model may be live or symbolic. The research reflected that these procedures were effective in the acquisition of new responses, eliminating inhibitions of responses, or facilitating the expression of responses already in an individual's repertoire.

Studies were cited which reflected the power of the modeling/role playing procedure to effect change in simple motor behavior as well as more complex cognitive and emotional behavior patterns. Most of the studies were concerned either with laboratory experimentation of atypical problems or adult populations. Very little systematic research has been conducted
with an elementary school population. The proof of any behavior-change technique lies not in the sterile confines of the laboratory, but in actual research affecting real-life situations. Pioneering efforts are occurring presently in the area of human social interaction. These studies presented preliminary evidence that individuals experiencing low levels of social interaction could be influenced through a modeling/role playing therapeutic technique. These investigations dealt primarily with an adult population. Evidence now exists which indicates that modeling does increase the level of social interaction in young children. It seems that an investigation of a modeling/role playing technique would increase not only understanding of this therapeutic procedure, but also offer an efficient, economical method of intervention into social conflicts of children. This modeling/role playing research was designed to improve the prosocial skills of children experiencing poor social adjustment.
CHAPTER BIBLIOGRAPHY


CHAPTER III

METHODS AND PROCEDURES

This chapter presents in detail a discussion of (1) the procedures involved in the selection of subjects for this investigation, (2) the instruments utilized to test the hypotheses, (3) the development of the modeling videotape utilized in the study, (4) the experimental design of the study, (5) the procedures involved in obtaining the data, and (6) the statistical procedure employed to analyze the data.

Selection of Subjects

Permission was obtained from a North Central Texas city to use selected second-grade children from the two elementary schools in that city in this investigation. In the early spring semester, 1975, the teachers of all second grade classes (eleven) were asked to choose the five most socially withdrawn children in their respective classes. The selection process explained to the teachers was the selection of the children who experienced the least frequent social interaction with their peers. This process resulted in the accumulation of a total population of fifty-five children described as the second-grade children experiencing the lowest level of social interaction with their peers.
The fifty-five children selected were rated by their respective teachers on the Behavior Maturity Scale (Appendix A). In each school, hereafter referred to as School A and School B, the sixteen children with the lowest score on the Behavior Maturity Scale were included in this investigation. These thirty-two children represent the population of this study. The children selected at School A consisted of nine boys and seven girls. There were five Negro children and one Mexican-American child within this group. The children selected from School B consisted of eleven boys and five girls. There were eleven Mexican-American children and one Negro child in this group.

Because it was impractical to integrate the two geographically separated school populations, the sixteen children in each school were randomly assigned to either the experimental or comparison condition within his or her own school. Each of the children in each school was numbered from one to sixteen. The numbers were randomly selected from a container and each number was alternately assigned either to the experimental or comparison treatment condition.

Two experimental groups of four children each were formed in each of the schools. These groups were designated as Experimental Group 1 (EG1), Experimental Group 2 (EG2), Experimental Group 3 (EG3), and Experimental Group 4 (EG4). Two comparison groups were formed in each school. They were designated as Comparison Group 1 (CG1), Comparison Group 2 (CG2), Comparison
Group 3 (CG3), and Comparison Group 4 (CG4). EG1, EG2, CG1, and CG2 were comprised of those children attending School A. EG3, EG4, CG3, and CG4 were comprised of the students attending School B.

Description of the Instruments

The California Test of Personality, Primary Form (Thorpe, Clarke, and Tiegs), was employed to reflect the child's perception of his own social adjustment. While this instrument is comprised of fifteen scores, including scores of self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, nervous symptoms, total personal adjustment, social standards, social skills, antisocial tendencies, family relations, school relations, community relations, total social adjustment, and total adjustment, only the feeling of belonging, withdrawing tendencies, school relations, and social skills subtests were considered for analysis. The items of these four subtests are directly related to the child's perception of his status concerning social interaction with his environment. The test has two equivalent forms, AA and BB. The AA form was administered on pretest and the alternate form as posttest.

Buros (4) reported the reliabilities of the total scores on the test range from .91 to .93 based on the split-half method, corrected by the Spearman-Brown formula, as determined for N's of from 237 to 729 for the various forms. The reliabilities for the principal component of Self-adjustment
range from .88 to .90 and for Social Adjustment from .86 to .90. Although reliabilities for two forms of the California Test of Personality are not available, they are stated to be from .60 to .87 on the remaining three forms of the test (4). Smith (11) performed a study designed to determine the validity of six personality instruments and whether they could differentiate levels of adjustment. Using a number of variables such as teacher ratings, peer ratings, and juvenile authorities, he identified a population of children at different levels of adjustment. Smith found the California Test of Personality would significantly differentiate between well-adjusted and poorly-adjusted elementary school children.

Considerable research has utilized the California Test of Personality. Buros (5) lists 166 publications which utilized the instrument. One reviewer, in a critical review of this test (4), reported it would appear to be among the best available.

The Class Pick Form (Appendix B) is a form on which each student in a classroom is asked to select the five classmates with whom he would prefer to sit, work, and play. Frequency of choice is a reflection of the position each student occupies in the social hierarchy of the class.

The validity of such a sociometric rating instrument is inherent in the structure of the instrument. Pepinsky (10) has stated, "Validity—the extent to which a test measures that which it purports to measure—is intrinsic to sociometric data,
since test results are choice behavior, and the test purports to measure the choice behavior" (10, p. 6). Gronlund (7), in reporting upon the validity of sociometric tests, reports correlation coefficients of .76 and .80 for a population of elementary school children. Bonney (2) cited several sources which provide evidence that sociometric choices do predict actual overt behavior in interpersonal associations or group status. Bonney (6) reported, after extensive observation of first- and second-grade children, that a significant difference occurred between high and low sociometric children on several variables. Using a sociometric measure on which children selected classmates with whom they preferred to sit and work, Bonney differentiated between high and low socially-accepted children. The low sociometric children were found to engage in some kind of activity alone during a free play or activity period significantly more often than high sociometric children. The low sociometric children also were significantly less likely to speak to another child \((p = .01)\), be spoken to by another child \((p = .05)\), speak to a group \((p = .001)\) and enter into cooperative participation in a group activity \((p = .01)\) than high sociometric children.

Gronlund (7) has been credited with developing and clarifying the sociometric rating technique used in this study. He indicated that the most widely used criteria in sociometric rating were those based upon seating companion, work companion,
and play companion. The sociogram is reported to be a graphic picture of desired associations.

Bronfenbrenner (3) reported a reliability coefficient of .67 over a seven-month period. He used a population of twenty kindergarten pupils and sociometric criteria of selecting a work, play, and seating companion. Gronlund (7) reported on the stability of sociometric status over one-week, four-week, and five-week intervals at the sixth-grade level in two studies. In both studies, three choices were allotted to four criteria pertaining to in-school and out-of-school activities. The composite sociometric status scores yielded stability coefficients ranging from .60 to .90 in one study and from .85 to .92 in the other.

Bonney (2) discussed the results of a study reported by Coopersmith, and reported that "Apparently most children can absorb traumatic events very well; more damaging to their self-regarding attitudes are recurring problems that are not resolved, especially those involving social isolation from peers" (2, p. 151). He reported the results of a sociometric study which found a test-retest correlation of .65 for positive peer selection and a test-retest correlation of .68 for negative peer selection.

The Class Pick Form has been useful in differentiating children who are accepted by their peers and those who are rejected or neglected. Previous research has shown that the socially-withdrawn child does not have the same quantity or
quality of social interaction as high sociometrically chosen children (1). High sociometric children on the Class Pick Form have been found to differ significantly from low sociometric children on personal and social adjustment dimensions as measured by the California Test of Personality (12). The high sociometric individuals tended to be better adjusted on all subscales of the California Test of Personality than less frequently chosen classmates.

The Behavior Maturity Scale (Appendix A) is an instrument designed to allow a teacher to rate elementary age students on behaviors which are considered appropriately related to social maturity (8). It is composed of eighteen items in three subscales which allow the teacher to rate students in three areas of maturity. Rating is accomplished using a five-point bipolar Likert scale. The areas of maturity are Interpersonal, Academic, and Emotional. These subscales were evolved through a factor-analytic procedure of items of established maturity scales and submitted for rating by experienced elementary school teachers. The items chosen were selected from the Vineland Social Maturity Scale, Perchstein's and Munn's Rating Scale of Social Maturity, Beller's Dependency-Interdependency Scale, Kearney's Elementary School Objectives, and the Child from Five to Ten by Gesell and Ilg.

Thirty experienced elementary school teachers were asked to judge each item on two points: (1) whether the item can be used to make valid judgment about children in their class for
each item, and (2) whether the item is acceptable for classroom teachers to answer without any embarrassment to themselves, the child, or his family. All items which attained the criterion level of 75 percent agreement were included in the scale. Forty-two of the items achieved the 75 percent level of agreement. These items were then administered to 582 second-grade children in twenty-one elementary schools. Nineteen schools were all-white schools and two were all-Negro schools. These results were factor-analyzed. Three factors were differentiated which had eigen values greater than one and accounted for 66 percent of the total variance. These factors were an Academic factor which described the extent to which a child is persistent, independent, and responsible; an Interpersonal Maturity factor which is concerned with a child's participation, leadership, and friendliness; and an Emotional Maturity factor which is concerned with a child's respect for others and emotional control. A reestimation of the six items having the highest loadings on each of the three factors revealed corresponding eigen values of 9.97, 1.8, and 1.32, respectively. This combination accounted for 73 percent of the total variance. Analysis of the results of the information obtained from the Negro population revealed the same three factors.

In his analysis, Kim (8) reported that significant differences were found between high and low achievers in academic, interpersonal, and emotional factors of social maturity over and above the differences in the chronological age, IQ, and
performance on standard achievement tests. He further indicated that the relatively high communalities obtained in the study suggested a high item reliability. Kim suggested several reasons for this. The teachers who rated students in their classes were well acquainted with the children, having had eight months of daily contact with them. Additionally, the items included in the scale are all selected from well-established maturity scales or constructed from well-defined education objectives in social development for this age level, and items that might have been unreliable were eliminated by the ratings of experienced teacher judgment.

The items in this scale seem suited for this study in that they ask for an evaluation by the teacher of observed behavior rather than inferred behavior. The items are directly related to behavior which the teacher observes daily as the child interacts with his social environment.

The Observed Behavior Rating Scale (Appendix C) is a naturalistic observation measure. It is a time-sampling measure of the frequency of child social interaction. Social interaction for this investigation was defined as any situation in which a child talked and/or played with another child. The interaction must have been reciprocal in nature. The instrument consists of two four-minute time-sample observation periods subdivided into fifteen-second intervals. Thus, one measure could conceivably result in thirty-two units of social interaction. The observation took place over a two-day period. A
four-minute observation was completed during an afternoon free-play period, and a four-minute observation was completed during a morning free-play period.

The observers for this investigation received two hours of instruction in the use of the Observed Behavior Rating Scale. They took part in practice in the utilization of the scale by completing several observations before the investigation was begun. Interrater reliability was computed using the formula suggested by Wright (13) and O'Connor (9). The six raters were paired and a percent of agreement of observation was determined (number of agreements/32 possible agreements). Investigations of social interaction utilizing criteria similar to this study have reported high interrater reliabilities. O'Connor (9) found interrater reliability for raters observing a population of young children's social interaction to be .90. The criteria for social interaction was the frequency of interacting with others during an eight-minute time sample. In an intensive, long-range investigation, Wright (13) found a high degree of reliability between pairs of raters of children's social interaction. Under the category Interplay Type which dealt with the congruence or incongruence between the actions of a child and his social environment, Wright found item-by-item agreement percents of 91, 83, and 71. As the observers were required to distinguish between social behaviors of more basic positive/negative dimensions, the percent of interrater agreement increased to 99, 100, and 94.
The combined effect of these and other studies suggested that observers in a time-sampling study are measuring the same phenomenon. There is evidence to support the contention that trained observers can distinguish between positive and negative social interaction in a reliable and consistent manner.

The present study required observers to rate subject behavior at fifteen-second intervals. The observer determined whether the child being rated engaged in a social interaction or not. If the child did not engage in any reciprocal interaction, the observer recorded a zero (0) in the appropriate space. If the child did engage in a form of social interaction, the rater determined whether the contact was positive or negative in nature. If the interaction was judged to be positive, the rater recorded a one (1) in the appropriate space. If the rater judged the interaction to be negative in nature, a two (2) was recorded in the appropriate space.

The use of a natural measure of the social behavior of the children included in this study was necessary to determine whether the treatment variable had been of practical value. Recognition is given to the fact that inferential methods of determining behavior change can be deceptive and in some cases may not be related to the subject's actual behavior. The treatment variable, if effective, should serve to increase not only the individual child's perception of his social relationships, but also increase the occurrence of social contact with his peer group.
Development of the Modeling Film

The modeling film developed for this study depicts children engaged in various social interactions. The scenes were developed to portray brief social contacts which are generally positive in nature. The sequences are brief in order to facilitate later enactment by observers of the film. Each scene is concluded with a positive consequence to increase the motivation factor for replication of the social behavior. The sequences range in length from one to two minutes. The modeling film is as close an approximation of the modeling script (Appendix D) as possible. Each scene was preceded by a narrative by the author explaining the scene and the modeled behaviors prior to observation by the children in the experimental condition.

There are eight filmed vignettes. The filmed sequences are arranged on two gradients of sociability. These two dimensions are an approach gradient and a dimension concerned with the number of individuals in each social encounter. The approach gradient depicts a child who at first does not initiate social contact. Succeeding sequences depict the modeling child initiating contact with his social environment. The second gradient presents the modeling child interacting with varying numbers of children. Scenes are presented in alternating fashion which first present a one-to-one social interaction, then a group social interaction. One scene was observed and role played during each session of the study.
The children who served as film models were unknown to the experimental population. The models were seven children (three boys and four girls) who ranged from six to eight years of age.

The modeling film originally consisted of twenty-four scenes depicting social interaction. From these twenty-four scenes, the eight scenes which best illustrated the desired effects of positive social interaction were selected for use in the study. A panel of three judges viewed and rated the vignettes. These judges were experienced elementary school counselors who had been counseling with children during a period of from three to nine years. Educationally, they were at the postmasters and doctoral level. The technique of paired comparisons was utilized to select the most accurate and realistic social interactions. The judges viewed two scenes, A and B. After choosing the scene they considered most realistic and positive in nature, they compared that choice, A or B, with C. The scene selected by at least two of three judges was utilized in this study. In the event a clear-cut selection was not made through the paired comparisons technique, each of the counselors rated each scene along several relevant dimensions (Appendix E). During the scene rating, all scenes except one were unanimous choices by the raters. The eight scenes found to most effectively depict the desired social interactions were edited and placed upon a single cassette videotape for observation by the experimental population. The
modeling film was videotaped using a portable Panasonic videotape recorder, camera, and monitor. Replay during the study for the experimental population was achieved with a portable Sony cassette videotape monitor.

Design of the Study

The design for this study was a pretest-posttest control group design. Campbell and Stanley point out that the pretest-posttest control group design controls for such experiment confounding variables as history, maturation, testing effects, instrumentation, statistical regression, selection biases, and experimental mortality. This design is illustrated by Campbell and Stanley (12, p. 13) as follows:

\[
\begin{array}{cccc}
R & 0_1 & X & 0_2 \\
\hline
R & 0_3 & 0_4 \\
\end{array}
\]

0_1 and 0_3 are the pretest observations as reported by measures from the Feeling of Belonging, Freedom from Withdrawing Tendencies, Social Skills, and School Relations subscales of the California Test of Personality, the Class Pick Form, the Behavior Maturity Scale, and the Observed Behavior Rating Scale. 0_2 and 0_4 are the posttest measures as reported by the same instruments. X was the modeling/role playing experimental condition.
Data Collection

The subjects in this investigation were thirty-two second-grade students enrolled in the spring 1975 academic year. The children selected as subjects were chosen as the most socially withdrawn by their respective teachers. As a further criterion for selection to the experimental or comparison condition, the Behavior Maturity Scale was administered. Each second-grade teacher completed this Behavior Maturity Scale for each child she identified as being socially withdrawn.

The administration of the Behavior Maturity Scale was accomplished two weeks prior to the initial treatment session. The Class Pick Form was administered during the week prior to the initial treatment session. All second-grade children were given a sheet of paper containing three columns labeled Play, Sit, and Work. The name of each student in his respective class appeared under each of the headings. After identifying themselves on the sheet, the children were asked to circle the names of five classmates in each column with whom they would like to play, sit, and work. They were informed they could choose the same or different names each time.

The selected subscales of the California Test of Personality were administered the week preceding the initial treatment sessions. These subscales were completed in a group administration in each school. The Observed Behavior Rating Scale was completed during the week preceding the initial treatment session. Trained raters observed each child and rated the
frequency of the child's social interaction in an eight-minute time sampling procedure. Observations of a nonreferred population were accomplished with the Observed Behavior Rating Scale and the Class Pick Form.

The raters were six individuals engaged in various elementary school guidance and counseling programs. Their experience with elementary school-aged children ranged from six months to ten years. Three of the raters were advanced undergraduate students in the Guidance Associates program of the Counseling and Student Services program at North Texas State University. The remaining three raters were employed in counseling positions at the time of the observations.

The raters received a two-hour period of instruction and training in the use of the Observed Behavior Rating Scale. All six raters observed and rated four students engaged in a free play situation. The raters were arbitrarily paired and a percent of agreement derived. The paired raters achieved an 88 percent, 91 percent, and 94 percent agreement in their item-by-item total rating of these students.

During the pretest and posttest observations with the Observed Behavior Rating Scale, the raters were paired during half of the ratings. A random sample of these paired observations was selected and an interrater reliability was computed. The percent of agreement on the pretest observation ranged from 81 percent to 100 percent agreement, with an overall average rater agreement of 87.1 percent. The percent of rater
agreement derived from the posttest observation ranged from 81 percent to 100 percent agreement, with an overall average rater agreement of 94 percent. The results of these ratings were deemed sufficiently reliable to accept the ratings completed by the raters.

The Observed Behavior Rating Scale was used to rate social interaction for four consecutive minutes during each of two free play periods. The eight-minute observation period was divided into thirty-two intervals of fifteen seconds each. The two four-minute observation periods were conducted during a morning free play period and an afternoon free play period. During the free play periods, the children were at liberty to play with whomever they chose and with whatever materials were available. These play periods were normally conducted on an outside play ground. During inclement weather the classes were allowed to play in the school cafeteria.

The modeling/role playing sessions began on Tuesday of the week following the completion of the administration of all pretest instruments. The schedule for the sessions was arranged so that each group met twice weekly for four weeks. The meetings each week were scheduled so that half of the experimental groups and half the comparison groups met in the morning, with the remaining half of the groups meeting in the afternoon. There were eight sessions for each group. Each session was approximately thirty minutes in length.
The initial session began with an explanation of the procedures which would be followed for that and succeeding sessions. The children were told they would see a short film which presented some children doing different things. The film was presented by a portable Sony cassette videotape unit. (The students were accustomed to viewing educational tapes via these portable units.) An introduction (Appendix D) to the situation being portrayed in each of the eight scenes was read by the counselor immediately before the vignette was observed.

The narrative preceding each scene was included to describe the social actions being modeled and to increase the children's attention to the model's behavior during the interaction. The children were instructed to pay close attention to what happened in the film and were told that after the film they could practice doing just what they observed the models doing in the film. The same toys employed in the development of the modeling videotape were utilized in the experimental condition. For example, the first filmed sequence depicts a somewhat shy boy who is new to the school. He is approached by another boy who invites him to come and play. The children were directed to observe the manner in which the children approached and talked with one another, and attention was drawn to the positive consequences which followed the filmed model's social interaction. A typescript of the eight introduction narratives and vignettes are included as Appendix D.
After viewing the sequence of responses presented in the film, each child was allowed to role play the modeled social interaction. Aid was given to those children who had forgotten or were confused about their expected behavior. The children who observed the modeling film were attentive, and they experienced no difficulty in achieving an approximation of the modeled behaviors.

Each child was paired with a partner in his group for the film sequences which portrayed only two characters. These partners alternated roles such that each child role played the modeled behavior. When a film sequence depicted more than two characters, each child in the group role played the modeled behavior.

The comparison groups met for approximately thirty minutes twice each week for eight weeks, also. They were shown short segments of the Walt Disney film Nature's Half Acre. This film is completely devoid of human figures. It is concerned with the exploration and discovery of wildlife. After viewing a segment of the film, the comparison group was allowed to discuss the film.

During the week following the eighth and final session, the administration of the posttest instruments was begun. The selected subscales of the California Test of Personality were administered in a group administration during the week following the final session. The Class Pick Form was administered during the week following the final session. Each teacher was asked
to complete the Behavior Maturity Scale during the week following the final session for the five children selected by them as being most socially withdrawn. Posttesting administration of the Observed Behavior Rating Scale was begun the week following the last session. However, due to the occurrence of Easter vacation, this instrument was not completed until the week the children returned from the Easter vacation.

Statistical Analyses of Data

The data from the groups in each school were considered separately for the purpose of initial statistical analyses. These results were considered separately to determine the possible existence of differential treatment effects in the two schools. A final one-way analysis of covariance which pooled both the experimental group data from both schools and pooled the comparison group data from both schools was computed.

A one-way analysis of covariance was utilized to determine the significance of change occurring between the experimental and comparison group adjusted mean scores. Stanley and Campbell (6) reported that the analysis of covariance is preferable to the use of the analysis of simple gain scores in educational experiments. They indicated that a further rationale for the use of the analysis of covariance occurs in situations in which the subjects are taken as "intact" populations as in classes or schools and fewer chance events might have been employed. The covariate measure in each analysis was the pretest score
for each of the four instruments. For the purposes of statistical analysis, the combined subscales scores of the California Test of Personality were treated as a single score. The combined scores of the three subscales of the Behavior Maturity Scale were treated as a single score. The dependent variable was the posttest score for each instrument. The results are reported in terms of F-ratios presented in tables.

The .05 level of significance was used as the basis for accepting or rejecting the hypotheses. The statistical computations of the data were completed at the Data Processing Center, North Texas State University.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

ANALYSIS OF RESULTS AND DISCUSSION

The purpose of this chapter is to present, analyze, and discuss the findings of this investigation. This study was designed to determine whether a modeling/role playing counseling procedure could be used to improve the social adjustment of children identified as socially withdrawn. The analysis of covariance statistical analysis was employed to determine whether statistically significant changes occurred as a result of this counseling procedure.

In order to examine the data more closely, the information derived from the two schools, A and B, will be initially reported separately. After the separate results are presented, the results of the analysis of covariance for the two combined school populations will be reported.

The data obtained from School B are based upon measures administered to fifteen children. One child, a Negro girl, moved away before the posttest measures were administered. She was a member of EG4 in School B.

The .05 level of significance was established as the basis upon which the hypotheses would be tested. Hypothesis I predicted that the adjusted mean for the number of social interactions of the children in the experimental group would
be significantly higher than the adjusted mean of the number of social interactions of the children in the comparison group. Table I reflects the means and standard deviations of the Observed Behavior Rating Scale (Appendix C) administered to pupils in School A.

**TABLE I**

**MEANS AND STANDARD DEVIATIONS FROM THE OBSERVED BEHAVIOR RATING SCALE FOR SCHOOL A**

<table>
<thead>
<tr>
<th>Group</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>EG1 &amp; EG2</td>
<td>11.3750</td>
<td>18.5000</td>
</tr>
<tr>
<td>CG1 &amp; CG2</td>
<td>10.7500</td>
<td>15.2500</td>
</tr>
</tbody>
</table>

Table II presents the analysis of covariance data related to the Observed Behavior Rating Scale administered to pupils in School A.

**TABLE II**

**ANALYSIS OF COVARIANCE DATA FROM THE OBSERVED BEHAVIOR RATING SCALE FOR SCHOOL A**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>33.6062</td>
<td>33.6062</td>
<td>3.8668</td>
<td>0.0710</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13</td>
<td>112.9827</td>
<td>8.6910</td>
<td>. .</td>
<td>. .</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>146.5889</td>
<td>. .</td>
<td>. .</td>
<td>. .</td>
</tr>
</tbody>
</table>
The means and standard deviations of the results of the administration of the Observed Behavior Rating Scale to pupils in School B are presented in Table III.

TABLE III
MEANS AND STANDARD DEVIATIONS FROM THE OBSERVED BEHAVIOR RATING SCALE FOR SCHOOL B

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG3 &amp; EG4</td>
<td>11.4286</td>
<td>11.8750</td>
<td>16.0148</td>
<td>9.7269</td>
<td>7.3808</td>
</tr>
<tr>
<td>CG3 &amp; CG4</td>
<td>11.8750</td>
<td>10.0000</td>
<td>9.8620</td>
<td>3.3568</td>
<td>7.9462</td>
</tr>
</tbody>
</table>

The analysis of covariance data related to the Observed Behavior Scale administered to students in School B is presented in Table IV.

TABLE IV
ANALYSIS OF COVARIANCE DATA FROM THE OBSERVED BEHAVIOR RATING SCALE FOR SCHOOL B

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>141.0493</td>
<td>141.0493</td>
<td>2.7916</td>
<td>0.1206</td>
</tr>
<tr>
<td>Within Groups</td>
<td>12</td>
<td>606.3181</td>
<td>50.5265</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>747.3674</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The means and standard deviations for the combined experimental and comparison group scores on the Observed Behavior Rating Scale appear in Table V.

### TABLE V

**MEANS AND STANDARD DEVIATIONS FROM THE OBSERVED BEHAVIOR RATING SCALE OF THE COMBINED GROUPS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>EG1, EG2, EG3 &amp; EG4</td>
<td>11.4000</td>
<td>17.2408</td>
</tr>
<tr>
<td>CG1, CG2, CG3 &amp; CG4</td>
<td>11.3125</td>
<td>12.6250</td>
</tr>
</tbody>
</table>

The analysis of covariance data pertaining to the Observed Behavior Rating Scale administered to all the experimental and comparison groups appears in Table VI.

### TABLE VI

**ANALYSIS OF COVARIANCE DATA FROM THE OBSERVED BEHAVIOR RATING SCALE FOR THE COMBINED GROUPS**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>163.1956</td>
<td>163.1956</td>
<td>5.145*</td>
<td>0.0312</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28</td>
<td>888.0928</td>
<td>31.7176</td>
<td>. .</td>
<td>. .</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>1051.2883</td>
<td>. .</td>
<td>. .</td>
<td>. .</td>
</tr>
</tbody>
</table>

*Significant at the .03 level of significance.
The analysis of covariance of the data resulting from the pooling of experimental group scores and comparison group scores reflect an F Value significant beyond the .03 level of significance. Hypothesis 1 was supported by the results of this study.

Hypothesis 2 predicted that the adjusted mean of the teacher rating of the children in the experimental group would be significantly higher than the adjusted mean of the teacher rating of children in the comparison group. The data from the Behavior Maturity Scale (Appendix A) were employed to test this hypothesis.

The means and standard deviations of the Behavioral Maturity Scale administered to pupils in School A are presented in Table VII.

<table>
<thead>
<tr>
<th>Group</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>EG1 &amp; EG2</td>
<td>38.8750</td>
<td>55.6250</td>
</tr>
<tr>
<td>CG1 &amp; CG2</td>
<td>41.5000</td>
<td>47.7500</td>
</tr>
</tbody>
</table>

The analysis of covariance data for the Behavior Maturity Scale information presented in Table VII is presented in Table VIII.
TABLE VIII
ANALYSIS OF COVARIANCE DATA FROM THE BEHAVIOR MATURITY SCALE ADMINISTERED TO SCHOOL A

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>361.2656</td>
<td>361.2656</td>
<td>6.6517*</td>
<td>0.0229</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13</td>
<td>706.0499</td>
<td>54.314</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>1067.3135</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

*Significant at the .02 level of significance.

The means and standard deviations of the Behavior Maturity Scale administered to students in School B are presented in Table IX.

TABLE IX
MEANS AND STANDARD DEVIATIONS FROM THE BEHAVIOR MATURITY SCALE ADMINISTERED TO SCHOOL B

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG3 &amp; EG4</td>
<td>38.0000</td>
<td>45.5714</td>
<td>45.5360</td>
<td>11.4601</td>
<td>9.0712</td>
</tr>
<tr>
<td>CG3 &amp; CG4</td>
<td>37.7500</td>
<td>45.0000</td>
<td>45.0310</td>
<td>9.5581</td>
<td>11.9642</td>
</tr>
</tbody>
</table>

The analysis of covariance data for the results of the Behavior Maturity Scale administered to pupils in School B are presented in Table X.
The means and standard deviations for the combined experimental group scores and comparison group scores of the Behavior Maturity Scale are presented in Table XI.

The analysis of covariance data for the Behavior Maturity Scale administered to both schools are presented in Table XII.
TABLE XII
ANALYSIS OF COVARIANCE DATA FROM THE BEHAVIOR MATURITY SCALE ADMINISTERED TO THE COMBINED GROUPS

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>197.5620</td>
<td>197.8914</td>
<td>2.1736</td>
<td>0.1515</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28</td>
<td>2544.9583</td>
<td>90.8914</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>2742.5203</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

The F Value reflected in Table XII did not attain the .05 level of significance necessary to support Hypothesis 2.

Hypothesis 3 predicted that the adjusted mean of the peer rating measure would be significantly greater for the children in the experimental group than the adjusted mean of the peer rating measure in the comparison group. Data from the Class Pick Form (Appendix B), a sociometric rating form, were utilized to test this hypothesis.

Table XIII presents the means and standard deviations of the Class Pick Form administered to pupils in School A.

TABLE XIII
MEANS AND STANDARD DEVIATIONS FROM THE CLASS PICK FORM ADMINISTERED TO SCHOOL A

<table>
<thead>
<tr>
<th>Group</th>
<th>Means Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Standard Deviations Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG1 &amp; EG2</td>
<td>6.5000</td>
<td>9.3750</td>
<td>10.9872</td>
<td>4.0356</td>
<td>4.5962</td>
</tr>
<tr>
<td>CG1 &amp; C32</td>
<td>10.8750</td>
<td>8.2500</td>
<td>6.6378</td>
<td>5.1669</td>
<td>4.3997</td>
</tr>
</tbody>
</table>
The analysis of covariance data related to the Class Pick Form administered to students in School A is reflected in Table XIV.

**TABLE XIV**

ANALYSIS OF COVARIANCE DATA FROM THE CLASS PICK FORM ADMINISTERED TO SCHOOL A

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>60.3212</td>
<td>60.3212</td>
<td>6.5380*</td>
<td>0.0239</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13</td>
<td>119.9415</td>
<td>9.2263</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>180.2626</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

*Significant at .02 level of significance.

The means and standard deviations of the Class Pick Form administered to the students in School B are presented in Table XV.

**TABLE XV**

MEANS AND STANDARD DEVIATIONS FROM THE CLASS PICK FORM ADMINISTERED TO SCHOOL B

<table>
<thead>
<tr>
<th>Group</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>EG3 &amp; EG4</td>
<td>7.8571</td>
<td>13.1429</td>
</tr>
<tr>
<td>CG3 &amp; CG4</td>
<td>6.5000</td>
<td>7.5000</td>
</tr>
</tbody>
</table>
The analysis of covariance data for the Class Pick Form information presented in Table XV appears in Table XVI.

TABLE XVI

ANALYSIS OF COVARIANCE DATA FROM THE CLASS PICK FORM ADMINISTERED TO SCHOOL B

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>62.2640</td>
<td>62.2640</td>
<td>3.3784</td>
<td>0.0909</td>
</tr>
<tr>
<td>Within Groups</td>
<td>12</td>
<td>221.1594</td>
<td>18.4299</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>283.4234</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

The means and standard deviations of the Class Pick Form for the combined groups are presented in Table XVII.

TABLE XVII

MEANS AND STANDARD DEVIATIONS FROM THE CLASS PICK FORM ADMINISTERED TO THE COMBINED GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG1, EG2, EG3 &amp; EG4</td>
<td>7.1333</td>
<td>11.1333</td>
<td>11.7918</td>
<td>3.9437</td>
<td>4.3731</td>
</tr>
<tr>
<td>CG1, CG2, CG3 &amp; CG4</td>
<td>8.6875</td>
<td>7.8750</td>
<td>7.2577</td>
<td>5.0691</td>
<td>6.0978</td>
</tr>
</tbody>
</table>

The analysis of covariance data for the Class Pick Form related to Table XVII is presented in Table XVIII.
TABLE XVIII
ANALYSIS OF COVARIANCE DATA FROM THE CLASS PICK FORM ADMINISTERED TO THE COMBINED GROUPS

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>154.3706</td>
<td>154.3706</td>
<td>10.3140*</td>
<td>0.0033</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28</td>
<td>419.0771</td>
<td>14.9670</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>573.4478</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .0033 level of significance.

The analysis of covariance reported in Table XVIII reflects an F Value of 10.3140. This is significant beyond the .0033 level of significance and Hypothesis 3 is supported by these results.

Hypothesis 4 predicted the adjusted mean of the measure of personal social adjustment as indicated by self-rating would be significantly greater for the children in the experimental group than the adjusted mean of the measure of personal social adjustment as indicated by self-rating for children in the comparison group. Four selected subscales of the California Test of Personality were employed to test this hypothesis. The subscales were the Feeling of Belonging, Withdrawing Tendencies, School Relations, and Social Skills.

Table XIX presents the means and standard deviations of the selected subscales of the California Test of Personality administered to students in School A.
TABLE XIX
MEANS AND STANDARD DEVIATIONS FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY ADMINISTERED TO SCHOOL A

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGI &amp; EG2</td>
<td>21.3750</td>
<td>18.1250</td>
<td>18.0360</td>
<td>4.2067</td>
<td>4.6426</td>
</tr>
</tbody>
</table>

The analysis of covariance data related to the subscales of the California Test of Personality administered to the pupils in School A is presented in Table XX.

TABLE XX
ANALYSIS OF COVARIANCE DATA FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY ADMINISTERED TO SCHOOL A

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>57.7376</td>
<td>57.7376</td>
<td>4.6467*</td>
<td>0.0504</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13</td>
<td>161.5330</td>
<td>12.4256</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>219.2706</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

*Significant at .05 level of significance.

The means and standard deviations of the selected subscales of the California Test of Personality administered to pupils in School B are presented in Table XXI.
TABLE XXI
MEANS AND STANDARD DEVIATIONS FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY ADMINISTERED TO SCHOOL B

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted Mean</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG3 &amp; EG4</td>
<td>18.7143</td>
<td>21.2857</td>
<td>20.7923</td>
<td>2.9278</td>
<td>4.6086</td>
</tr>
<tr>
<td>CG3 &amp; CG4</td>
<td>17.3750</td>
<td>19.7500</td>
<td>20.1817</td>
<td>3.3354</td>
<td>3.5757</td>
</tr>
</tbody>
</table>

The analysis of covariance data pertaining to the means and standard deviations of Table XXI is presented in Table XXII.

TABLE XXII
ANALYSIS OF COVARIANCE DATA FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY ADMINISTERED TO SCHOOL B

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>1.3232</td>
<td>1.3232</td>
<td>0.1023</td>
<td>0.7546</td>
</tr>
<tr>
<td>Within Groups</td>
<td>12</td>
<td>155.2263</td>
<td>12.9355</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>156.5495</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

The means and standard deviations of the selected subscales of the California Test of Personality for the combined
experimental group scores and the combined comparison group scores are presented in Table XXIII.

**TABLE XXIII**

MEANS AND STANDARD DEVIATIONS FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY FOR THE COMBINED GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Means Pretest</th>
<th>Means Posttest</th>
<th>Adjusted Mean</th>
<th>Standard Deviations Pretest</th>
<th>Standard Deviations Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EG1, EG2, EG3 &amp; EG4</td>
<td>20.1333</td>
<td>19.6000</td>
<td>19.3800</td>
<td>3.7960</td>
<td>4.7480</td>
</tr>
<tr>
<td>CG1, CG2, CG3 &amp; CG4</td>
<td>19.1875</td>
<td>20.7500</td>
<td>20.9562</td>
<td>4.4305</td>
<td>3.4737</td>
</tr>
</tbody>
</table>

The analysis of covariance data of the information contained in Table XXIII is presented in Table XXIV.

**TABLE XXIV**

ANALYSIS OF COVARIANCE DATA FROM THE SELECTED SUBSCALES OF THE CALIFORNIA TEST OF PERSONALITY FOR COMBINED GROUPS

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>18.9680</td>
<td>18.9680</td>
<td>1.3416</td>
<td>0.2565</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28</td>
<td>395.8794</td>
<td>14.1385</td>
<td>. . .</td>
<td>. .</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>414.8474</td>
<td>. .</td>
<td>. .</td>
<td>. .</td>
</tr>
</tbody>
</table>
The analysis of covariance data reported in Table XXIV reflects an F Value of 1.3416 which does not attain the .05 level of significance. Hypothesis 4 was not substantiated by these results.

Discussion

An examination of the analysis of covariance tables related to the analysis of combined group scores reveals data which supported two of the four original hypotheses. Hypothesis 1, which predicted that the frequency of social interaction of the experimental group would increase more than the comparison group, was supported by the findings reported in Tables V and VI. The analyses of covariance data reported in Tables II and IV for schools A and B, respectively, were not significant individually. However, when these results are combined in Table VI, an F value of 5.1453, which is significant at the .03 level of significance, results. There was an increase in posttest means for the experimental groups in both School A and B, while the means for the comparison groups remained relatively stable for School B. School A comparison groups did experience a mean gain in frequency of social interaction.

The adjusted mean for the experimental groups was 17.2408. This compares favorably with the observations of a selected sample of nonreferred children conducted prior to the initial treatment sessions. The nonreferred second-grade sample mean number of social interactions was twenty. The experimental
adjusted mean does approach this level of social interaction. These results are consistent with those reported by O'Connor (3). He found the post-experimental and nonreferred population mean number of social interactions for preschool children to be virtually identical.

The data in Tables I-VI related to Hypothesis 1 tend to substantiate Bandura's view that the provision of adequate practice and reinforcement of social skills tends to increase the probability that the behavior will attain a functional value (1). The data also lend support to the en vivo therapeutic technique in which the individual is encouraged to experience the conflict in a real-life situation. Anxiety aroused by the prospect of interpersonal interaction may also be reduced by the modeling/role playing procedure. Wolpe stated, "A good deal of deconditioning of anxiety frequently takes place during the behavior rehearsal itself" (5, p. 68).

The interpersonal anxiety may undergo vicarious extinction through the modeling process and be reduced further through the role playing sequence in which the child is required to actually engage in social interaction.

Hypothesis 2, which predicted that the teachers would observe changes in the child's level of social interaction was not confirmed. An examination of the analysis of covariance of data of the Behavior Maturity Scale in Tables VII and VIII for School A reveals that the teacher ratings for the experimental group did significantly increase. Table VIII
presents an F Value of 6.6517 which is significant at the .02 level of significance. The teachers of School B reported substantial changes in both experimental and comparison group children.

Several factors may have influenced the teacher ratings of their children. The most pervasive factor is the halo effect. The source of this rater bias may stem from the knowledge that all of the children were involved in an experiment. This is partially supported by the tendency for teachers in both School A and School B to rate both experimental and comparison group students higher on the posttest than on the pretest administration of the Behavior Maturity Scale.

Another possible factor affecting the results may lie in the population differences in the two schools. The sixteen children from School A consisted of ten white children, five Negro children, and one Mexican child. The sixteen children from School B were eleven Mexican-American children, four white children, and one Negro child. The impact of the ethnic differences in the two school populations and the rigidity with which ethnic minorities are sometimes perceived may have influenced the teacher rating. Much evidence has been cited by Ullman and Krasner (4) which is indicative of the prevalence of maladjustment in low socioeconomic groups and the tendency to perceive no positive changes resulting from therapy in these groups.
A third possible factor, related to the results pertaining to Hypothesis 2, is the manner of initially informing the teachers of the study. The author was acquainted with the administrators and teachers in School A. The teachers were first informed of the pending study by the author. The teachers in School B were initially informed by the school authorities that an investigation was being conducted. There may have been a tendency among the teachers of School B to perceive the purpose and motivation of the investigation differently than perceived by the teachers of School A. The social perception of the teachers toward ethnic minorities and administrative expectations may have affected the teacher ratings of children in School B.

The tendency for the teachers to rate the experimentally treated children as better adjusted socially is evident from the P value of 0.1515 reported in Table XXII. It does not attain the .05 level of significance, however, and Hypothesis 2 was not substantiated.

The data related to Hypothesis 3 are reported in Tables XIII-XVIII. An examination of the individual school results and the combined results shows that the experimentally treated groups in both School A and School B improved substantially in terms of the sociometric rating utilized. The comparison groups remained virtually the same from the pretest to posttest administration. The P of 0.0033 exceeds the .05 level of significance required to accept Hypothesis 3.
The experimentally treated group's adjusted mean reported in Table XVII compares favorably with the average number of selections for a nonreferred population of second-grade children. The nonreferred population mean number of selections on the Class Pick Form was 13.6666, while the experimental group's adjusted mean was 11.7918.

An examination of the raw scores of the Class Pick Form indicates that fourteen of the experimentally treated children had higher scores on the posttest measure than on the pretest measure. The remaining child lost a single score unit. These pervasive gains are indicative of the widespread effect the modeling/role playing procedure may achieve. These gains are compared to the lack of change in scores of the comparison group children on the Class Pick Form from pretest to posttest administration.

The effects of the modeling/role playing counseling procedure appear to have generalized from the experimental situation to a real-life situation of peer selection. The effect of increasing the efficiency of social skills can have a self-maintaining value. O'Connor (3) pointed out that avoidance of interpersonal interaction can impede development of socially mediated competencies. The facilitation of social skills and the generalization of these social behaviors to a generalized population can lead to a powerful social reinforcement. This social reinforcement can maintain the experimentally facilitated social behaviors.
The data related to Hypothesis 4 which predicted improved personal adjustment on the self-rating measure are presented in Tables XIX through XXIV. The information resulting from the data appears conflicting. Table XX reflects an F Value of 4.6467 indicating the difference between the adjusted means of the experimental and comparison groups of School A are significantly different. The information contained in Tables XXI and XXII indicates there was no significant difference between the posttest means of the experimental and comparison groups in School B on the selected subscales of the California Test of Personality.

Close examination of the mean changes in Table XIX in School A reveals that the experimental group pretest mean was 21.3750 and their posttest mean was 18.1250. These are compared with the comparison group's pretest mean of 21.0000 and posttest mean of 21.7500. There was virtually no difference from pretest to posttest measurement in the comparison group means. However, the experimental group posttest mean decreased 3.25 score units from the pretest mean. A possible factor influencing this result may again lie in the population differences which exist between the two schools. The subscales of the California Test of Personality were administered as a group procedure. The language comprehension difficulties which existed between the Spanish speaking and English speaking children may have contributed to these results. It is also possible that the experimental group in School A became more introspective
of their social deficiencies, thus rating themselves more harshly as a result of the treatment procedure.

The analysis of covariance data pertaining to the subscales of the California Test of Personality does not support Hypothesis 4. The lack of significant change is consistent with the findings reported by Clements, Roberts, and Lantz (2) regarding personality changes as measured by the California Test of Personality. They used the Withdrawing Tendencies and Social Skills subscales as pretest and posttest measures. These authors reported no significant changes in the two subscales of the California Test of Personality. In addition, the belief is widely shared that therapeutically induced personality changes rarely occur in such a brief period as this four-week investigation. Even though the child may be experiencing more frequent social interaction and may be interacting with more individuals than previously, his perception of these changes may require a longer period of time to process and integrate. The individual child may react somewhat more slowly in changing self-referent labels which are descriptive of himself. It would appear consistent within the social-learning framework that continued interpersonal interaction of a positive nature will alter these perceptions of self over time.
Summary

This chapter presented, analyzed, and reviewed the findings of this investigation. The four hypotheses presented in Chapter I were reviewed, and the statistical analysis of the data related to each hypothesis was examined. The procedure for the presentation of the data consisted of reporting the results of the analysis of covariance data for each school separately. After this separate examination, the results for all experimental groups and the comparison group results were combined and analyzed.

The data supported Hypothesis 1 which predicted that the frequency of social interaction for experimental group children would increase significantly over the frequency of the social interaction for the comparison group children. The data also supported Hypothesis 3, which predicted that the frequency of selection on a peer rating sociometric instrument for the experimental groups would be significantly greater than the frequency of selection on this instrument for the comparison group children.

The data failed to support Hypothesis 2 or Hypothesis 4. Hypothesis 2 predicted that the respective teachers of the experimental group children would rate these children significantly higher on the Behavior Maturity Scale than the children of the comparison groups. Hypothesis 4 predicted that the children in the experimental groups would rate themselves as significantly higher on a self-rating instrument than the comparison group children.
The implications of these findings were discussed. Factors which may have contributed to the confirmation or lack of support of the hypotheses were reviewed. The children of the experimental groups tended to increase the frequency of their social interaction, and their selection by their classmates on a sociometric instrument increased. These findings reflect a generalization of the treatment effects to real-life situations among peers. Theoretically there may be a tendency for the modeling/role playing procedure to decondition anxiety associated with interpersonal interaction. The implications for the self-maintenance of efficient social skills through appropriate social reinforcement were discussed.

Factors were discussed which may have influenced the data regarding Hypothesis 2 and Hypothesis 4. Among these considerations were the ethnic makeup of the two school populations, the halo effect of the experimental condition, and the social perception of ethnic minority changes related to personal and social adjustment. The possible ramifications of changes in self-labeling were discussed in light of the observed behavior changes and the lack of change on the self-rating instrument.

It appears that this procedure did effect changes in the social adjustment and functioning among peers of the experimental groups involved. The frequency of social interaction and the sociometric rating of the children in the experimental condition increased. There was a trend for
teachers to rate improvement in the social maturity of the experimental groups.

Conclusions

The following conclusions are presented as a result of this investigation:

1. The symbolic modeling/role playing procedure as utilized in this study is effective in increasing the frequency of social interaction of socially withdrawn children.

2. The symbolic modeling/role playing counseling procedure as utilized in this investigation is effective in increasing the sociometric status of socially withdrawn children.

3. The symbolic modeling/role playing counseling procedure as utilized in this study appears to be ineffective with respect to changing children's self-perception.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this investigation was to determine the effects of a modeling/role playing procedure upon the social adjustment of socially withdrawn second-grade children. The modeling/role playing procedure is a therapeutic technique utilized by a wide range of counselors and therapists. Vicarious learning provides a basis for the relatively recent exploration by social-learning theorists in human learning. The early investigations of modeling/role playing focused primarily upon the manipulation of atypical, asocial behaviors within a laboratory setting. Relatively few studies have investigated the effects of this procedure upon prosocial behavior change. This study sought to enhance the social skills and social adjustment of children experiencing low levels of social interaction through a modeling/role playing procedure.

The four hypotheses investigated in this study were:

1. The adjusted mean for the number of social interactions of the children in the experimental group will be significantly higher than the adjusted mean of the number of social interactions of the children in the comparison group.
2. The adjusted mean of the teacher ratings of the children in the experimental group will be significantly greater than the adjusted mean of the teacher ratings of children in the comparison group.

3. The adjusted mean of the peer rating measures of social adjustment will be significantly greater for the children in the experimental group than the adjusted mean of the peer rating measures of social adjustment for the children in the comparison group.

4. The adjusted mean of the measure of personal social adjustment as indicated by self-rating will be significantly greater for the children in the experimental group than the adjusted mean of the measure of personal social adjustment as indicated by self-rating for children in the comparison group.

The subjects selected for participation in this investigation were thirty-two second-grade children enrolled in the Waxahachie Public Schools in the spring semester of 1975. They were chosen through a double selection process. The eleven second-grade teachers in the two elementary schools were asked to identify the five children in their respective classrooms currently experiencing the lowest levels of social interaction. This resulted in the referral of fifty-five children. Each teacher rated the children referred from her classroom, using the Behavior Maturity Scale (Appendix A). The sixteen children receiving the lowest total ratings in
each school were randomly assigned to the modeling/role playing treatment procedure or the comparison group treatment. This resulted in four experimental groups of four members each and four comparison groups of four members each. The analysis of data for School B has an experimental population number of seven due to the withdrawal of one member from the school.

A videotape of models engaged in social interaction was developed for this investigation. The models were seven elementary school children unknown to the experimental population. Appendix D is a typescript of the eight modeling vignettes.

During each of the eight treatment sessions, one of the eight modeling scenes was observed. The modeling scenes were developed to depict brief social contacts which are generally positive in nature. Each scene was preceded by a narrative by the counselor describing the social interactions being modeled. The filmed sequences are arranged on two dimensions of sociability. These dimensions are an approach gradient and a dimension concerned with the number of individuals portrayed in each social encounter. The approach gradient initially depicts a child who does not initiate social contact. Succeeding sequences depict the modeling child initiating contact with his social environment. The second gradient presents the modeling child interacting with varying numbers of children. Scenes are presented in an alternating fashion which first presents a one-to-one social interaction, then a group
social interaction. Each scene is concluded with a positive consequence to increase the motivation factor for replication of the social behavior.

The children in the experimental group met twice each week for four weeks for approximately thirty minutes. After observing the modeling scene, the children role played the modeled interactions. To facilitate the role playing, the same toys utilized in the modeling scenes were employed during the role playing.

The children assigned to the comparison group condition met for eight sessions of approximately thirty minutes each. They observed segments of the Walt Disney film Nature's Half-Acre and engaged in a group discussion of the film during each session.

The Class Pick Form (Appendix B), Behavior Maturity Scale (Appendix A), Observed Behavior Rating Scale (Appendix C), and the Feeling of Belonging, Withdrawing Tendencies, School Relations and Social Skills subscales of the California Test of Personality were the instruments used in this study. The instruments were administered one week prior to the initial treatment session. Posttesting was completed within two weeks of the final treatment session.

The one-way analysis of covariance was employed to test the results for statistical significance. The .05 level of significance was established as the criterion level to test the hypotheses. The results for each of the two schools were
presented separately in order to examine the effects of treatment for the schools individually, and then the results for the two schools were presented in combined form after the separate analyses.

The findings reported in this study supported Hypothesis 1. There was an increase in the frequency of social interaction for the experimental group children. The analysis of covariance data concerning this hypothesis reflect an F value of 5.1453 for the combined groups. This F value was significant at the .03 level of significance.

Hypothesis 2 was not supported by the findings of this study. The data reflect an F value of 2.1736 which is significant at the .15 level of significance. There was a trend for the teachers to rate the experimental group children higher on the Behavior Maturity Scale than they rated the comparison group children on this instrument. The experimental group had an adjusted mean of 51.1938 on the Behavior Maturity Scale. The comparison group had an adjusted mean of 46.1308 on the Behavior Maturity Scale.

The findings reported in this investigation supported Hypothesis 3. The children in the experimental group were selected more frequently by their classmates on the sociometric rating instrument than the comparison group children. The adjusted mean number of peer selections for the experimental group on the Class Pick Form was 11.7918 and the comparison group adjusted mean on this instrument was 7.2577. This
data resulted in an F value of 10.3140 and was significant at the .003 level of significance.

The results of this study do not support Hypothesis 4. The experimental group earned an adjusted mean of 19.3800 on the selected subscales of the California Test of Personality, and the comparison group earned a 20.9562 adjusted mean on the same instrument. The analysis of covariance data pertaining to this hypothesis reflects an F value of 1.3416 which is significant at the .25 level of significance.

Conclusions

The following conclusions are presented as a result of this investigation:

1. The children who observed a modeling film of positive social interaction and who role played these behaviors did engage in significantly more social interaction than a group of children who did not participate in the modeling/role playing treatment. The frequency of social interaction for socially withdrawn children who had participated in the modeling/role playing procedure compared favorably with the frequency of social interaction of a nonreferred population.

2. The children who participated in the modeling/role playing procedure were not rated significantly higher on the Behavior Maturity Scale than the comparison group. The analysis of covariance data revealed an F value which approached but did not attain the predetermined .05 level of significance.
The data for the separate schools indicated the teachers in School A perceived significant change in the social maturity in the experimental group, whereas the teachers in School B tended to perceive change in the experimental and comparison group children. The school population differences, the halo effect, and the manner in which the teachers in School B were informed of the study were offered as possible factors influencing this outcome.

3. The experimentally treated children in both School A and School B were selected by their peers on a sociometric instrument more frequently than the comparison group children. The comparison group children remained virtually the same on the Class Pick Form from pretest to posttest administration. The socially withdrawn children who participated in the modeling/role playing procedure were selected on the sociometric instrument by their classmates nearly as often as a nonreferred population on the posttest administration of this instrument. These results tend to support the generalization of treatment gains from a laboratory setting to a more appropriate real-life social setting.

4. The children who participated in the modeling/role playing procedure did not experience significant gains on a self-rating instrument when compared with the comparison group on the same instrument. The children of School A in the experimental group tended to rate themselves in a less positive manner following the modeling/role playing procedure than on
the pretest administration. The rather intense focus upon social interaction during the treatment period may have influenced the children in the experimental group toward a more negative introspection of themselves. The predominance of Spanish speaking subjects in School B combined with the relatively difficult items contained in the selected subscales of the California Test of Personality may have influenced the results for School B. The lack of significant gain in the self-perception of the children in the modeling/role playing group may be a factor related to the time required for self-labeling to become congruent with overt behavior. There appears to be a tendency to retain the labels of self-reference even though behavior change has occurred.

The symbolic modeling/role playing procedure did enhance the level of social interaction and sociometric status of the children in the experimental treatment group. The efficacy of this procedure is heightened when consideration is given to the relatively brief intervention period of eight sessions over four weeks. This investigation supports the hypothesis that prosocial behavior change in the form of enhanced social adjustment can derive through a modeling/role playing procedure.

Recommendations

In view of the results of this investigation, the following recommendations are made.
For Future Research

1. The utilization of positive direct reinforcement to the children in the experimental group should be utilized in a replication of this investigation. This should take the form of both tangible and intangible (i.e., social reinforcement) reinforceers.

2. Future research of modeling/role playing should consider variations in the sex, age, and status of the models and the observers to determine the differential effects of these variables on observational learning.

3. Further research should be conducted which explores the perception of change in various ethnic populations.

4. Further research should investigate the change in self-perception as it relates to overt behavior change.

5. Research should be conducted to investigate the long-term benefits of a modeling/role playing procedure.

6. Research should investigate the possible use of role playing with a younger population in order to determine the conceptual capacities for varying ages.

7. Further research should investigate the impact of the modeling/role playing procedure upon the range of social interaction of socially withdrawn children.

8. Future research should be conducted to investigate the relative influence of the individual components of modeling/role playing.
9. Future research should examine the possible benefits accruing to variations in length of a modeling/role playing treatment procedure.
APPENDIX A

Behavior Maturity Scale (Elementary Form)

By Yung Ho Kim

Student's Name__________________________
Teacher's Name__________________________
School__________________________

1. The student can work alone for a period of time.
   Never 1 2 3 4 5 Always

2. The student returns to a task unfinished from the previous day and develops it.
   Never 1 2 3 4 5 Always

3. The student carries activities to completion.
   Never 1 2 3 4 5 Very Often

4. The student carries out brief individual assignments in school without supervision.
   Never 1 2 3 4 5 Very Often

5. The student reads on his/her own initiative.
   Never 1 2 3 4 5 Very Often

6. The student enjoys books, newspapers, and/or magazines.
   Never 1 2 3 4 5 Very Much

7. The student enjoys team games and group games.
   Very Little 1 2 3 4 5 Very Much

8. The student makes friends quickly and easily.
   Never 1 2 3 4 5 Definitely

9. The student takes part in competitive games.
   Very Little 1 2 3 4 5 Very Much
10. The student takes initiative at play or in the classroom.
   Never 1 2 3 4 5 Always

11. The student is friendly toward other people.
    Not Friendly at All 1 2 3 4 5 Always Friendly

12. The student assumes group leadership for a given activity.
    Never 1 2 3 4 5 Always

13. The student's remarks about others are kind, that is, he/she
do not say things to hurt others' feelings.
    Not Kind 1 2 3 4 5 Very Kind

14. The student reacts properly to the teacher's approval or
disapproval.
    Very Poorly 1 2 3 4 5 Very Properly

15. The student is inclined to sympathize rather than laugh at
    those in difficulty.
    Laughs at Them 1 2 3 4 5 Sympathizes With Them

16. The student remains calm when he/she cannot get what he/she
    wants.
    Never 1 2 3 4 5 Always

17. The student can lose with grace (fair play).
    Never 1 2 3 4 5 Very Properly

18. The student knows how to take turns at games, talking, and in
    the use of facilities.
    Very Poorly 1 2 3 4 5 Very Well

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APPENDIX B

Instructions: Select five names in each column. Choose the 5 classmates with who you'd like to Sit, Work and Play.

Your Name_________________ Teacher's Name_________________

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APPENDIX C

Observed Behavior Rating Scale

Child Number ________  Morning  Afternoon (Circle one)

Date of Observation ______________  Observer ______________

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APPENDIX D

Modeling Script

SCENE 1 (Two children, A and B, and Mother)

Narrator: A is a new kid in school. He doesn't have many friends but he'd sure like to have friends. He is afraid to talk to B, but B wants to talk to A. B invites A to come and play with his blocks. A likes that. They play together and both of them get a piece of candy after playing together.

A comes into a room where B is playing with some blocks.

B - "Hi" (pause)
A - "Hi"
B - "What's your name?"
A - "A. What's yours?"
B - "B" (pause) "Did you just move in next door?"
A - "Yes, we moved in this morning". (Pause)
B - "Would you like to play with the blocks with me?"
A - "Yeah" (A goes and sits next to B. They play)

B's Mother comes in

Mother - "B, I see you have a new friend - would you two like a piece of candy?"

SCENE 2 (Four children, A,B,C, & D, and Teacher)

Narrator: A is a shy boy and meets B, C, and D. A doesn't know what to say to them. B, C, and D ask A to come and play with them and their cars and blocks. A likes that and begins to play and make some new friends. Their teacher comes in and gives them another ten minutes of play time because they are playing together so well.

A enters the room where the Group (B,C, and D) are playing with cars and blocks.

B - "Hi, what are you doing?"
A - "Nothin' ."
B - "What's your name?"

A - "A".

C - "Did you just come to this school?"

A - "Yeah. We just moved here."

D - "You're in Mrs. Brewer's room, huh?"

A - "Yeah, she's a nice teacher."

B - "Here" (holds out toy car) "Come and play with us."

A - (Takes car) "OK. That's a neat car." (Pause)

A teacher comes into the room.

Teacher - "I'm glad to see you all playing so well. You may have another 10 minutes to play."

SCENE 3 (Two children, A and B, and Father)

Narrator: A is a girl who has a hard time talking and playing with the other kids. She doesn't know what to say sometimes and is a little afraid to say very much. She speaks first to B. B is playing with some dominoes. B asks A to come in and because they are playing so well and having a good time, B's daddy will come in and ask them if they would like to go and get an ice cream cone.

A - "Hi."

B - "Hi" (Stacks and knocks over the dominoes)

A - "Whatcha doing?"

B - "Playing with these dominoes."

(Pause while A watches B play, silently)

A - "Would you like to play a game with these dominoes?"

B - "Okay. What kind of game?"

A - "Let's build a tower!"

B - "Okay." (Puts a domino down. A puts domino on top of it. They continue to build tower, alternating dominoes.)
B - "I like to play this game with you". (He looks at A)

A - "Me, too!"

Father enters

Father - "You kids seem to be having a good time. Would you like to go and get an ice cream cone with me?"

A and B - "Yeah!"

SCENE 4 (Four children, A,B,C & D, and Mother)

Narrator: A is a boy who doesn't have many friends, but he sure wants some. He sees B,C, and D playing a game of dominoes and he speaks and asks if he can play too. B, C, and D are glad to have A come and play with them. A learns that he can make new friends. B's mother will come in and give the kids some cookies since they are playing so well together.

B, C, and D are playing with a box of dominoes. They are playing a game, laughing and talking with one another.

A enters the scene, standing to watch the others.

A - "Hi, what are you doing?"

B - "We're playing a game of dominoes."

A - (Pause) "I'd like to play with you, Okay?"

C - "Do you know how to play?"

A - "Yeah." (Sits down)

D - "All right, you can be my partner!"

A - "Okay."

B - "It's fun to have friends to play with."

Mother enters with plate of cookies

Mother - "You children seem to be having a good time playing together. I've brought you some cookies!"

A,B,C, and D - "Oh, boy!"
SCENE 5  (Two children, A and B, and Teacher)

Narrator: A is a little shy, but wants to play with B. He has learned that if he talks and plays with the other kids they will soon be his friends. Both A and B begin to play close to each other and soon are playing together like friends. Their teacher brings them candy for playing nicely together.

A enters the room carrying a model car. B is playing with his car around some chairs. A begins playing with his car near B.

A - "You've got a neat looking car."

B - "Yeah. Its strong and its got racing slicks on it!"  
(He races the car around chairs, Brrrrrrrrrrrrrrrrrr)

A and B begin running their cars near one another.

A - "Do you want to drive my car?"

B - "Can I?"

A - "Sure. Here."  (Hands B his car. B hands A his car.)

B - "Thanks for letting me play with your car!"

A - "That's okay."

Teacher comes into the room.

Teacher - "You've been playing so well together that I brought you some candy."

SCENE 6  (Four children, A,B,C, and D)

Narrator: A is a boy who likes to have friends, but doesn't have very many. He sees B, C, and D who are putting a kite together. They have built the kite, but don't have enough scraps for a long tail. A has some cloth to make a tail and tells them he will share it with them. They are glad and want A to stay and help them fly their kite.

A is sitting at his desk writing and listening to the others talk. B,C, and D are putting a kite together. They've got it built, and are making a tail for it.

B - "We don't have enough scraps to make the tail."
C - "Heck, where are we going to get more scraps?"

A - "Hey, I've got some things in my locker you can use."

D - "Okay, let's see what you've got!"

A - (Goes to his locker and gets some scraps and comes back to the group) "Here they are."

B - "Gee, look at those long pieces!"

C - "Great! They'll make a super tail for our kite!"

A - "Here. Let's start tying them together."

B - "Boy, I'm glad you had those scraps in your locker so we can finish our kite. You want to help us get it in the air?"

A - "Sure! Let's go!"

---

SCENE 7 (Two children, A and B, and Father)

Narrator: A is a boy who has learned to make friends. He knows that to make friends you must talk and play with other kids. He has a toy town and invites B to come and play with him. B is glad A wants to play with him and they have fun with the toy town. They each get a donut for playing so well together.

A - "Hi."

B - "Hi. Boy, you sure have a lot of blocks and things."

A - "Yeah. I got 'em for Christmas. It's a little town with cars, blocks and houses."

B - "And that is the street" (Points to street)

A - "Yeah. You want to help me build the town?"

B - "Sure". (Sits down. They begin to play and lay out the town together.)

A - "It's more fun to play with this when somebody plays with me."

B - "Yeah."

Man comes in carrying donut box.
Man - "You boys are putting together a good looking little town. How about a donut?"

A and B - "Gee, sure. Thanks."

SCENE 8 (Four children, A, B, C, and D, and Mother)

Narrator: A is a boy who likes to play with the other kids. He likes to share his toys with the other kids and they like it too. A has a toy town, and asks B, C, and D to play with him. They sit and play for awhile. A's mother comes and gives them cookies for playing and being such good friends.

A - "Hey, B, C, and D! Come over and see my new toy town!"

B - "Toy what?"

A - "It's a little town with houses and trees and cars and people. And, see, this is the street."

C - "Let's see -- where does this one go?"

A - "That one goes over here on the corner."

(Pause while the kids play for awhile)

B - "Thanks for letting us play with your new town."

A - "It's more fun to play when you have friends."

Mother comes in and admires the town.

Mother - "Do you all want some cookies?"
Film Rating Scale

This scene depicts positive social interaction.

1 2 3 4 5

This scene is believeable as a social interaction.

1 2 3 4 5

This scene's dialogue can be clearly understood.

1 2 3 4 5

1 - None
2 - Poor
3 - Satisfactory
4 - Good
5 - Excellent
BIBLIOGRAPHY

Books


**Articles**


Hicks, D. J., "Imitation and Retention of Film-Mediated Aggressive Peer and Adult Models," *Journal of Personality and Social Psychology*, II (1965), 97-100.


Unpublished Materials


