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VIDEO MODELS AND PLAY RESPONSES

by



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## ABSTRACT

The study explored the feasibility of a social learning model of play therapy. Specifically, the influence of video-mediated models upon children's play behaviors was examined.

It was postulated that children who observed various models would subsequently imitate the models' verbal and nonverbal behavior patterns.

Subjects were assigned to one of five treatment groups or to a control group. A total of 77 students enrolled in grades one, two, and three in an Edmonton public elementary school participated.

The children in each treatment group were exposed to a different video-model for five minutes. Each child was then individually seen in a play therapy session for five minutes where he was confronted with the toy used on the tape and with other toys. The verbal and nonverbal behaviors of each child were recorded.

An analysis of variance on the mean number of behavior responses for each group did not indicate existence of significant differences between groups, and thus the six specific hypotheses were not verified.

The results indicated that a trend exists for children to imitate the behavior of models. It was concluded that social learning and modeling techniques require further exploration.

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CHAPTER I

THE THESIS PROBLEM

Introduction

Western civilizations (and indeed many societies today) are experiencing an unprecedented interest in children, their development, education, health, and their whole life style in general. This growing interest has lead to an increased emphasis in guidance programs that help parents and children cope with illness, oppression, depravity, and other maladies that often beset children. The need for preventive programs becomes apparent when one considers the many ways in which children and parents can encounter a diversity of problems. The hope of many educators is to maximize the development of children by freeing them from these problems. There is a variety of assistance available, including readable books for parents on helping children (Patterson and Gullion, 1968, for example) and conferences for elementary school counsellors and psychologists, such as the Canadian Conference of Counseling in the Elementary School, reported by Zingle and Fox (1972).

Play therapy is one attempt to alleviate a child's difficulties. The playroom technique is often used to assess a child's level of functioning or to provide treatment through play therapy. Our knowledge of effective play therapy techniques, of play materials, and of



children's verbalizations in play therapy is incomplete. There is yet considerable opportunity to expand our knowledge in this area.

This study will constitute an experimental inquiry into the feasibility of a social learning approach to play therapy.

It will be postulated that children who observe various models will subsequently imitate the models' verbal and nonverbal behavior patterns. Elementary school students in grades one, two, and three from an Edmonton school will be assigned to one of five treatment groups or to a control group.

Five different audio-video tapes will be made, each showing a model displaying various nonverbal and verbal behaviors toward different toys. The children in the first treatment group will each be exposed to the first tape for five minutes and then will be seen individually in a play therapy session for five minutes. The children in each treatment group will be exposed to a different tape, whereas the children in the control group will not have such exposure.

In the play therapy session, all children will be able to play with the toys shown on the tape, as well as with other toys. The verbal and nonverbal behavior of the children will be recorded.

A comparison of the various verbal and nonverbal responses of each group will be made. Confirmation of the

hypotheses would indicate that children in play therapy do imitate the behavior of models. The influence of models upon children's behavior is the essence of social learning theory.

### The Problem

There are several aspects of play therapy which warrant delineation. Issues surrounding the nature of play, play therapy, toys, children's speech and their behaviors must be brought to light in outlining the scope of this study.

The phenomenon of play is truly characteristic of children. Indeed it is the abnormal child who does not engage in some form of sense-pleasure play (eg. running through a water sprinkler), skill play (eg. coloring), social-affective play (eg. "London Bridge is Falling Down"), and especially dramatic play (eg. playing "house") (Stone and Church, 1968, p. 287).

A basic assumption of many play therapists is that some of the factors involved in children's normal play behavior can be extended to their behavior in the playroom. In other words, the child will exhibit in play therapy either by direct or indirect manners some aspects of his personality. The contention is that the underlying personality trait and its manifestation in play behavior are contiguous, and hence play therapy is an extension of normal play behavior. This holistic viewpoint is supported

by Bradley (1970, p. 106), for example, who encourages therapists to see the "whole child".

An example of play behavior contiguity is shown in research on sex-role identification which has, as one of its tenets, that a child's preference for certain toys in the experimental or play therapy situation indicates a masculine or feminine role orientation (Brown, 1956; DeLucia, 1963; Lynn, 1959; Rabban, 1950). A major premise is that the child's behavior during his choice of toys is representative of his behavior outside the experimental situation. Social learning theorists, such as Bandura and Walters (1963), purport that children's behavior is largely imitative of models to which they have had exposure, and thus the child's behavior during any play session is a microcosm of his total behavioral models. In terms of social learning theory, therapy is effected by modifying the environment in the playroom in order to control the noxious stimuli to which a child's neurotic responses were learned (Ross, 1964, p. 104).

On the other hand, the major focus in the past has been that of viewing play therapy as facilitating a catharsis (Rogers, 1943) or release of socially unacceptable behavior (Lebo, 1955a, p. 421), in which the child can express himself in ways that he cannot do otherwise (Ginott, 1960, p. 246). The play therapy situation is a different circumstance than the child's regular environment, and so different behaviors may be expected.

The child may experience an absence of "adult suggestions, mandates, rebukes, restraints, criticisms, disapprovals, support . . . replaced by complete acceptance and permissiveness to be himself" (Axline, 1969, pp. 16-17). He encounters an atmosphere of warmth, harmony, and tranquility in a unique relationship (Moustakas, 1959, p. 9). Thus, the child's behavior in the play therapy room is in some ways different than his behavior outside of such an experience -- this is in contrast to those who argue for continuous behaviors both in and out of the playroom.

The disparity is exemplified when one considers whether a child's specific behavior at a particular moment in play therapy is expressive of some inner turmoil, or whether it represents a sample of his normal behavior. The problem can also be considered from the perspective of realism or fantasy ie. is a behavior representative of a definable event or is it fantasy or is it a symbolic representation of either?

An important part of play therapy is the child's verbalizations. In the development of play therapy, the predominant viewpoint has been that a child's language is not an adequate means of expression, and so he must express his fantasies and preoccupations symbolically (Slavson, 1952, p. 145). "Words do not serve the young child well" (Knowles, 1972, p. 123). Because children cannot effectively express themselves in speech, they use a "natural" form of expression -- play (Axline, 1969, p. 9).

In other words, "the child's play is his talk and the toys his words" (Ginott, 1960, p. 243). There comes from this attitude toward play therapy, a multitude of recommended toys which have been claimed to facilitate expressiveness, encourage fantasizing, provide symbolic representations of wish-fulfillments, and other general self-actualizing terms. The inherent behavior-eliciting properties of toys claimed by some authors will come under serious scrutiny in this study.

An alternative to symbolic play is realistic play, as suggested by social learning theorists. Bandura, Ross, and Ross (1961) have pioneered an approach to considering children's actions in terms of imitative behavior. With respect to speech, it was claimed yet some years before nondirective play therapy became popular, that speech and language are learned by imitation of adult's voices (Guillaume, 1926). Children have not yet gained a capacity to disguise their feelings in literal symbolism, and hence words are not always adequate substitutes for actions (Smolen, 1959, p. 873). Several studies have shown that children's speech can be imitative of model's speech; for example, in imitating language syntax styles (Odom, Liebert, and Hill, 1968).

It becomes apparent that there is no consensus among writers with respect to the significance of children's speech or behaviors. The divergent viewpoints can be typified by Virginia Axline who espouses the expressive

nature of play behavior, and by Albert Bandura who adopts the imitative aspect of such behavior.

These two perspectives are not incompatible. In psychoanalytic terms, the therapist functions within the child's fantasy and then begins to relate to reality (Chethik and Fast, 1970, p. 764). The purpose of some child psychotherapy is to assimilate reality and fantasy (Hamilton, 1947, p. 174). In commenting on Jean Piaget, Vygotsky (1962, p. 13) remarks that it is very difficult to separate deliberate invention (ie. logical activity) from fantasy. In trying to describe moral development in children, Burton (1971) comments that some behavior may be wish-fulfilment, while some may be a replication of actual events. The integration of fantasy and imitation appears so complex as to elude all attempts to separate the two. It would be helpful if the child behaved consistently in fantasizing in play therapy, but such is not the case (Levin and Wardwell, 1962, p. 52).

If a play therapist can discern whether a behavior is wish-fulfilment or imitative, he can use appropriate techniques in therapy. For example, a barrage of scatology from a child can have significantly different consequences if the therapist suspected the child was expressing suppressed behaviors, than if the child was thought to be imitating parental behavior.

This study investigates some behaviors in play therapy with respect to the possible etiology of these

behaviors ie. the extent to which these play behaviors can be attributed to imitation, rather than to wish-fulfilment. The underlying hypothesis is: children's behavior in play therapy is partly imitative of models to whom they have been exposed.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Essentially, the concern of the present study is with the evidence of modeling behavior in play therapy. A review of the general concepts of play, and reality and fantasy in play therapy will precede a survey of the recommended toys for the playroom. Specifically, the relevance of children's verbalizations in play therapy will be outlined. This chapter will conclude with an explication of the hypotheses.

#### Play Behavior

The general nature of play will be examined, as play behavior is understandably important and relevant to play therapy.

The Random House Dictionary of the English Language (1968) lists sixty-seven meanings for play and its derivatives. Gilmore (1966a, p. 344) cautions that the definition of play will determine both the theorizing about and the research done with play. In order to include a broad yet feasible framework in examining some aspects of play, a functional description of play offered by Bender and Woltmann in 1941 is still applicable: "Through play the child experiments with reality in the physical, social, and emotional world." (p. 20). Play is seen as a part of the child's interaction with his environment.



Early theories of play focused upon the antecedents and inferred purposes of play, not upon the specific content of play behaviors (Gilmore, 1966a). Spencer (1873) postulated that play was a result of surplus energy created by freedom from energy spent on self-preservation. Conversely, Patrick (1916) claimed that play was not a time for expending extra energy, but a time of replenishing spent energy. Karl Groos (1898, 1901) hypothesized that play is a biological function which provides a necessary practice for maturing organs (old references cited in Bender and Woltmann, 1941, p. 20). Later, he theorized that play is a catharsis in which suppressed emotions are expressed. This latter idea of catharsis is currently incorporated into psychoanalytically oriented theories of play therapy.

From an anthropological point of view, G. Stanley Hall's (1904) theory of recapitulation affirmed that the phylogenetic development of man is repeated by a child ontogenetically, even in his play behavior. Thus the toys of children begin to assume prominence, as all the phases and forms of our past social development are reflected in the games and toys of children (Hils, 1959, p. 15).

Contemporary theories of play, according to Gilmore, (1966a, p. 346), tend to emphasize the individual dynamics and forms of play, rather than a general explanation of play. For Lewin (1951), the young child cannot readily distinguish between what is real and what is imaginary

(cited in Hall and Lindzey, 1970, p. 238). Because his life-space is still unstructured, he is still a "part of his environment" (p. 239), and until he begins to differentiate between the real and unreal, his play behavior is a result of various forces impinging upon his life space.

Piaget (1945) incorporates his view of play into the child's cognitive dimensions. For Piaget, one function or form of intelligence is "adaptation." In his conception, adaptation is a modification of the individual's cognitive structure in order to cope with the environment. A child may incorporate new experiences into his presently existing mental organization by altering external elements (ie. assimilation), or he may modify his mental structure to adopt to situations in new ways (ie. accomodation). In the former he bends reality to fit what he knows; in the latter, he adjusts himself to fit the new reality (Gilmore, 1966a, p. 348). Play, then, is a preponderance of assimilation and a deemphasis of accomodation in the child. Piaget (1945) distinguishes three forms of play based upon these premises, all of which are described with reference to the individual's developing cognitive structures.

The psychoanalytic and cathartic theories of play generally propose that play is a child's attempt to master: reality (Erikson, 1950, p. 195), unpleasant experiences (S. Freud, 1940), and anxiety (A. Freud, 1946). Psychic pain results from a conflict in the pleasure principle of the id and the conscience of the super-ego (cited in Hall and Lindzey, 1970).

A popular trend in the last thirty years has been the consideration of play as a functional activity. Play is often described as the child's natural form of expression (Allen, 1942, p. 125), a figurative language (Frank, 1955, p. 586) in which the child reveals archaic fantasies (Solomon, 1955, p. 597). Play is the specific language of children whereby the "configurational realities" (ie. play situations) (Woltmann, 1955, p. 774) express personal and idiosyncratic experiences (Rabin and Haworth, 1960, p. 290). Play has been described as a religious activity (Huff, 1967) as well as a complement to work which should be utilized in the classroom (Margolin, 1967). For some writers, play is synonymous with work, as children prepare themselves for adult roles (Symons, 1963, p. vii).

Herron and Sutton-Smith (1971) extensively present an integration of the predominant theoretical positions which explain play, including normative studies, ecological approaches, psychoanalytic traditions, cognitive approaches and developmental approaches.

The normative studies of play behavior either compare play styles of children in different decades or children in different geographical locations. Results of these studies show a generally diminished range of acceptable play behavior for children as compared to nineteenth century play norms (Sutton-Smith and Rosenberg, 1961). Barnes (1971) found that preschoolers today are less social than preschoolers described by Parten (1933) forty years ago.

Cross-cultural studies suggest that play behaviors are related to the political philosophy of the country (Seagoe, 1971). Especially significant is the trend that North American children seem to be more active and task-oriented (Finley and Layne, 1971) and more individually-competitive (Seagoe and Murakami, 1961) than foreign counterparts. Other normative studies show that children's play behavior becomes more social as children grow older (Eifermann, 1970) and that school is the major institution in providing play situations in social contexts (Seagoe, 1970).

These normative studies serve to illustrate the extent and influence of cultural differences in play behavior. To children's play behaviors many play therapists attach "meaning", facilitated by an understanding of the "full connections" (Bender and Woltmann, 1941, p. 22) or contexts of that behavior. As well as family and school associations, the social background must be studied as it affects the child (Conn, 1939).

The theory of play that one adopts as his own provides a particular rationale for examining play therapy, just as one's theoretical orientation guides the techniques used in general psychotherapy. Many of the above philosophical and cultural perspectives of play per se are embodied in contemporary forms of play therapy.

### Play Therapy

There has been very much written over the past

twenty-five years about the nature of play therapy. Experimental, descriptive, and theoretical approaches have each contained both excellent and questionable studies. A review of the major emphases of play therapy constitutes this next section.

Play therapy is a form of psychotherapy which utilizes the experience of play as the medium for diagnosis and treatment. Moustakas (1959) defines play therapy as:

a relationship between the child and the therapist in the setting of the playroom, where the child is encouraged to express himself freely, to release pent-up emotions and repressed feelings and to work through his fear and anger so that he comes to be himself and functions in terms of his real potentials and abilities. (p. 256).

For many play therapists, play therapy is seen as an opportunity to experience growth (Axline, 1969, p. 16). For Carl Rogers (1943) the aim in play therapy is not to change the individual in ways which we (therapists) approve, but to release the normal process of growth. Play therapy at best is purposed to alleviate guilt, anxiety, aggression, repressed impulses, incorrect fantasies, and to achieve an assimilation with reality (Hamilton, 1947, p. 174) as well as inner harmony and stability (Jackson and Todd, 1950, p. 52).

There are several forms that play therapy may assume. Lebo (1955a) and Watson (1949) summarize the major theoretical approaches toward play therapy which include psychoanalytic, relationship, and nondirective theories. Each of these attitudes toward play therapy is premised

upon the ideas postulated by Sigmund Freud (psychoanalytic), Carl Rogers (nondirective), and Clark Moustakas (relationship). In each type of play therapy, essentially the same techniques are used, but with different rationales and emphases. For example, play therapists in the psychoanalytic tradition stress release of repressed parental hostilities; nondirective play therapists encourage self-growth, while relationship therapists emphasize the therapeutic relationship between therapist and child. In each theory, successful therapy is attributed to dynamic forces within each individual (Lebo, 1958b), and it is the explanation and conjecture of these forces which differentiates among theorists. In short, the value of play in the resolution of children's difficulties is recognized in play therapy (Pumfrey and Elliott, 1970, p. 183).

The techniques used in play therapy are basic, and can be described as common-sense etiquette rather than as highly trained skills. In fact, by being reflective, non-interfering, and empathic, university undergraduate students were shown to be effective lay play therapists with children (Linden and Stollack, 1969). The atmosphere to be developed in the play therapy situation is one of warmth and understanding (Dorfmann, 1951, p. 241), unconditional acceptance (p. 254), permissiveness (Hamilton, 1947, p. 185), respect (Moustakas, 1955a, p. 83), and so forth. Toys are given to the child as facilitators of expressiveness. The therapist reflects feelings back to the child (Axline, 1969, p. 73).

In some cases, an analysis of the child's behavior is made directly to the child (Slavson, 1952), while in other cases no such analysis is made (Nelson, 1966). In the play sequence the counsellor helps the child to act out troubled themes (Bishop, 1972, p. 73).

Haim Ginott has been instrumental in providing much advice in play therapy techniques. Suggestions for the initial counselling interview (Ginott, 1961b) and extent of limitations placed upon the child (Ginott, 1959) reflect a predominant attitude among therapists of behavior restraint but verbal permissiveness. In other words, the child should have complete freedom of speech, but limitations on undesirable behavior, like damaging property (p. 161). In a questionnaire attempting to discover the limits that play therapists used in the playroom, Ginott and Lebo (1961, 1963) found that therapists of varied orientations did not differ in the number of limits used, but differed in the kinds of specific limits used. Child therapists showed greater verbal permissiveness than the general population, yet did not tolerate blatant physical aggression.

The processes of play therapy which each therapist describes as "therapeutic" center around the concept of catharsis, or "talking out" (Rogers, 1943). Solomon (1955) describes the therapeutic process from a psychoanalytical framework:

When children have been traumatized at very early age periods, their reactions are based upon threats of a nonverbal or preverbal character. These very early threats may be revealed by the child's dramatization of archaic fantasies in play or drawings or bodily behavior . . . Through the use of the play medium the perceptual threats become translated into ideas or concepts which have verbal representations. As verbal concepts, the thinking processes are routed through higher cortical channels, hence constitute a function of the well-organized ego.

Through verbalizing and interpreting the productions of the child, there is afforded a medium for mastering his difficulties. It is a relief for the child to know that there are words for some of the thoughts for which he never knew were any words. (p. 597).

Thus, the child-patient discharges painful memories and thoughts which have been suppressed (Slavson, 1952, p. 145), and somehow this insight into the past constitutes cure. The child articulates a troubled theme, the child "integrates" (Bishop, 1972, p. 73) and cure is effected.

In a permissive atmosphere, the child is induced to relax his defenses (Dorfmann, 1951, p. 241), and then projects or transfers onto the therapist his forbidden feelings and wishes and thereby releases and reduces anxiety (Hamilton, 1947, p. 185). The disturbed child gains a sense of emotional insight, inner comfort, relaxation, and personal adequacy, and decreases the adverse effects of anxiety and hostility (Moustakas, 1955a, p. 83). In exploring the significance of his past negative feelings, the child gains a realistic emotional reaction to the environment (p. 83). Axline (1969) sums up the dynamic therapeutic process:



By playing out these (suppressed) feelings, he brings them to the surface, gets them out in the open, faces them, learns to control them, or abandons them. When he has achieved emotional relaxation, he begins to realize the power within himself to be an individual in his own right, to think for himself, to make his own decisions, to become psychologically more mature, and, by doing so, to realize selfhood. (p. 16).

In short, in successful play therapy, the resolution of past experiences which have been discomfoting to the child is required. A realization of the past is synonymous with insight, which then presupposes therapeutic cure.

These nebulous concepts have come under harsh criticism from many writers. In evaluating the status of non-directive play therapy, Lebo (1953) accuses articles on the topic as being propaganda rather than research. He further charges that the case study approach is more concerned with helping the child, rather than adding research to the field. Experimental laxity produces a lack of good methodological and objective research. Krivy (1972) heeds the pleading of Lebo (1953) and Pumfrey and Elliott (1970) for sound experimental control, and in a controlled experiment concludes that nondirective play therapy is more effective than play alone -- the crucial variable being the therapeutic relationship. This finding no one disputes.

Other writers express more interest in the variables affecting play therapy outcomes. Pumfrey and Elliott (1970, p. 191) argue that the therapist's attitude and personality are equally as important as the play therapy techniques. Rabin and Haworth (1960, p. 290) claim that since a child's play involves so many personal,

idiosyncratic experiences, no objective criteria can ever be made in evaluating play. Similarly, Conn (1939) advocates the gathering of data from many sources in explaining (rather than evaluating) a child's behavior. All factors of the child's life situation that have contributed to his problem (Amster, 1943, p. 68) should be used in interpreting his behavior meaningfully in context (Frank, 1939).

Play therapy has limitations in usage. For example, the parents must be involved in the treatment process (Hamilton, 1947, p. 174). The choice of receiving or rejecting psychotherapy should not be left to the child, but to the adults responsible for the child (Ginott, 1961b, p. 73). Play therapy has been found not to be as effective with children entering their teens as with younger children (Lebo, 1956, p. 236). Both Lebo (1956) and Rogers (1942) state that play therapy is most effective between the ages of four and twelve. Furthermore, Lebo (1958b) suggests that aggression is a behavior which is variable with children's ages, and hence a different therapeutic process should be adopted for different age levels.

The style of play therapy that the therapist employs in the playroom is a major determinant of changes that occur. For example, Newell (1941) discusses the advantages and disadvantages of spontaneous versus controlled play therapy. In general, controlled play behavior in which the play situation is subtly manipulated by the

therapist has yielded better success (as indicated by reports of Holmer, 1937; Lynn and Lynn, 1959; and Winstel, 1951).

Play therapy, as it has been applied to children's ailments, appears to be as effective as the general psychotherapeutic theories from which play therapy evolves. However, certain crucial practices are questionable. For example, Meister (1948) showed that play therapy is an inefficient and lengthy method of diagnosis, and that the opinions of teachers, parents, and others knowing the child well are a more valid, reliable, and efficient means of diagnosis than play therapy diagnosis. The issue of play therapy as a microcosm of general behavior is indispensable to any approach of counselling using play therapy.

Furthermore, Farnham-Diggory and Ramsey (1971) found that constant intrusions upon the play activities of young children create emotional tensions and scrambled expectancies that interfere significantly with subsequent play experience. The practices of interpreting significant child behaviors and of querying the child by the therapist are controversial in light of the previous findings.

In conclusion, there appears to be no consistent rationale for play therapy. The effect of play therapy seems to be, one could argue, determined mainly by inadequate studies (Pumfrey and Elliott, 1970). Moreover, as yet, no explanation of play therapy has been sufficient in elucidating the very essence of the technique.

The various reports of effectiveness, processes, and techniques of play therapy have been outlined in the preceding section. Two specific factors in play therapy have received much attention; literature on children's speech (verbalizations) and selected toys will be reviewed.

### Verbalizations

Much has been written about the significance of children's words and speech. A survey of the literature on this topic is necessary in order to provide a background for examining children's verbal behavior specifically in play therapy. The limitations and values of children's speech will be reviewed.

Children's verbalizations (or speech) are relevant to this study in that both speech and performance behaviors are mediums of communication. Both nonverbal and verbal communication are means through which children may express fantasy, or may reveal some aspect of reality by imitation of some models. The nonverbal form of expression for children is a "specific language" (Woltmann, 1955, p. 773), and can change its form to "figurative language" ie. play where figures of speech are manifested -- metaphor, analogy, metonymy, hyperperbole, and so on (Frank, 1955, p. 586).

There are those who would belittle the significance of children's speech in play therapy. Words are not suitable for the child to use to express his thoughts, fears, and fantasies (Whiles, 1941, p. 359). Jackson and Todd (1950,

p. 51) claim that language is yet an imperfect tool for the child. Some consider it inappropriate to expect a child to talk through his feelings (Nelson, 1966, p. 25). Language is inadequate as a medium of expression (Slavson, 1952, p. 145). It is more natural for a child to "express himself" through action because he has little facility in the use of words, and furthermore, his ideas and feelings are often almost impossible to put into words, even if he had the ability to do so (Traill, 1945, p. 43). In general, the language of children is developed gradually, limited in vocabulary, incapable of abstractions, and unskilled in relating experiences (Kanner, 1940, p. 534).

From this philosophy of the language inadequacy of children, many writers subsequently attach symbolic significance to children's words. Because their words do not sufficiently portray the child's intended meaning, they must be interpreted by the therapist. Frequently, the interpretation is of some symbolic significance of the child's speech. It becomes necessary for the therapist to help children explore and verbalize about the manifest and latent meanings of their behavior (verbal and nonverbal) (Schiffer, 1969, p. 56, p. 79). Verbalizations are representative of failure, punishment, and retaliation (Amster, 1943), and must be interpreted as adult's language is interpreted (Slavson, 1952). The content of children's speech is valued less than his experience in free verbal expression (Moustakas, 1959, p. 3). In short, verbal

expression, whenever it is recognized, is thought to be representative of fantasies, suppressed feelings, and other experiences often in symbolic disguise (Axline, 1969, p. 129). Smolen (1959, p. 873) contradicts this idea by saying that children cannot adequately express symbolic forms in speech. Helping the child to "translate his feelings into words" (Hamilton, 1947, p. 190) and then interpreting them seems to be the theme which many play therapists uphold with staunch (and often obstinate) persistence. "The Spirit gives . . . to another (person) divers kinds of tongues; to another the interpretation of tongues" (I Corinthians 12:10).

A paradox is presented by those who simultaneously discredit the significance of speech and then attribute impressive symbolic content to it. A resolution of this conflict is presented by those who espouse the view that talking is adequate, beneficial, and can even be used as an index of therapeutic success (Lebo, 1956, p. 233). The writers in this field of thought seriously consider the importance of children's speech. The value of "talking out" (catharsis) is recognized by Carl Rogers (1943). The child's verbalizations accompany appropriate play activities and can create meaning and understanding for the child (Frank, 1955, p. 586). In a fairly comprehensive study of preschooler's play behavior, Despert (1940, p. 28) concluded that verbal expression is as readily available as motor expression if the child is placed in spontaneous play situations. She illustrated the extent to which young

children express positive, affective speech in doll play behavior, for example.

The predominant attitude toward speech in many studies has been that of considering it as relevant and significant, especially in the expression of aggression. Lebo (1962) found that verbally active children tend to be aggressive. Similarly, Krall (1953) showed that accident repeating children are verbally aggressive. Moustakas (1955b) found that disturbed children are much more verbally aggressive than well-adjusted children. These findings contradict the psychoanalytical intuition of Slavson (1952, p. 41) who would believe that oral aggression is seldom found among boys. These studies serve to show the relationship of verbal activity to personality characteristics.

Levenstein and Sunley (1967) revealed that children's verbal intelligence can be improved by verbal stimulation and play interaction between mother and child. The child's verbal responses are often accepted at their face value (Conn, 1939, p. 50), and generalizations about aggressive tendencies can be made about children by heeding their verbal responses (Ammons and Ammons, 1953).

The importance of children's speech is underscored in many related studies. A further development considers speech as truly relevant in diagnosing children's problems. Bandura and Walters (1963) show that a child's behavior is largely influenced by models. Specifically, children learn to speak by imitating other people's voices

(Guillaume, 1926), and if a child had no opportunity to observe the muscular responses of a verbalizing model, it would probably be impossible to teach him the type of verbal responses that constitute a language (Bandura and Walters, 1963, p. 3). Children and adults have been shown to imitate: voice inflections which the parents have never directly attempted to teach (p. 48), some grammatical and syntax constructions (Odom et al, 1968), and uninhibited and revealing responses (Spiritas and Holmes, 1971).

A child's speech is thought to be reflective of his total socialization milieu, as it contains influential models for the child. Lebo and Lebo (1957) showed that children's aggressive responses were significantly related to their age and extent of acculturation. Janus (1943), in an elaborate study, concluded that certain language patterns develop from participation in certain activities. For example, active outdoor play is more conducive to language involving commands, threats, challenges, and other active genre (p. 40). Similarly, the Parsons Project (1963, p. 78) illustrated that verbal behavior is indeed affected by the type of situation in which a child is placed. Marshall (1961, p. 72) claimed that if parents and adults talked with the preschool child about dramatic topics, the child will have a better chance of social acceptance in the preschool group. She further illustrated the extent to which the home experiences and social behaviors of children can be determined by examining the



dramatic and realistic components of children's speech.

The value of speech as an indication of psychological health cannot be demeaned. For Lebo (1958a, p. 25), speech constitutes therapy. Landisberg and Snyder (1946) showed that 60% of the statements made in nondirective play therapy were made by the child. Furthermore, one quarter of the total verbal responses were made by the child giving information. Frequently a child's truth of expressive information is distorted by the therapist's symbolic interpretation. The following excerpts may illustrate the error of inappropriate interpretation. The question of literal versus figurative meanings of children's speech behavior remains salient in this study.

STEWART: These soldiers are marching to Korea.

(S. lines up the figures in the sandbox.)

They are all going to Korea. This is a machine gun they need.

THERAPIST: Mhm, all soldiers head for Korea.

S.: Yeah. That's right, isn't it?

T.: If that's the way you do it.

S.: Look at this soldier move on his feet. This motorcycle is going too. This is a white guy and another white guy. This one is waving a flag. They are all heading for Korea. This is a drum player with a flag. This man has a rocket. This one throws an arrow. (Pause.) Ladies aren't supposed to go to Korea, are they? (Moustakas, 1959, p. 69).

. . . two major events occurred in his (Stewart's) life: a baby sister had joined the family and U. S. troops were sent to Korea. Two of his uncles were in the army . . . He seems to be struggling with the reality of war -- what it means, what it does to individuals and families. He also explores his feeling toward his baby sister. His play conveys an awareness of the tragedy of war and his fear that men will kill each other and that eventually women and children may be destroyed too. In several episodes, he solves the problem of war by destroying all soldiers, but in the end he realizes that killing

them is no answer so he returns them to their families on farms and in cities. (p. 69, p. 72).

In essence, is Stewart expressing his philosophical attitude toward life's afflictions, or is he exemplifying a theme which he has seen at home, on television, in conversation, and in his play experiences?

EDITH: And this one (doll) here is Ann. Ann is a old tattletale. I don't like Ann. (She tears off Ann's head.) Oh, look what happened to Ann. Her head come off.

THERAPIST: You don't like Ann because she is a tattletale and that's why you tore her head off.  
Edith: She's a mean one. She sat right in back of me in school and all the time she bothered me and got me in trouble and she would always be tellin' me things and the teacher would make me come up in front and sit on a chair. And once I said the teacher stunk and Ann told her and the teacher slapped me.

Therapist: You think that Ann caused a lot of your trouble at school . . . .

This excerpt from the child's play certainly displayed wishful thinking. (Axline, 1969, p. 194, p. 196).

It is not all that apparent that the above episode is an expression of some wish-fulfilment. Ann may be very real, and Edith could in fact be relating an actual incident. The competent therapist is obligated to explore the full implications of the child's behavior if any meaningful therapy is to be accomplished. Very real problems must be handled in a very real manner -- wish-fulfilment practices leave little room for sensible and rational curative techniques.

The diversity of opinions about children's verbalizations illustrates the magnitude of the topic. There

is no consensus regarding the significance of children's verbal behavior in play therapy.

### Toys

This study is specifically concerned with the appropriateness of certain toys for play therapy. Generally, the hypotheses predict that children will play with toys in manners to which they have seen models playing with the toys. Therefore, an historical review of the development of toys, and a summary of the literature describing the role of toys in play therapy, will permit a broad perspective for viewing the nature of children's toys today.

In the past century, a trend toward a different treatment of children from adults has produced a multitude of special considerations of children. This increase in attention of children has resulted in a plethora of advice concerning their play materials and toys.

There has been an abundant focus upon the historical development of toys and their preponderance in different cultures (Accorsi, 1968; Culff, 1969; Daiken, 1953, 1963; Foley, 1962; Fraser, 1966; Hils, 1959; Jackson, 1968; Murray, 1968; Symons, 1963).

Authors early realized that parents were as concerned with proper and appropriate toys for their children as they were with breast- or bottle-feeding the infant. The result was an overwhelming profusion of suggestions by

amateurs who often claimed that their selection of toys was wise, omniscient, and irrefutable (see The Wise Choice of Toys, Kawin, 1934, for example). The resulting assault of suggestions generally offered intuitive advice rather than scientific recommendations. Among those who offer counsel for certain toys appropriate for enriching the development of children are: Buhler (1933), Edgington (1968), Franklin (1959), Garrison (1926), Hartley and Goldenson (1957), Kawin (1934), Matterson (1965), Play Schools Association (1958), Tudor-Hart (1955), and Zimmerman and Calovini (1971).

Certain toys sometimes are condemned or sanctified. Bull (1969) illustrates the ubiquitousness and universal love of teddy bears. Saki (1923) warns of the dangers of war toys, more currently typified by a recent ban on manufacture and sale of some war toys (Edmonton Journal, 1972). Swartz (1971) presents unequivocal evidence in anecdotal style of the fatalities caused by toys. He illustrates the pervasiveness of hazardous and unsafe toys on the market. Rees (1961) also advocates stringent regulations for dangerous toys, especially firecrackers (p. 80).

A more sophisticated attitude toward recommended toys for children considers sex differences. Originally, many studies served only to show that indeed there is a difference between boys and girls in the manner and frequency of playing with various toys. These early studies basically concluded that boys play actively with toys requiring muscular dexterity, while girls played passively using conservative

involvement (Lehman and Witty, 1927, p. 106). The technique most often used to arrive at some concrete description of children's sex differences was an observation of the amount of time each child spent with toys. Thus, Benjamin (1932), Farwell (1930), McDowell (1937), and Van Alstyne (1932) using this method, described sex differences with respect to predispositions toward toys. Another technique used to describe these differences was that of children's choices of pictures of toys (Vance and McCall, 1934) which produced similar results as the previous studies.

Later studies on sex differentiation with respect to toys were also descriptive, using the same techniques but including more variables. These studies served to show that children, by virtue of their sex, reacted differently toward toys and play materials, and that this differential behavior was attributable, in part, to their gender. Farrell (1957) found sex differences in preschooler's play with blocks; Goldberg and Lewis (1969) found sex differences toward play behavior as early as six months; Honzik (1951) photographed children's play constructions and concluded that differences were a result of physiobiological factors rather than cultural factors (p. 34). Sutton-Smith, Rosenberg, and Morgan (1963) used an inventory check list to illustrate that a major change in sex-role behavior occurs around age ten.

Other related studies have tended to be somewhat more theoretical than descriptive, and mainly try to show that a child's preference for either masculine or feminine toys is indicative of his sex-role identity. Failure to establish proper sex-role identity is seen as being signs of maladjustment (Brown, 1956, p. 1) and immaturity (Sutton-Smith and Rosenberg, 1960). The It-Scale for Children (a child-figure drawing, unstructured as to sex) assumes that children will project themselves onto other objects and people (Brown, 1956, pp. 4-5). DeLucia (1963) developed the Toy Preference Test, which gauges a child's sex identification by his choices of pictures of toys. A healthy masculine-oriented boy subsequently is thought to choose more masculine than feminine toys. In citing many researches to support his hypotheses, Lynn (1959) disputes Freudian Oedipal conflicts, and argues that boys have little difficulty in identifying with male figures. Rabban (1950) shows some socio-economic differences in sex-role identification; lower class children are sooner and more clearly aware of sex-role patterns than children of the upper class. Liebert, McCall, and Hanratty (1971) showed that children consciously choose toys which they believe are appropriate for their sex.

In general, the process of socialization and acculturation selectively shapes and refines a child's behavior in accordance with his sex, age, race, and so forth. Lewis (1972) shows that from birth, children are

differentially treated as to their sex. By the time a child is six, he can already indicate which roles are masculine and which are feminine (Looft, 1971). Although feminine roles appear to be becoming less traditionally feminine, and now incorporate many masculine characteristics (Rosenberg and Sutton-Smith, 1959, 1960), a child is still guided by contemporary sex identification standards. Succinctly stated, a child does react differently toward toys as determined by his sex-role identification.

Others have shown that differential behavior toward toys is moreso a factor of some inherent characteristic in the toys. Different toys are seen to possess different capabilities of eliciting various behaviors. Novel toys seem to arouse different behaviors than common toys (Gilmore, 1966b; Laurence and Sutton-Smith, 1968; Leuba and Friedlander, 1968; Sutton-Smith, 1968). Updegraff and Herbst (1933) claimed that blocks were conducive to non-sociable and non-cooperative play behavior. Moyer and Gilmer (1956) purported that children use blocks because of their utility in being combined together for building, not necessarily because of sex or age factors. Further studies illustrate the differential behavior-eliciting capacity of certain play materials: structured and unstructured toys (Pulaski, 1970), play boxes (Gramza, 1970), amount of play equipment (Johnson, 1935), trestles (Witt and Gramza, 1970), and experimentally-designed toys (Moyer and Gilmer, 1955).

Gump and Sutton-Smith (1955) raise the issue of how materials and activities

. . . limit, provoke, or coerce the expression of children's needs and problems. This form of consideration is based upon the general hypothesis that activities have a reality and a behavior-influencing power in their own right. An activity, once entered, will exclude some potential behaviors, necessitate other behaviors, and finally, encourage or discourage still other behaviors. This coercive and provocative power of an activity rests upon . . . the behavioral limitations and possibilities in the physical setting and its objects . . . . (p. 755).

Furthermore, Bearison and Sigel (1968) show that color (rather than form) of materials has a greater influence upon the child's choices of various objects.

Therefore, it is not surprising that there are as many variables and outcomes discovered in the physical construction of toys as in the physiological and psychological structure of children. A child's behavior may represent his psychological maturity, or it may reveal some dynamic power of the toys in the situation. Play therapists, it could be contended, are guilty of prescribing a gamut of toys based on intuitive, absurd, and often illogical reasoning, without due respect for the experimentally-validated findings concerning play behavior. This accusation is more profound when the blatant inconsistencies and contradictions of play therapy toy suggestions (even among writers of the same school of thought) are uncovered.

Foremost in the areas of play therapy are those writers who willingly offer their idiosyncratic suggestions for materials to be used in play therapy. The mammoth task



of merely summarizing such materials appears futile, as seen in light of the subjectiveness and provincialism of these suggestions. Perhaps a scant summary of the major fields is in order.

Psychoanalysts are to be commended for creating an inexpugnable confusion among amateur play therapists stocking their playrooms. Therapists are warned to scrutinize the toy behavior of children for symbolism. Alligators represent and elicit concerns around oral sadism and castration anxiety (Hammer and Kaplan, 1967, p. 14). Sexual preoccupations are present in all play styles, for it is very clear to Erikson (1951) that children's toy arrangements represent

. . . in the male, external organs, erectible and intrusive in character, serving highly mobile sperm cells; internal organs in the female, with vestibular access, leading to statically expectant ova (p. 690).

Other psychoanalysts offer a plentiful array of symbolic interpretations, and no single play behavior is spared the analysis concerning sexual connotations. Lack of consensus among interpretations magnifies the ambiguity of such practices.

Some writers are content to recommend toys without offering any rationale for their selection (such as Fries, 1937; Whiles, 1941). Other writers recommend simple and easy to manipulate toys (Axline, 1969; Jackson and Todd, 1950). Most authors seem to shun structured and mechanical toys, and recommend unstructured and nonmechanical ones

(Frank, 1939; Klein, 1955; Moustakas, 1953, 1959; Nelson, 1966; Woltmann, 1964).

Another approach for toy selection suggests specific purposes for particular toys. For example, Hamilton (1947) and Moustakas (1959) are only two therapists who recommend specific toys to facilitate the release of suppressed aggression. Ginott (1961a) goes through great detail in describing what he believes are the various outcomes resulting from play with certain toys and materials. Leland and Smith (1965) suggest various unstructured and structured materials useful in play therapy with subnormal children, subsequently adopted by Bradley (1970), whereas Millar (1968, p. 219) claims that organized (structured) material induces destructive tendencies among children. In general, most authors seem to recommend toys which complement their theories about play therapy, be it psychoanalytic (Slavson, 1952), or Piagetian (Knowles, 1972), or Gestaltist (Bishop, 1972).

Some writers utilize predominantly one toy or type of material. Some psychoanalysts rely heavily upon the final toy constructions of children (Erikson, 1951; Kamp and Kessler, 1970; Lowenfeld, 1939; Traill, 1945). Dolls have always been popular toys and were used in play therapy by Ammons and Ammons (1953), Baruch (1940), Burton (1971), Levin and Wardwell (1962), and Lynn and Lynn (1959). Other toys used include: doll houses (Pichon Riviere, 1958), puppets (Bender and Woltmann, 1941), and teddy bears (Millar, 1968).

Much concern has been shown for the value of toys in play therapy. Toys are valuable, useful, or relevant only with respect to one's theoretical orientation. For example, Beiser (1955) assigned communication values to some toys determined in part by "dynamic interpretations", or the extent to which a therapist could gain significant knowledge (relative to the therapist's psychoanalytic orientation) from the children's play.

For Schiffer (1969, p. 73) toys were judged by their valence, or the toy's potential for inducing significant communication. Ginott's (1960) rationale for toy selection relies heavily upon psychoanalytic theory, and is basically conjectural rather than experimental. Dell Lebo (1955b, 1955c, 1958a) provides an experimentally-based analysis of toy appropriateness in play therapy. Using 4092 statements classified according to Finke's (1947) verbal categories, Lebo was able to arrive at a Verbal Index (1958a, p. 30) which was a number indicative of the extent to which a particular toy was able to elicit revealing, relevant, and expressive statements from children.

Lebo's studies are not completely adequate. He purposely excluded nonverbal children from his sample. His reliance solely upon verbalized statements must be held questionable in light of the profuse arguments against the adequacy and accuracy of children's speech. Furthermore, he based his recommendations partially upon the frequency of very revealing statements, which constituted less

than one per cent of all children's statements in play therapy.

Krivy (1972) used the suggestions of some of the above writers in examining the efficacy of nondirective play therapy. Uncertainty arises from Krivy's research which is based on still nebulous findings of Lebo (1958a). Toys themselves are not capable of eliciting speech. No toy-expressive index is universally applicable. The neglect of the relevancy and importance of other factors, especially the child's past experiences within a social milieu, are detrimental to the processes of successful child counselling.

The efficacy of social learning procedures has been demonstrated in countless studies, only minimally summarized by Bourdon (1970), Flanders (1968), and McLaughlin (1971). This study purports to add another dimension to understanding the role of social learning as it applies to play therapy.

There is an abundant array of attitudes and opinions about play therapy. A review of the literature indicates a diversity of theoretical approaches to this area.

Although the specific areas of play, play therapy, verbalizations, and toys were reviewed separately, these areas can all be integrated into a unit. One way of viewing the previous research is to recognize the major philosophical (or theoretical) orientations. Psychoanalytic, behavioristic, and humanistic philosophies can

be described as the general themes, while each has a separate rationale for the nature of play, play therapy, verbalizations, toys and so forth.

The focus of this study is upon the general theme of social learning, wherein certain behaviors can be explained in terms of modeling. In other words, some of one's behaviors are modeled after the behaviors of others.

Specifically, the concern of this study is with the degree to which children model verbal and nonverbal behavior. The setting is in terms of a play therapy situation; verbal behavior and nonverbal behavior are the independent variables. These behaviors are further classified as being expressive or non-expressive, and will be described in detail in the next chapter.

#### Hypotheses

The following will constitute the six specific hypotheses relevant to this study. Based upon a review of the literature, it was contended that these hypotheses were reasonable and justified within the scope of this study.

1. Children shown the telephone-expressive models, as opposed to children not shown these models, will exhibit more nonverbal telephone-expressive behavior.
2. Children shown the plasticine-expressive models, as opposed to children not shown these models, will exhibit more nonverbal plasticine-expressive behavior.

3. Children shown the doll-expressive models, as opposed to children not shown these models, will exhibit more nonverbal doll-expressive behavior.
4. Children exposed to high verbal-expressive models, as compared to children exposed to the low verbal-expressive model and children exposed to no model, will exhibit more verbally-expressive imitative behavior.
5. Children exposed to the high verbal-expressive models, as compared to children exposed to the low verbal-expressive model and children exposed to no model, will exhibit more verbally-expressive nonimitative behavior.
6. Children exposed to the low verbal-expressive model, as compared to children shown no model, will exhibit less verbal-expressive behavior.

## CHAPTER III

### DESIGN AND PROCEDURE

#### Introduction

Seventy-seven elementary school children in grades one, two, and three attending Parkallen Junior High-Elementary School in Edmonton were used in this study. They were assigned to one of five treatment groups and one control group. The children in each of the experimental groups were exposed to one of five possible audio-video tapes which portrayed a child playing with a toy. The control group was not exposed to the audio-video tape. All 77 children were then observed individually in a mock play therapy situation, and their verbal and nonverbal behaviors were recorded.

#### Audio-video tapes

Five 8 mm. audio-video tapes were prepared for this experiment. Each tape was of 300 seconds (5 minutes) duration, and was recorded in the same studio using the same setting for all five tapes. The setting consisted of a curtain as a solid background and a boy seated behind a table in the foreground. The camera was focused in a fixed position, and no close-up or distant shots were made on the tapes. On each tape, the majority of the table top was shown, as was the boy's body from the waist up. The boy's face was clearly shown on each tape, and it was

easily discernible any actions he was performing with his hands. In short, the audio-video techniques were constant in all five tapes, and a very clear picture and audible voice were portrayed on each tape.

Each tape showed the same model -- a grade-two boy named Darren. At the time the tapes were made he was 7 years 7 months of age and weighed 60 pounds. He was 50 inches (4' 2") in height and had blue eyes and light brown hair. Darren was dressed neatly but informally, and was used as a model because he appeared to be a good-looking, typical seven-year-old boy.

Audio-video tape A showed Darren playing exclusively with a yellow plastic toy telephone. This telephone was slightly smaller than a regular-sized telephone, and it had a movable receiver-mouthpiece connected to the body by a plastic coil wire as well as a rotatable dial which gave a clicking sound.

Darren played with this play telephone in various manners, and spoke to the camera and over the telephone in different ways. The context of his speech is given in Appendix A. Darren also exhibited some novel performance responses, such as dialing the phone with a pencil, using the receiver like a cap and microphone, and holding the receiver upside down (see Appendix F).

Audio-video tape B illustrated Darren playing exclusively with plasticine. Darren was able to use five different colors of plasticine; each could have been rolled in a ball



of about two inches diameter. As in the previous audio-video tape, Darren displayed novel verbal and nonverbal behavior using plasticine instead of the telephone. The context of his speech in this tape is recorded in Appendix B. The novel nonverbal behaviors (listed in Appendix F) included: using plasticine as a mustache, swinging it around like a helicopter, and giving the plasticine a judo chop.

Audio-video tape C showed Darren playing with a male soldier doll called "Johnny Strong", which is very similar to the more popular GI Joe doll. This plastic doll was 12 inches in height, and had movable arms, neck, waist, hips, ankles, and knees. The removable parts to this doll included a green army cap, a one-piece orange suit, and two black army boots. The doll had lifelike facial features, fingers, toes, and so forth. Darren's speech while playing with this doll is recorded in Appendix C. The novel nonverbal behavior he exhibited included such things as reversing the boots, placing the doll's cap on his own head, and throwing things at the doll (further described in Appendix F).

In each of the audio-video tapes A, B, and C, certain behaviors were shown for a second and third time. The reason for this was to present a limited amount of novel behaviors to the observers of the tapes. It was felt that a large number of specific behaviors would be too unwieldy for the model to learn and for the observers to see.

Audio-video tape C showed Darren playing with each of the three toys shown on the previous tapes. Darren first of all played with the toy telephone exclusively for approximately 100 seconds (or one-third of five minutes). He exhibited the same verbal and nonverbal behaviors as was shown on audio-video tape A, with the exception that he displayed these novel behaviors only once. Similarly, he then played exclusively with the plasticine and then with the male doll for approximately 100 seconds each. He also displayed the same novel behaviors as shown on tapes B and C respectively. A record of Darren's speech in this tape is given in Appendix D, while the nonverbal behaviors he exhibited are summarized in Appendix F.

Audio-video tape E showed Darren playing with all three toys. In contrast to the previous tapes, this tape differed in two major respects. First of all, Darren was very reticent and untalkative, and spoke in a mundane, bored tone of voice (see Appendix E). In fact, Darren spoke only 28 word equivalents in this tape, as compared to 317, 298, 179, and 296 word equivalents in audio-video tapes A, B, C, and D respectively. Secondly, Darren displayed very little active behavior toward the toys. For the most part, he merely picked them up, looked disinterestedly at them, and then put them down again. He reacted toward each toy several times throughout the five-minute segment, and roughly spent about an equivalent amount of time with each of the three toys.

In summary, tapes A, B, C, and D show a high-expressive model, while tape E depicts a low-expressive model. Tapes A, B, and C are alike in that the model plays with one toy exclusively in each tape. Tapes D and E are alike in that the model is playing with all three toys for an equal amount of time; the tapes are unlike in that the model in tape D is active and expressive, while the model in tape E is passive and generally nonexpressive.

### Sample

The sample comprised of 77 elementary school students enrolled in grades 1, 2, and 3 in Parkallen Junior High-Elementary School in Edmonton. Each child was assigned to one of six groups. For the majority of children, this assignment was random. However, an attempt was made to have an equal proportion of girls and boys in each group, and thus eight children were assigned to specific groups based upon their sex only.

In order to ensure that the groups were not different from one another, and were representative of the respective population (ie. children in grades 1, 2, and 3 in Edmonton), the criterion of socio-economic status was used. The Blishen Scale (1967, pp. 41-53) was used to calculate the socio-economic status. This scale is based on a numerical rating of the occupation of the main wage earner of the family. The more prestigious occupations are given a higher rating (eg. 74.52 for an Architect) while lower-class

occupations have a low rating (eg. 32.93 for boilermakers). The mean occupational rating on the Blishen Scale is 50 -- the standard deviation is 10.

Elley (1961, pp. 69-70) found a mean of 51.63 and a standard deviation of 9.35 in a random selection of 400 Edmontonians. Davies (1970, p. 31) found a mean of 50.97 and a standard deviation of 9.04 in a representative sample of 113 Edmontonians. The results of these local studies would suggest that the Blishen Scale is a reliable measure of socio-economic status.

In this study the occupation of the children's fathers (mothers, in some cases of separation or divorce) was used to calculate the socio-economic index. Initially, the fathers' occupations were ascertained by querying each child after the experiment. Verification was made by checking the cumulative records, and in some cases, miscellaneous methods (such as telephone inquiries) were used.

It was found that the mean Blishen socio-economic index for all subjects was 43.58, while the standard deviation was 15.91. This sample was interpreted as being fairly representative of the population. The mean socio-economic index was lower than that of Elley's (1961) and Davies' (1970) probably because of seven occupations described as graduate students. These students generally receive a minimal salary, yet often return to university from average-salaried occupations and hence the low income occupation is only temporary. The sample was taken from a

school quite near the university area, and many graduate students with families rent suites in this neighborhood.

Further data with respect to mean socio-economic status is presented in Tables I and II. It can be seen that the groups did not differ significantly from each other with respect to socio-economic status.

TABLE I  
MEAN BLISHEN SOCIO-ECONOMIC INDEX OF SUBJECTS

| GROUP | MEAN BLISHEN INDEX | STANDARD DEVIATION |
|-------|--------------------|--------------------|
| 1     | 47.04              | 17.58              |
| 2     | 40.30              | 14.68              |
| 3     | 40.03              | 14.67              |
| 4     | 43.18              | 17.51              |
| 5     | 40.98              | 15.18              |
| 6     | 49.03              | 16.96              |
| TOTAL | 43.58              | 15.91              |

TABLE II  
 SUMMARY OF DIFFERENCES BETWEEN GROUPS ON MEAN BLISHEN SOCIO-  
 ECONOMIC INDEX

| SOURCE OF VARIANCE | DF | MS     | F    | P    |
|--------------------|----|--------|------|------|
| Between groups     | 5  | 193.06 | 0.74 | 0.60 |
| Error              | 71 | 261.02 |      |      |

In order to ensure that the groups were truly not different from one another, the criteria of sex and age were used to compare the groups. Tables III and IV show that the groups did not differ significantly with respect to sex. Tables V and VI show that the groups did not differ significantly with respect to age.

TABLE III  
 DISTRIBUTION OF SUBJECTS BY SEX

| GROUP | TOTAL NO. IN GROUP | NO. OF MALES | NO. OF FEMALES |
|-------|--------------------|--------------|----------------|
| 1     | 12                 | 6            | 6              |
| 2     | 12                 | 6            | 6              |
| 3     | 12                 | 6            | 6              |
| 4     | 12                 | 6            | 6              |
| 5     | 14                 | 8            | 6              |
| 6     | 15                 | 8            | 7              |
| TOTAL | 77                 | 40           | 37             |

TABLE IV  
SUMMARY OF DIFFERENCES BETWEEN GROUPS ON SEX-CRITERION

| SOURCE OF VARIANCE | DF | MS   | F    | P    |
|--------------------|----|------|------|------|
| Groups             | 5  | 0.01 | 0.04 | 0.99 |
| Error              | 71 | 0.27 |      |      |

NOTE: Boys = 2  
Girls = 1

TABLE V  
DISTRIBUTION OF SUBJECTS BY AGE (in months)

| GROUP | MEAN AGE (in months) | STANDARD DEVIATION |
|-------|----------------------|--------------------|
| 1     | 86.5                 | 10.4               |
| 2     | 83.5                 | 10.4               |
| 3     | 83.9                 | 7.8                |
| 4     | 87.0                 | 12.2               |
| 5     | 88.4                 | 13.0               |
| 6     | 88.9                 | 14.3               |
| TOTAL | 86.5                 | 11.4               |

TABLE VI  
SUMMARY OF DIFFERENCES BETWEEN GROUPS ON AGE-CRITERION

| SOURCE OF VARIANCE | DF | MS     | F    | P    |
|--------------------|----|--------|------|------|
| Groups             | 5  | 64.47  | 0.47 | 0.80 |
| Error              | 71 | 137.48 |      |      |

To summarize the constitution of the groups, it can be said that the groups were not different with respect to socio-economic status, sex, and age. In general, the sample is representative of a below-average income group of protestant children with a mean age of 86 months (7 years 2 months).

#### Procedure

The treatment procedures used in this study were not unlike those used in other social learning experiments. In brief, subjects are exposed to a model and their behavior is then observed after a certain amount of exposure.

Children assigned to groups 1, 2, 3, 4 and 5 (experimental groups) were exposed only to audio-video tapes A, B, C, D, and E respectively. Thus, all 12 children of Experimental Group 1 viewed tape A (telephone-expressive model); all 12 children of Experimental Group 2 saw tape B (plasticine-expressive model); all 12 children of Experimental Group 3 saw tape C (doll-expressive model); all 12 children of Experimental Group 4 viewed tape D (all



toy-expressive model); and all 14 children of Experimental Group 5 were exposed to tape E (all toy-nonexpressive model). In addition to the 5 experimental groups, 15 children were included in a control group which was not exposed to any audio-video taped model.

An isolated room in Parkallen School was used as the treatment and observation room. Each child was led individually from his classroom to the experimental room, and during this time, some rapport was established with each child. All children who were asked to participate, cooperated.

Each child was seated on a chair facing an 11-inch television monitor over which the audio-video tape was shown. The screen was about six feet from the chair, and headphones were used to listen to the tape. Headphones were used for reducing auditory distraction and for facilitating concentration on the tape. Each child was told: "I would like you to watch a short film about a boy. Please tell me when it is finished." Then the headphones were placed on the child's head and the audio-video tape was shown.

Immediately after termination of the tape, the child was led to a nearby table where he was seated in the center position. On the table top were all three toys that the models used (ie. toy telephone, plasticine, doll), even though the child was not necessarily exposed to all of them on tape. The instructions to all children were identical:

"Mary, (child's name), do you see these toys in front of you? You can play with any of these toys in any way that you'd like."

The experimenter remained seated by a corner of the table. In play therapy, the therapist is usually present, and encourages the child to talk and play. In fact, some children may become frightened if left alone in a strange room. Also, it was expected that many children will not talk while alone, yet they may talk to and about toys if an adult is present.

The male experimenter did not offer any suggestions with respect to specific words or behaviors the child might have used. Instead, the experimenter sometimes merely prompted the child's interaction with the toys by asking neutral questions, like, "Have you ever seen any of these toys before? What can you tell me about any of these toys?"

All 77 children were seen in this mini play therapy setting. Audio tapes were made of all children's verbal interactions. These tapes were each 300 seconds (5 minutes) in duration.

In addition, the children's nonverbal behaviors were recorded. This was done using a procedure similar to that of Bandura, Ross, and Ross (1963). The validity of this method of observation has been attested in their study as well as in other social learning experiments.

Specific behavioral responses which children could possibly emit were listed on a behavioral rating sheet (Appendix F). In one corner of the experimental room, an observer sat in such a way as to clearly see the children's behaviors, yet was unobtrusive to the play therapy atmosphere. The observer pretended to be listening to music over some headphones, when in fact, she was listening to a pre-recorded tape which emitted beeps every 5 seconds. At the sound of each beep, which was audible only to the observer, she recorded the child's behavior, checking off one item on the behavioral rating sheet. Each of the 77 children's behaviors were thus recorded on separate sheets. As each child was allowed exactly 300 seconds in play therapy, there was a total of 60 response units per child.

As two different raters were used, it was necessary to establish an estimate of inter-scorer reliability. The responses of five children for each rater were subsequently re-evaluated after their termination of play therapy. As consensus of agreement between raters was unanimous, it was assumed that rater reliability approached 0.99.

Because each session was audio-taped, it was possible to later review all the children's verbal behavior. Very accurate recordings were made, and clear reproductions of what each child said enabled an analysis of verbal content. Each child's speech was classified into one of four

categories. These categories include: (1) Spontaneous imitative speech, (2) Spontaneous non-imitative speech, (3) Prompted imitative speech, and (4) Prompted non-imitative speech. Prompted speech includes answers to the experimenter's questions. The number of words the child spoke was classified into these four areas, and so it was possible to obtain the total number of words spoken by summing the four category totals.

Rater reliability for 10 children was calculated using the Pearson product-moment formula. It was found to be 0.96 and better, indicating that the categorization of verbal responses was done consistently.

## CHAPTER IV

### FINDINGS AND CONCLUSIONS

In play therapy, do children play with toys in ways in which they have seen the toys being used before? To answer this question, six specific hypotheses were tested. These shall be restated separately, followed by findings and conclusions appropriate to each hypothesis.

#### HYPOTHESIS I

Children shown the telephone-expressive models, as opposed to children not shown these models, will exhibit more nonverbal telephone-expressive behavior.

Two of the six groups were exposed to a model who displayed telephone-expressive behavior. Group 1 saw a model playing exclusively with the toy telephone, while group 4 saw the model play expressively with the telephone for one-third of the time.

"Expressiveness" was defined in two forms -- verbal expressiveness and nonverbal expressiveness. Nonverbal expressiveness is a numerical total of responses that each child made toward a toy. Thus, in this case, nonverbal telephone-expressiveness is an indication of the number of times a child was recorded as playing with the telephone. Telephone-expressive behavior can be further classified as being imitative or nonimitative of the model's behavior.

Findings

Table VII shows the mean number of telephone-expressive responses each group made which was classified as being imitative of the model.

TABLE VII  
MEAN TELEPHONE-IMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 4.3  | 8.1                |
| 2     | 1.8  | 3.6                |
| 3     | 1.9  | 4.6                |
| 4     | 6.1  | 14.7               |
| 5     | 3.3  | 4.8                |
| 6     | 1.7  | 3.9                |
| TOTAL | 3.1  | 7.4                |

It can be seen from the above table that groups 4 and 1 emitted a mean of 6.1 and 4.3 telephone-imitative responses respectively. Other groups emitted less telephone-imitative responses. As groups 4 and 1 were the only groups shown a telephone-expressive model, it can be stated that children shown a telephone-expressive model tend to imitate that model's nonverbal actions. That this trend is not statistically significant is shown in Table VIII.

TABLE VIII  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO TELEPHONE-  
IMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P    |
|--------------------|-------|----|------|------|
| Groups             | 38.47 | 5  | 0.68 | 0.64 |
| Error              | 56.26 | 71 |      |      |

The following tables illustrate the mean number of telephone-expressive responses which were not imitative of the model's behavior. As can be seen in Table IX, groups 4 and 1, which were exposed to the telephone-expressive model, did exhibit more telephone-expressive nonimitative behavior than any of the other groups. Table X shows that this difference is not significant.

TABLE IX  
MEAN TELEPHONE-NONIMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 2.2  | 3.8                |
| 2     | 0.6  | 1.0                |
| 3     | 0.8  | 2.3                |
| 4     | 2.6  | 6.1                |
| 5     | 1.1  | 2.6                |
| 6     | 2.1  | 5.1                |
| TOTAL | 1.6  | 3.8                |

TABLE X  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO TELEPHONE-  
NONIMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P    |
|--------------------|-------|----|------|------|
| Groups             | 8.61  | 5  | 0.57 | 0.72 |
| Error              | 15.15 | 71 |      |      |

### Conclusion

Statistical analysis of the data did not confirm the hypothesis. Even though the predicted trends did occur, it cannot be stated unequivocally that children exposed to a telephone-expressive model will exhibit more nonverbal telephone-expressive behavior than children not so exposed.

### HYPOTHESIS II

Children shown the plasticine-expressive models, as opposed to children not shown these models, will exhibit more nonverbal plasticine-expressive behavior.

Of the six groups, groups 2 and 4 only were exposed to a plasticine-expressive model. The model for group 2 played only with plasticine, while the model for group 4 played with plasticine for one-third of the time. Plasticine-expressiveness, in nonverbal form, was described as being the number of responses that children made toward plasticine.



Findings

The mean number of plasticine-expressive responses which were imitative of the model's behavior is summarized in Table XI. Group 2 shows the most plasticine-imitative behavior, as was expected. However, group 4, which was also exposed to a plasticine-expressive model, did not exhibit as much plasticine-imitative behavior as other groups not seeing the model. Table XII shows that the 6 groups did not differ significantly with respect to plasticine-imitative behavior.

TABLE XI  
MEAN PLASTICINE-IMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 10.8 | 13.2               |
| 2     | 17.8 | 15.0               |
| 3     | 16.5 | 22.3               |
| 4     | 8.8  | 10.9               |
| 5     | 10.2 | 15.1               |
| 6     | 9.3  | 9.9                |
| TOTAL | 12.1 | 14.8               |

TABLE XII  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO PLASTICINE-  
IMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS     | DF | F    | P    |
|--------------------|--------|----|------|------|
| Groups             | 186.76 | 5  | 0.86 | 0.51 |
| Error              | 217.31 | 71 |      |      |

Considering the plasticine-expressive behavior which was not imitative of the models' behavior, groups 2 and 4 failed to show more plasticine-nonimitative behavior than other groups not exposed to the plasticine-expressive model. Table XIII shows the mean number of plasticine nonimitative responses, and Table XIV shows that the groups did not differ significantly on this variable.

TABLE XIII  
MEAN PLASTICINE-NONIMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 37.6 | 19.6               |
| 2     | 36.7 | 18.6               |
| 3     | 31.0 | 21.1               |
| 4     | 27.2 | 20.6               |
| 5     | 35.6 | 20.0               |
| 6     | 30.2 | 20.9               |
| TOTAL | 33.0 | 19.7               |

TABLE XIV

DIFFERENCES BETWEEN GROUPS WITH RESPECT TO PLASTICINE-  
NONIMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS     | DF | F    | P    |
|--------------------|--------|----|------|------|
| Groups             | 217.01 | 5  | 0.53 | 0.75 |
| Error              | 406.83 | 71 |      |      |

### Conclusion

As there were no significant differences between groups on the variable of nonverbal plasticine-expressive behavior, Hypothesis II must therefore be rejected.

### HYPOTHESIS III

Children shown the doll-expressive models, as opposed to children not shown these models, will exhibit more nonverbal doll-expressive behavior.

Two of the six groups were exposed to doll-expressive models. Group 3 saw the model play only with the doll, while group 4 saw the model play expressively with the doll for one-third of the time. For this analysis, nonverbal doll-expressiveness was meant to be the number of nonverbal responses children made toward the doll.

### Findings

Comparing the mean doll-expressive responses which were imitative of the models' behaviors (Table XV), one can see that the group which displayed the most doll-

imitative behavior was group 6, the control group. Logically, the only way group 6 could have imitated the model's behavior was by chance. Rechecking the children's nonverbal responses, it was discovered that one child in group 6, in the process of examining the doll, did display many manipulative behaviors which the model also displayed. Table XVI shows, that considering all 6 groups, there were no significant differences between groups with respect to doll-imitative behavior. However, further analysis which considered only the first three groups, showed that the difference between groups was extremely close to being significant at the 0.05 level (Table XVII). However, taking all individuals into account, no significant differences were made between groups.

TABLE XV  
MEAN DOLL-IMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 0.42 | 0.90               |
| 2     | 0.08 | 0.29               |
| 3     | 2.08 | 3.53               |
| 4     | 1.08 | 1.51               |
| 5     | 1.86 | 3.21               |
| 6     | 2.40 | 8.21               |
| TOTAL | 1.38 | 4.12               |

TABLE XVI

DIFFERENCES BETWEEN ALL GROUPS WITH RESPECT TO DOLL-IMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P    |
|--------------------|-------|----|------|------|
| Groups             | 11.42 | 5  | 0.65 | 0.66 |
| Error              | 17.59 | 71 |      |      |

TABLE XVII

DIFFERENCES BETWEEN GROUPS 1, 2, AND 3 WITH RESPECT TO DOLL-IMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P     |
|--------------------|-------|----|------|-------|
| Groups             | 13.78 | 2  | 3.10 | 0.058 |
| Error              | 4.45  | 33 |      |       |

Considering further the mean doll-expressive responses of the groups that were not imitative, Table XVIII shows that groups 3, 4, and 6 displayed more doll-nonimitative behavior than groups 1, 2, and 5. As groups 3 and 4 were exposed to the doll-expressive models, the results were in the expected directions. But the control group also displayed doll-expressive responses, and Table XIX shows that the differences between groups on this variable were eventually non-significant.

TABLE XVIII  
MEAN DOLL-NONIMITATIVE RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 5.0  | 10.7               |
| 2     | 3.3  | 8.9                |
| 3     | 12.0 | 20.4               |
| 4     | 14.8 | 18.8               |
| 5     | 7.9  | 12.2               |
| 6     | 14.3 | 24.3               |
| TOTAL | 9.7  | 17.0               |

TABLE XIX  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO DOLL-NONIMITATIVE BEHAVIOR

| SOURCE OF VARIANCE | MS     | DF | F    | P    |
|--------------------|--------|----|------|------|
| Groups             | 297.39 | 5  | 1.01 | 0.42 |
| Error              | 293.23 | 71 |      |      |

### Conclusion

On the basis of finding no significant differences between groups on the amount of doll-expressive behavior, Hypothesis III must be rejected.

#### HYPOTHESIS IV

Children exposed to high verbal-expressive models, as compared to children exposed to the low verbal-expressive model and children exposed to no model, will exhibit more verbally-expressive imitative behavior.

Verbal expressiveness was defined as the sum of children's spoken words (and word equivalents, such as "Huh? Wow! mmmm"). The models for audio-video tapes A, B, C, D, and E emitted 317, 298, 179, 296, and 28 word equivalents respectively. Thus, tapes A, B, C, and D showed models that were verbally-expressive, while tape E showed a model that was verbally-nonexpressive. In effect, the hypothesis is predicting that groups 1, 2, 3, and 4 (shown high verbal-expressive models) will tend to be more verbally imitative than group 5 (shown the low expressive model) and group 6 (control group).

The amount of verbal expressiveness that each child showed was further classified as being spontaneous (emitted naturally) or prompted (elicited by questioning).

#### Findings

Table XX shows the mean spontaneous imitative verbal-expressiveness of each group. Table XXI illustrates the mean prompted imitative verbal-expressiveness of each group. It can be seen by the first table that groups 1 and 5 were the most verbally imitative, and groups 3 and 6 were the least verbally imitative. Table XXI again shows that group 6 was the least verbally imitative, while group 2 was

the most verbally imitative. Although these results were generally in the expected direction, Tables XXII and XXIII show that the differences between the groups on both prompted and spontaneous verbally imitative behavior were insignificant.

TABLE XX  
MEAN SPONTANEOUS IMITATIVE VERBAL RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 3.8  | 6.3                |
| 2     | 1.8  | 3.7                |
| 3     | 0.2  | 0.4                |
| 4     | 2.9  | 6.4                |
| 5     | 3.4  | 7.8                |
| 6     | 0.1  | 0.5                |
| TOTAL | 2.0  | 5.1                |



TABLE XXI  
MEAN PROMPTED IMITATIVE VERBAL RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 2.8  | 4.0                |
| 2     | 3.5  | 7.0                |
| 3     | 2.7  | 4.0                |
| 4     | 2.9  | 3.5                |
| 5     | 2.8  | 4.5                |
| 6     | 0.1  | 0.5                |
| TOTAL | 2.4  | 4.2                |

TABLE XXII  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO SPONTANEOUS  
IMITATIVE VERBAL BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P    |
|--------------------|-------|----|------|------|
| Groups             | 33.75 | 5  | 1.31 | 0.27 |
| Error              | 25.72 | 71 |      |      |

TABLE XXIII  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO PROMPTED  
IMITATIVE VERBAL BEHAVIOR

| SOURCE OF VARIANCE | MS    | DF | F    | P    |
|--------------------|-------|----|------|------|
| Groups             | 19.83 | 5  | 1.10 | 0.37 |
| Error              | 17.96 | 71 |      |      |

### Conclusion

Based on the evidence that there were no significant differences between groups on the amount of verbally-imitative behavior, Hypothesis IV must therefore be rejected.

### HYPOTHESIS V

Children exposed to the high verbal-expressive models, as compared to children exposed to the low verbal-expressive model and children exposed to no model, will exhibit more verbally-expressive nonimitative behavior.

This hypothesis differs from Hypothesis IV in that the former is concerned with nonimitative behaviors, while the latter considers specific imitative behaviors. It would be expected that groups 1, 2, 3, and 4 would be more verbally expressive than groups 5 and 6.

### Findings

Table XXIV shows the mean spontaneous nonimitative responses of each group. It can be seen that children in groups 5 and 6 talked the most without being questioned. This finding was completely contrary to what was expected. Table XXV shows, that in spite of the large differences between groups, these differences were not significant.

TABLE XXIV  
MEAN SPONTANEOUS NONIMITATIVE VERBAL RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 34.7 | 69.4               |
| 2     | 24.7 | 31.6               |
| 3     | 31.6 | 43.7               |
| 4     | 27.5 | 31.5               |
| 5     | 75.8 | 94.4               |
| 6     | 67.1 | 139.0              |
| TOTAL | 45.3 | 81.8               |

TABLE XXV  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO SPONTANEOUS  
NONIMITATIVE VERBAL RESPONSES

| SOURCE OF VARIANCE | MS      | DF | F    | P    |
|--------------------|---------|----|------|------|
| Groups             | 6528.71 | 5  | 0.96 | 0.45 |
| Error              | 6793.05 | 71 |      |      |

The following table lists the mean prompted non-imitative verbal responses. Children in group 5 displayed the least amount of this behavior in comparison to children in the other groups. However, Table XXVII shows that this difference was not significant at the 0.05 level.

TABLE XXIV  
MEAN SPONTANEOUS NONIMITATIVE VERBAL RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 34.7 | 69.4               |
| 2     | 24.7 | 31.6               |
| 3     | 31.6 | 43.7               |
| 4     | 27.5 | 31.5               |
| 5     | 75.8 | 94.4               |
| 6     | 67.1 | 139.0              |
| TOTAL | 45.3 | 81.8               |

TABLE XXV  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO SPONTANEOUS  
NONIMITATIVE VERBAL RESPONSES

| SOURCE OF VARIANCE | MS      | DF | F    | P    |
|--------------------|---------|----|------|------|
| Groups             | 6528.71 | 5  | 0.96 | 0.45 |
| Error              | 6793.05 | 71 |      |      |

The following table lists the mean prompted non-imitative verbal responses. Children in group 5 displayed the least amount of this behavior in comparison to children in the other groups. However, Table XXVII shows that this difference was not significant at the 0.05 level.

TABLE XXVI  
MEAN PROMPTED NONIMITATIVE VERBAL RESPONSES

| GROUP | MEAN | STANDARD DEVIATION |
|-------|------|--------------------|
| 1     | 49.3 | 30.5               |
| 2     | 41.1 | 22.0               |
| 3     | 49.3 | 45.5               |
| 4     | 47.3 | 35.9               |
| 5     | 28.1 | 31.0               |
| 6     | 44.9 | 30.1               |
| TOTAL | 43.0 | 32.6               |

TABLE XXVII  
DIFFERENCES BETWEEN GROUPS WITH RESPECT TO PROMPTED  
NONIMITATIVE VERBAL RESPONSES

| SOURCE OF VARIANCE | MS      | DF | F    | P    |
|--------------------|---------|----|------|------|
| Group              | 878.35  | 5  | 0.80 | 0.55 |
| Error              | 1092.69 | 71 |      |      |

### Conclusion

Children in these groups did not differ significantly on their nonimitative verbal responses, whether these responses were spontaneous or prompted. On the bases of these analyses, Hypothesis V must be rejected.

### HYPOTHESIS VI

Children exposed to the low verbal-expressive model, as compared to children shown no model, will exhibit less verbal-expressive behavior.

This hypothesis concerns the verbal expressiveness of groups 5 and 6. Both nonimitative and specific imitative behaviors are considered. The hypothesis is predicting that the mean verbal responses of group 6 (control group) will be more than the mean verbal responses of group 5. In short, it was predicted that exposure to a low-verbal-expressive model would have a disinhibitory effect upon the observers' verbal behavior.

### Findings

The summaries of the various verbal responses of children in groups 5 and 6 are listed in Tables XX, XXI, XXIV, and XXVI. In 3 cases of the 4, the mean verbal responses for group 5 was greater than that for group 6. This was contrary to expectations. Only in the amount of prompted nonimitative verbal responses did the mean for group 6 exceed the mean for group 5.

### Conclusion

As the analysis of variance indicated that there were no significant differences between groups on verbal expressiveness, Hypothesis VI was not confirmed and must therefore be rejected.

### SUMMARY OF CONCLUSIONS

Hypotheses I, II, and III were essentially predictive that children would imitate the general and specific nonverbal play patterns (ie. toy expressiveness) of the models to which they had been exposed. Although the results were in the expected directions, they were not significant at the 0.05 level of confidence. It cannot be unequivocally stated, then, that children will exhibit nonverbal toy-expressive behavior according to the models seen by these children. Hypotheses I, II, and III must be rejected.

Hypotheses IV, V, and VI contained the prediction that children would imitate the specific and general verbal behaviors of models they had seen. Analyses showed that there were no significant differences between groups with respect to certain measures of verbal behavior. Therefore, it cannot be said with absolute conviction that children in this study imitated the verbal behaviors of models. Hypotheses IV, V, and VI must also be rejected.

On the basis of the statistical evidence, it cannot be claimed with certainty that children in this experiment imitated nonverbal and verbal behavioral patterns of audio-video taped models.

## CHAPTER V

### DISCUSSION AND IMPLICATIONS

#### DISCUSSION

The purpose of this study was to examine the extent that children's behavior in play therapy is imitative of models to whom they have been exposed. Six specific hypotheses were postulated which proposed that children would imitate both verbal and nonverbal behavioral patterns. Statistical analysis led to rejection of all six hypotheses.

The results, tabulated and interpreted in the previous chapter, demonstrate that children do react differently after seeing a model on video-tape playing with toys. However, this difference in their behavior is not significant to the degree of enabling unequivocal conclusions about the results.

Several factors may account for the failure to obtain significant results in this study. Conjecturally, the groups may not have been equivalent in mean intellectual ability, language facility, emotional adjustment, and other factors which may possibly influence verbal and nonverbal expressiveness (the dependent variables being observed in the children).

To investigate the possibility that intra-group rather than inter-group differences in socio-economic status, age, and sex might have had an effect upon the



verbal and nonverbal expressiveness of subjects, an additional analysis of variance was done on these variables. Many significant results were found. For example, on measures of doll-expressive behavior, boys reacted significantly ( $P = 0.001$ ) more nonverbally than girls. Other significant differences between age-groups, sex-groups, and socio-economic groups were noted. The point is that sex, age, and socio-economic variables were interacting in addition to the treatment variables.

Analyses of variance considered only the interaction of each of these variables separately ie. one-way analysis of variance. A multiple analysis of variance would have taken into account the simultaneous interactions of all of these variables. Although the latter statistic is more desirable and powerful, it could not have been employed for this study because of insufficient subjects.

Even if a larger number of subjects were used, some procedural changes should be made before more valid conclusions could be reached.

The sex of the model and the degree to which the model's behavior is sex-typed are factors which may differentially affect the subjects' responses (Bandura, Ross, and Ross, 1961, p. 581; Hicks, 1965, p. 100). For this study, female subjects should have observed a female model exhibiting comparable female behavior.

Although live models and taped models are equally efficacious in certain circumstances, live models generally

produce changes of greater magnitude than vicarious models (Bandura and Mischel, 1965, pp. 703-704). Thus, the possibility of live models eliciting from the observers more behavioral changes than taped models warrants serious consideration.

While many of the behaviors that the models displayed were certainly novel, they were almost eccentric, and not necessarily conducive to facile imitation. Seligman and Hager (1972) and Friedman and Bowers (1971) both conclude that some behaviors are more amenable to imitation than other behaviors. Thus, the novelty of many of the models' behaviors should be made less extreme.

It has been shown in many social learning studies (for example, Paskal, 1969, p. 469) that children tend to imitate behaviors which have been reinforced more so than behaviors not reinforced. As neither the models' behaviors nor the observers' behaviors were reinforced in this study, some form of positive reinforcement could be used in future experiments.

Many experiments in social learning utilize preschool subjects with success. It is possible that younger children are more susceptible to modeling than older children. Therefore, the age factor must be taken into account in studies of this type. Kindergarten children may react differently than school-age children in imitative behavior.

Lastly, Bandura (1965) shows that observing a model does not ensure that a person will imitate the observed behaviors:

Exposing a person to a complex sequence of stimulation is no guarantee that he will attend to the entire range of cues, that he will necessarily select from a total stimulus complex only the most relevant stimuli, or that he will even perceive accurately the cues to which his attention is directed. Motivational variables, prior training in discriminate observation, and the anticipation of positive or negative reinforcements contingent on the emission of matching responses may be highly influential in channeling, augmenting, or reducing observing responses, which is a necessary precondition for imitative learning. (p. 593).

Bandura claims that there are many contributing factors involved which may result in a person observing a behavior, incorporating it into his behavioral repertoire, and yet not displaying this behavior immediately after observing it, but rather after some delay (p. 590). Therefore, the five-minute treatment and subsequent five-minute observation periods may not have been sufficient time for the observers to display the behavioral patterns that they had possibly acquired. Perhaps thirty minutes of play therapy would have enabled a more accurate assessment of behavior change. It also would have been more alike the actual play therapy setting.

One final procedural technique warrants criticism. A pre-test and post-test evaluation may have yielded significant differences relative to the treatment (ie. observation of a model). Thus, some measure of basal behavior before the treatment should have been made.

## IMPLICATIONS

This study has attempted to provide a rationale for play therapy. From the perspective of a social learning model, specific play behaviors were examined in terms of antecedent experiences. Several areas of play therapy were reviewed in Chapter II, and a post-experiment synopsis is in order.

The philosophic issue pervading this study has been centered on the question: are children's behaviors in play therapy a microcosm of their total behavior repertoire or are these behaviors different than children's regular behaviors because of the unique therapeutic atmosphere of permissiveness? The conclusion reached is that one cannot look at any specific play therapy behavior and say whether or not it is imitative. Allowance must be made for novelty and creativity. All behaviors cannot necessarily be explained by antecedent models, but rather, the child's behaviors must be viewed in context of each other and of the situation. Attention should be directed to the whole child rather than just fragmented areas (Bradley, 1970, p. 106).

If play is regarded as part of a child's experience with reality, then in play therapy the child can have an opportunity to gain skills needed to function in reality. In particular, the play therapist can encourage in the child a development of cooperative and sharing skills, specific verbal skills (like politeness), acceptable forms of aggression, and other specific skills that the child uses

in his everyday interaction with his world. The value that modeling can have in play therapy is dependent upon many factors, not the least of which includes the problem, the therapist, and the child's behavior. The therapist can be instrumental in acting as a model for the child, as others have shown (Bourdon, 1970).

It was found in this study that children do react differently toward toys based on their sex. This finding adds support to the many studies which describe children's sex-role identification by their preference for toys.

However, there was no evidence to show that the toys used in this study had the capacity in and of themselves to elicit certain behaviors from the children. Lebo's (1958a) formula for toy selection cannot necessarily be applied to the subjects used in the study. It was apparent that plasticine was by far the most popular toy. In a discussion with the children's teachers after the experiment, it was mentioned that whenever these children had spare time in class, they would play with plasticine. In fact, one teacher estimated that her children played with plasticine for about 80% of their spare time. Of course these observations are subjective and unvalidated, yet they serve to show that children largely played with toys in play therapy in accordance with previous (conditioned) exposure and usage. This is the major tenet of this study.

Children's behavior toward toys in play therapy can be considered vis-a-vis one's theoretical orientation. From a

social learning perspective, much can be gained by the therapist's attuned observation of the child's behavior. Although chiefly diagnostic in nature, this study has implications for therapy and remediation, already discussed under the guise of the therapist as a model.

The value of this study lies moreso in hidden experience rather than in the formally stated hypotheses. The writer was able to differentiate among subjects by their manner and duration of handling toys. Children observing the model who quickly held one toy and then another, also tended to be brief and quick with their toy-expressive behaviors. Unfortunately, no provision was made for recording this behavior. Nevertheless, the subjective observation of and informal atmosphere during the brief play therapy session proved to be a valuable source of information. Children's speech was found to be adequate as a means of communication. Many of the nonverbal behaviors appeared to be imitative.

Traditional nondirective, psychoanalytic, and relationship play therapies have dominated child psychotherapy for many years. It is hoped that this study will help foster the development of social learning play therapy.

## BIBLIOGRAPHY

- Accorsi, W. Toy Sculpture. New York: Reinhold, 1968.
- Allen, F. H. Psychotherapy with Children. New York: W. W. Norton, 1942.
- Ammons, C. H., & Ammons, R. B. Aggression in doll-play: interviews of two- to six-year-old white males. Journal of Genetic Psychology, 1953, 82, 205-213.
- Amster, F. Differential uses of play in treatment of young children. American Journal of Orthopsychiatry, 1943, 13, 62-68.
- Axline, V. M. Play Therapy. New York: Ballantine, 1969.
- Bandura, A. Influence of model's reinforcement contingencies on the acquisition of imitative responses. Journal of Personality and Social Psychology, 1965, 1(6), 589-595.
- Bandura, A., Ross, D., & Ross, S. A. Transmission of aggression through imitation of aggressive models. Journal of Abnormal and Social Psychology, 1961, 63(3), 575-582.
- Bandura, A., Ross, D., & Ross, S. A. Vicarious reinforcement and imitative learning. Journal of Abnormal and Social Psychology, 1963, 67(6), 601-607.
- Bandura, A., & Walters, R. H. Social Learning and Personality Development. Toronto: Holt, Rinehart, and Winston, 1963.
- Bandura, A., & Mischel, W. Modification of self-imposed delay of reward through exposure to live and symbolic models. Journal of Personality and Social Psychology, 1965, 2(5), 698-705.
- Barnes, K. E. Preschool play norms: a replication. Developmental Psychology, 1971, 5(1), 99-103.
- Baruch, D. W. Doll play in pre-school as an aid in understanding the child. Mental Hygiene, 1940, 24, 566-577.
- Bearison, D. J., & Sigel, E. Hierarchical attributes for categorization. Perceptual and Motor Skills, 1968, 27, 147-153.
- Beiser, H. R. Therapeutic play techniques: play equipment for diagnosis and therapy. American Journal of Orthopsychiatry, 1955, 25, 761-770.

- Bender, L., & Woltmann, A. G. Play and psychotherapy. Nervous Child, 1941, 1, 17-42.
- Benjamin, H. Age and sex differences in the toy-preferences of young children. Journal of Genetic Psychology, 1932, 41, 417-429.
- Bishop, J. K. Toward a practicable theory of counseling elementary school children. in H. W. Zingle and E. E. Fox (Eds.), The Elementary School Counselor in the Decade Ahead. Toronto: Holt, Rinehart, and Winston, 1972, Pp. 71-76.
- Blishen, B. R. A socio-economic index of occupations. The Canadian Review of Sociology and Anthropology, 1967, 4, 41-53.
- Bourdon, R. D. Imitation: implications for counseling and therapy. Review of Educational Research, 1970, 40, 429-457.
- Bradley, B. H. The use of the playroom in education of mentally retarded children. Rehabilitation Literature, 1970, 31(4), 103-106.
- Brown, D. G. Sex-role preference in young children. Psychological Monographs, 1956, 70, No. 14 (Whole No. 421).
- Buhler, C. The child and its activity with practical material. British Journal of Educational Psychology, 1933, 3, 27-41.
- Bull, P. Bear With Me. London: Hutchinson, 1969.
- Burton, R. V. Correspondence between behavioral and doll-play measures of conscience. Developmental Psychology, 1971, 5(2), 320-332.
- Chethik, M., & Fast, I. A function of fantasy in the borderline child. American Journal of Orthopsychiatry, 1970, 40, 756-765.
- Conn, J. H. The child reveals himself through play: the method of the play interview. Mental Hygiene, 1939, 23, 49-69.
- Culff, R. The World of Toys. Toronto: Hamlyn, 1969.
- Daiken, L. Children's Toys throughout the Ages. New York: Frederick A. Praeger, 1953.
- Daiken L. World of Toys. London: Lambarde, 1963.



- Davies, R. L. Relationship of irrational ideas to emotional disturbance. Unpublished master's thesis. University of Alberta, 1970.
- DeLucia, L. A. The toy preference test: a measure of sex-role identification. Child Development, 1963, 34, 107-117.
- Despert, J. L. A method for the study of personality reactions in preschool age children by means of analysis of their play. Journal of Psychology, 1940, 9, 17-29.
- Dorfman, E. Play therapy. in C. Rogers (Ed.), Client-Centered Therapy. New York: Houghton Mifflin, 1951, Pp. 235-277.
- Edgington, R. Which one shall I buy? Academic Therapy Quarterly, 1968, 3(3), 191-193.
- Edmonton Journal. California orders ban on 'violent toys', June 19, 1972, p. 1.
- Eifermann, R. R. Level of children's play as expressed in group size. British Journal of Educational Psychology, 1970, 40(2), 161-170.
- Elley, W. B. A comparative analysis of the socio-economic bias in selected intelligence tests. Unpublished doctoral dissertation. University of Alberta, 1961.
- Erikson, E. H. Childhood and Society. New York: Norton, 1950.
- Erikson, E. H. Sex differences in the play configurations of preadolescents. American Journal of Orthopsychiatry, 1951, 21, 667-692.
- Farnham-Diggory, S. & Ramsey, B. Play persistence: some effects of interruption, social reinforcement, and defective toys. Developmental Psychology, 1971, 4(2), 297-298.
- Farrell, M. Sex differences in block play in early childhood education. Journal of Educational Research, 1957, 51, 279-284.
- Farwell, L. Reactions of kindergarten, first-, and second-grade children to constructive play materials. Genetic Psychology Monographs, 1930, 8, 431-562.
- Finke, H. Changes in the expression of emotionalized attitudes in six cases of play therapy. Unpublished master's thesis. University of Chicago, 1947.

- Finley, G. E., & Layne, O. Play behavior in young children: a cross-cultural study. Journal of Genetic Psychology, 1971, 119, 203-210.
- Flanders, J. P. A review of research on imitative behavior. Psychological Bulletin, 1968, 69, 316-337.
- Foley, D. J. Toys through the Ages. New York: Chilton, 1962.
- Frank, L. K. Projective methods for the study of personality. Journal of Psychology, 1939, 8, 389-413.
- Frank, L. K. Therapeutic play techniques: play in personality development. American Journal of Orthopsychiatry, 1955, 25, 576-590.
- Franklin, A. Home Play and Play Equipment for Young Children. U. S. Department of Health, Education, and Welfare (Children's Bureau), 1959.
- Fraser, A. A History of Toys. London: Weidenfeld and Nicolson, 1966.
- Freud, A. The Psycho-Analytic Treatment of Children. London: Imago, 1946.
- Freud, S. An Outline of Psycho-Analysis. In Standard Edition Vol. 23, London: Hogarth, 1964. (First German edition, 1940).
- Friedman, P., & Bowers, N. D. Student imitation of a rewarding teacher's verbal style as a function of sex and grade level. Journal of Educational Psychology, 1971, 62(6), 487-491.
- Fries, M. E. Play technique in the analysis of young children. Psychoanalytic Review, 1937, 24, 233-245.
- Garrison, C. G. Permanent Play Materials for Young Children. New York: Charles Scribner's Sons, 1926.
- Gilmore, J. B. Play: a special behavior. in R. H. Haber (Ed.), Current Research in Motivation. New York: Holt, Rinehart, and Winston, 1966a, Pp. 343-355.
- Gilmore, J. B. The role of anxiety and cognitive factors in children's play behavior. Child Development, 1966b, 37, 397-416.
- Ginott, H. G. The theory and practice of "therapeutic intervention" in child treatment. Journal of Consulting Psychology, 1959, 23, 160-166.

Ginott, H. G. A rationale for selecting toys in play therapy. Journal of Consulting Psychology, 1960, 24, 243-246.

Ginott, H. G. Group Psychotherapy with Children. New York: McGraw-Hill, 1961a.

Ginott, H. G. Play therapy: the initial session. American Journal of Psychotherapy, 1961b, 15, 73-88.

Ginott, H. G., & Lebo, D. Play therapy limits and theoretical orientation. Journal of Consulting Psychology, 1961, 25, 337-340.

Ginott, H. G., & Lebo, D. Most and least used play therapy limits. Journal of Genetic Psychology, 1963, 103, 153-159.

Goldberg, S., & Lewis, M. Play behavior in the year-old infant: early sex differences. Child Development, 1969, 40, 21-31.

Gramza, A. F. Preferences of preschool children for enterable play boxes. Perceptual and Motor Skills, 1970, 31, 177-178.

Groos, K. The Play of Animals. New York: D. Appleton, 1898.

Groos, K. Play of Man. New York: D. Appleton, 1901.

Guillaume, P. Imitation in Children. Translated by Elaine P. Halperin; Chicago: University of Chicago, 1971 (original, 1926).

Gump, P., & Sutton-Smith, B. Therapeutic play techniques: activity-setting and social interaction: a field study. American Journal of Orthopsychiatry, 1955, 25, 755-760.

Hall, C. S., & Lindzey, G. (Eds), Theories of Personality. New York: John Wiley and Sons, 1970.

Hall, G. S. Adolescence. New York: D. Appleton, 1904.

Hamilton, G. Psychotherapy in Child Guidance. New York: Columbia University, 1947.

Hammer, M., & Kaplan A. M. The Practice of Psychotherapy with Children. Homewood, Illinois: Dorsey, 1967.

- Hartley, R. E., & Goldenson, R. M. The Complete Book of Children's Play. New York: Thomas Y. Crowell, 1957.
- Herron, R. E., & Sutton-Smith, B. Child's Play. New York: John Wiley and Sons, 1971.
- Hicks, D. J. Imitation and retention of film-mediated aggressive peer and adult models. Journal of Personality and Social Psychology, 1965, 2(1), 97-100.
- Hils, K. The Toy -- Its Value, Construction and Use. London: Edmund Ward, 1959.
- Holmer, P. The use of the play situation as an aid to diagnosis: a case report. American Journal of Orthopsychiatry, 1937, 7, 523-531.
- Honzik, M. P. Sex differences in the occurrence of materials in the play constructions of preadolescents. Child Development, 1951, 22, 15-35.
- Huff, J. Games that children play. New York State Education, 1967, 54(4), 32-33.
- Jackson, F. N. Toys of Other Days. New York: Benjamin Blom, 1968.
- Jackson, L., & Todd, K. M. Child Treatment and the Therapy of Play. New York: Ronald, 1950.
- Janus, S. Q. An investigation of the relationship between children's language and their play. Journal of Genetic Psychology, 1943, 62, 3-61.
- Johnson, M. W. The effect on behavior of variation in the amount of play equipment. Child Development, 1935, 6, 56-68.
- Kamp, L. N. J., & Kessler, E. S. The World Test: developmental aspects of a play technique. Journal of Child Psychology and Psychiatry and Allied Disciplines, 1970, 11, 81-108.
- Kanner, L. Play investigation and play treatment of children's behavior disorders. Journal of Pediatrics, 1940, 17, 533-546.
- Kawin, E. The Wise Choice of Toys. Chicago: University of Chicago, 1934.
- Klein, M. The psychoanalytic play technique. American Journal of Orthopsychiatry, 1955, 25, 223-237.

- Knowles, D. Play media in elementary school counseling. in H. W. Zingle and E. E. Fox (Eds.), The Elementary School Counselor in the Decade Ahead. Toronto: Holt, Rinehart, and Winston, 1972, Pp. 123-133.
- Krall, V. Personality characteristics of accident repeating children. Journal of Abnormal and Social Psychology, 1953, 48, 99-107.
- Krivy, G. J. Nondirective play therapy. in H. W. Zingle and E. E. Fox (Eds.), The Elementary School Counselor in the Decade Ahead. Toronto: Holt, Rinehart, and Winston, 1972, Pp. 93-108.
- Landisberg, S., & Snyder, W. U. Nondirective play therapy. Journal of Clinical Psychology, 1946, 2, 203-213.
- Laurence, R., & Sutton-Smith, B. Novel responses to toys: a replication. Merrill-Palmer Quarterly, 1968, 14(2), 159-160.
- Lebo, D. The present status of research on nondirective play therapy. Journal of Consulting Psychology, 1953, 17, 177-183.
- Lebo, D. The development of play as a form of therapy: from Rousseau to Rogers. American Journal of Psychiatry, 1955a, 112, 418-422.
- Lebo, D. The expressive value of toys recommended for nondirective play therapy. Journal of Clinical Psychology, 1955b, 11, 144-148.
- Lebo, D. Quantification of the nondirective play therapy process. Journal of Genetic Psychology, 1955c, 86, 375-378.
- Lebo, D. Age and suitability for nondirective play therapy. Journal of Genetic Psychology, 1956, 89, 231-238.
- Lebo, D. A formula for selecting toys for nondirective play therapy. Journal of Genetic Psychology, 1958a, 92, 23-34.
- Lebo, D. A theoretical framework for nondirective play therapy: concepts from psychoanalysis and learning theory. Journal of Consulting Psychology, 1958b, 22, 275-279.
- Lebo, D. Aggressiveness and expansiveness in children. Journal of Genetic Psychology, 1962, 100, 227-240.

- Lebo, D., & Lebo, E. Aggression and age in relation to verbal expression in nondirective play therapy. Psychological Monographs, 1957, 71, Whole No. 449.
- Lehman, H. C., & Witty, P. A. The Psychology of Play Activities. New York: A. S. Barnes, 1927.
- Leland, H., & Smith, D. E. Play Therapy with Mentally Subnormal Children. New York: Grune and Stratton, 1965.
- Leuba, C., & Friedlander, B. Z. Effects of controlled audio-visual reinforcement of infant's manipulative play in the home. Journal of Experimental Child Psychology, 1968, 6(1), 86-99.
- Levenstein, P., & Sunley, R. An effect of stimulating verbal interaction between mothers and children around play materials. American Journal of Orthopsychiatry, 1967, 37, 334-335.
- Levin, H., & Wardwell, E. The research uses of doll play. Psychological Bulletin, 1962, 59, 27-56.
- Lewin, K. Field Theory in Social Science: Selected Theoretical Papers. D. Cartwright (Ed.), New York: Harper and Row, 1951.
- Lewis, M. There's no unisex in the nursery. Psychology Today, 1972, 5, 54-57.
- Liebert, R. M., McCall, R. B., & Hanratty, M. A. Effects of sex-typed information on children's toy preferences. Journal of Genetic Psychology, 1971, 119(1), 133-136.
- Linden, J. I., & Stollack, G. E. The training of undergraduates in play techniques. Journal of Clinical Psychology, 1969, 25, 213-218.
- Looft, W. R. Sex differences in the expression of vocational aspirations of elementary school children. Developmental Psychology, 1971, 5(2), 366.
- Lowenfeld, M. The world pictures of children. British Journal of Medical Psychology, 1939, 18, 65-101.
- Lynn, D. B. A note on sex differences in the development of masculine and feminine identification. Psychological Review, 1959, 66(2), 126-135.
- Lynn, D. B., & Lynn, R. The structured doll play test as a projective technique for use with children. Journal of Projective Techniques, 1959, 23, 335-344.

- Margolin, E. Work and play -- are they really opposites? Elementary School Journal, 1967, 67(7), 343-353.
- Marshall, H. R. Relations between home experiences and children's use of language in play interactions with peers. Psychological Monographs, 1961, 75, 1-77, (Whole No. 509).
- Matterson, E. M. Play and Playthings for the Preschool Child. Baltimore: Penguin, 1965.
- McDowell, M. S. Frequency of choice of play materials by pre-school children. Child Development, 1937, 8, 305-310.
- McLaughlin, B. Learning and Social Behavior. New York: Free Press, 1971.
- Meister, D. Adjustment of children as reflected in play performance. Journal of Genetic Psychology, 1948, 73, 141-155.
- Millar, S. The Psychology of Play. Baltimore: Penguin, 1968.
- Moustakas, C. E. Children in Play Therapy. New York: McGraw-Hill, 1953.
- Moustakas, C. E. Emotional adjustment and the play therapy process. Journal of Genetic Psychology, 1955a, 86, 79-99.
- Moustakas, C. E. The frequency and intensity of negative attitudes expressed in play therapy: a comparison of well-adjusted and disturbed young children. Journal of Genetic Psychology, 1955b, 86, 309-315.
- Moustakas, C. E. Psychotherapy with Children. New York: Ballantine, 1959.
- Moyer, K. E., & Gilmer, B. H. Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, 187-201.
- Moyer, K. E., & Gilmer, B. H. Experimental study of children's preferences and use of blocks in play. Journal of Genetic Psychology, 1956, 89, 3-10.
- Murray, P. Toys. New York: E. P. Dutton, 1968.
- Nelson, R. C. Elementary school counseling with unstructured play media. Personnel and Guidance Journal, 1966, 45, 24-27.

- Newell, H. W. Play therapy in child psychiatry. American Journal of Orthopsychiatry, 1941, 11, 245-251.
- Odom, R. D., Liebert, R. M., & Hill, J. H. The effects of modeling cues, reward, and attentional set on the production of grammatical and ungrammatical syntactic constructions. Journal of Experimental Child Psychology, 1968, 6(1), 131-140.
- Parsons Project in Language and Communication of Mentally Retarded Children. Language studies of mentally retarded children. Journal of Speech and Hearing Disorders, 1963, 1-108, Monograph Supplement No. 10.
- Parten, M. B. Social play among preschool children. Journal of Abnormal and Social Psychology, 1933, 28, 136-147.
- Paskal, V. The value of imitative behavior. Developmental Psychology, 1969, 1(5), 463-469.
- Patrick, G. T. W. The Psychology of Relaxation. New York: Houghton Mifflin, 1916.
- Patterson, G. R., & Gullion, M. E. Living with Children. Champaign, Illinois: Research Press, 1968.
- Piaget, J. Play, Dreams, and Imitation in Childhood. London: William Heinemann, 1951 (originally published, 1945).
- Pichon Riviere, A. A. House construction play: its interpretation and diagnostic value. International Journal of Psycho-Analysis, 1958, 39, 39-49.
- Play Schools Association. All in Play. New York: Play Schools Association, 1958.
- Pulaski, M. A. S. Play as a function of toy structure and fantasy predisposition. Child Development, 1970, 41(2), 531-537.
- Pumfrey, P. D., & Elliott, C. D. Play therapy, social adjustment and reading attainment. Educational Research, 1970, 12(3), 183-193.
- Rabban, M. Sex-role identification in young children in two diverse social groups. Genetic Psychology Monographs, 1950, 42, 81-158.
- Rabin, A. I., & Haworth, M. R. Projective Techniques with Children. New York: Grune and Stratton, 1960.



- Rees, E. L. A Doctor Looks at Toys. Springfield, Illinois: Charles C. Thomas, 1961.
- Rogers, C. R. Counseling and Psychotherapy. Cambridge, Massachusetts: Houghton Mifflin, 1942.
- Rogers, C. R. Therapy in guidance clinics. Journal of Abnormal and Social Psychology, 1943, 38, 284-289.
- Rosenberg, B. G., & Sutton-Smith, B. The measurement of masculinity and femininity in children. Child Development, 1959, 30, 373-380.
- Rosenberg, B. G., & Sutton-Smith, B. A revised conception of masculine-feminine differences in play activities. Journal of Genetic Psychology, 1960, 96, 165-170.
- Ross, A. O. Learning theory and therapy with children. Theory, Research, and Practice, 1964, 1, 102-107.
- Saki (H. H. Munro). The Toys of Peace. New York: Viking Press, 1923.
- Schiffer, M. The Therapeutic Play Group. New York: Grune and Stratton, 1969.
- Seagoe, M. V. An instrument for the analysis of children's play as an index of degree of socialization. Journal of School Psychology, 1970, 8(2), 139-144.
- Seagoe, M. V. A comparison of children's play in six modern cultures. Journal of School Psychology, 1971, 9, 61-72.
- Seagoe, M. V., & Murakami, K. A comparative study of children's play in America and Japan. California Journal of Educational Research, 1961, 12, 124-130.
- Seligman, M. E. P., & Hager, J. L. Biological boundaries of learning (the Sauce-Bearnaise Syndrome). Psychology Today, 1972, 6(3), 59-61, 84-87.
- Slavson, S. R. Child Psychotherapy. New York: Columbia University Press, 1952.
- Smolen E. M. Nonverbal aspects of therapy with children. American Journal of Psychotherapy, 1959, 13, 872-881.
- Solomon, J. C. Therapeutic play techniques: play technique and the integrative process. American Journal of Orthopsychiatry, 1955, 25, 591-600.

- Spencer, H. Principles of Psychology. New York: D. Appleton, 1873.
- Spiritas, A. A., & Holmes, D. S. Effects of models on interview responses. Journal of Counseling Psychology, 1971, 18(2), 217-220.
- Stone, L. J., & Church, J. Childhood and Adolescence. New York: Random House, 1968.
- Sutton-Smith, B. Novel responses to toys. Merrill-Palmer Quarterly, 1968, 14(2), 151-158.
- Sutton-Smith, B., & Rosenberg, B. G. Manifest anxiety and game preferences in children. Child Development, 1960, 31, 307-311.
- Sutton-Smith, B., & Rosenberg, B. G. Sixty years of historical change in the game preferences of American children. Journal of American Folklore, 1961, 74, 17-46.
- Sutton-Smith, B., Rosenberg, B. G., & Morgan, E. F. Development of sex differences in play choices during preadolescence. Child Development, 1963, 34, 119-126.
- Swartz, E. M. Toys that Don't Care. Boston: Gambit, 1971.
- Symons, H. Playthings of Yesterday. Toronto: Ryerson Press, 1963.
- Traill, P. M. An account of Lowenfeld technique in a child guidance clinic, with a survey of therapeutic play technique in Great Britain and U. S. A. Journal of Mental Science, 1945, 91, 43-78.
- Tudor-Hart, B. Toys, Play and Discipline in Childhood. London: Routledge and Kegan Paul, 1955.
- Updegraff, R., & Herbst, E. K. An experimental study of the social behavior stimulated in young children by certain play materials. Journal of Genetic Psychology, 1933, 42, 372-391.
- Van Alstyne, D. Play Behavior and Choice of Play Materials of Pre-school Children. Chicago: University of Chicago Press, 1932.
- Vance, T. F., & McCall, L. T. Children's preferences among play materials as determined by the method of paired comparisons of pictures. Child Development, 1934, 5, 267-277.

- Vygotsky, L. S. Thought and Language (translated by E. Hanfmann and G. Vakar). Cambridge, Massachusetts: M. I. T. Press, 1962.
- Watson, R. I. Treatment as an aspect of the clinical method: a review. in R. I. Watson (Ed.), Readings in the Clinical Method in Psychology. New York: Harper and Brothers, 1949, Pp. 674-718.
- Whiles, W. H. Treatment of emotional problems in childhood. Journal of Mental Science, 1941, 87, 359-369.
- Winstel, B. The use of a controlled play situation in determining certain effects of maternal attitudes on children. Child Development, 1951, 22, 299-311.
- Witt, P. A., & Gramza, A. F. Position effects in play equipment preferences of nursery school children. Perceptual and Motor Skills, 1970, 31, 431-434.
- Woltmann, A. G. Therapeutic play techniques: concepts of play therapy techniques. American Journal of Orthopsychiatry, 1955, 25, 771-783.
- Woltmann, A. G. Diagnostic and therapeutic considerations of nonverbal projective activities with children. in M. R. Haworth (Ed.), Child Psychotherapy. New York: Basic Books, 1964.
- Zimmerman, L. D., & Calovini, G. Toys as learning materials for preschool children. Exceptional Children, 1971, 37(9), 642-654.
- Zingle, H. W., & Fox, E. E. (Eds.), The Elementary School Counselor in the Decade Ahead. Toronto: Holt, Rinehart, and Winston, 1972.

## APPENDIX A

## FILM A: Telephone-Expressive Responses

Hi! My name is Darren.

1 ... 2 ... 3 ... 4 ... 5 ... Hello, Mr. Grocer. Would you please send me some butter, some hamburger, lots of pizza, peanut butter, some bread, meat, bottles of coke, gum, candy, lots of everything, butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything.

Hello, is this the hospital? Could I please speak to Dr. Mikolaski? Hello, Doctor, I have had some diseases, I've had: the mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye, mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye. OK! Goodbye.

I feel like singing a song. Happy birthday to you, Happy birthday to you, Happy birthday dear . . . uhmm . . . dear Jeffery, Happy birthday to you.

1 ... 2 ... 3 ... 4 ... 5 ... Hello, Mr. Grocer. Could I please . . . could you please send me: Some butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything, butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything.

Hello. This is the hospital? Can I please speak to Dr. Mikolaski. Hello Doctor, I've had some diseases; I've had: the mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye, mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye. OK! Goodbye.

I feel like singing a song. Happy birthday to you, Happy birthday to you, Happy birthday dear Jeffery, Happy birthday to you.

Hi! My name is Darren.

1 ... 2 ... 3 ... 4 ... 5 ... Hello, Mr. Grocery . . . Gro . . . Hello Mr. Grocer. Could you please send me some butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything, butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy . . . .

## APPENDIX B

## FILM B: Plasticine-Expressive Responses

Hi! My name is Darren.

I'm making a mustache; uhh, this is hard. Uhhh, I've got a mustache, I've got a mustache, I've got a mustache.

1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 ... 10 ...  
11 ... 12 ... 13 ... 14 ... 15 ... 16 ... 17 ... 18 ...  
19 ... 20 ...

Now I've got a helicopter. I'm making a ball. This is hard. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball.

Hi! My name is Darren.

I'm making a mustache. I've got a mustache. I've got a mustache. I've got a mustache.

1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 ... 10 ...  
11 ... 12 ... 13 ... 14 ... 15 ... 16 ... 17 ... 18 ...  
19 ... 20 ...

I've got a helicopter! I'm making a ball. Happy birthday to you, happy birthday to you, happy birthday dear Jeffery, happy birthday to you.

This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball.

Hi! My name is Darren.

I'm making a mustache. I've got a mustache. I've got a mustache. I've got a mustache.

1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 ... 10 ...  
11 ... 12 ... 13 ... 14 ... 15 ... 16 ... 17 ... 18 ...  
19 ... 20 ...

Now I've got a helicopter. Now I've got a helicopter. I'm making a ball. Happy birthday to you, happy birthday to you, happy birthday dear Jeffery, happy birthday to you.

This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball . . . .

## APPENDIX C

## FILM C: Doll-Expressive Responses

Hi! My name is Darren.

Hmmm. Look what I've got. Hmmm. Funny eyes. Hat is too small. Boots are too big. Hmmm. Funny suit. Funny head. (laughs) Cap is too small for me (laughs).

Bang -- missed. Bang -- got him! Bang -- got him!  
Bang -- got him!

When I grow up, I'm going to be a hockey player. Bang!  
Bang!

Snip. Snip. Snip. Snip. Snip.

GI Joe can be a doctor, a dentist, grocer, lawyer, mayor, a principal, a teacher, a pilot, a policeman, doctor, dentist, lawyer, mayor, principal, teacher, pilot, policeman.

Hi! My name is Darren.

Hmmm. Funny arms. Funny head. Cap is too small for me. (laughs) Boots are too big (laughs). Funny suit (laughs).

When I grow up, I'm going to be a hockey player.

Bang -- got him! Bang -- got him! Bang -- got him!  
Opps! Hat fell off.

Snip. Snip. Snip. Snip. Snip.

GI Joe can be a doctor, dentist, grocer, lawyer, mayor, principal, teacher, pilot, policeman, doctor, dentist, grocer, lawyer, mayor, principal, teacher, pilot, policeman.

Hi! My name is Darren.

Funny arms. Funny hat. Funny suit (laughs).

APPENDIX D

FILM D: All-Toy-Expressive Responses

Hi! My name is Darren.

1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... Grocery, will you please send me some: butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything, butter, hamburger, lots of pizza, peanut butter, bread, meat, bottles of coke, gum, candy, lots of everything.

Hmmm. I'm gonna phone the doctor. Hello. This is the hospital? Could I please speak to Dr. Mikolaski? Dr. Mikolaski, I've had some diseases; I've had the: mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye, mumps, chicken pox, measles, broken arm, a cold, a cough, a broken ankle, a black eye. OK! Goodbye.

I feel like singing a song. Happy birthday to you, happy birthday to you, happy birthday dear Jeffery, happy birthday to you.

I'm making a mustache. I've got a mustache. I've got a mustache. I've got a mustache.

1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 ...  
10 ... 11 ... 12 ... 13 ... 14 ... 15 ... 16 ... 17 ...  
18 ... 19 ... 20 ...

I've got a helicopter! I've got a helicopter! I'm making a ball now. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball. This is a ball.

Hmmm, what's this? Funny arms. Funny head. Funny hat. Funny boots. Funny suit. (laughs).

When I grow up, I'm going to be a hockey player. When I grow up I'm going to be a hockey player.

Bang -- got him! Bang -- missed. Bang -- got him!  
Snip. Snip. Snip. Snip.

GI Joe can be a doctor, dentist, grocer, lawyer, mayor, principal, teacher, pilot, policeman, doctor, dentist, grocer, lawyer, mayor, principal, teacher, pilot . . . .

## APPENDIX E

## FILM E: All-Toy-Nonexpressive Responses

Hi! My name is Darren.

This is a telephone.

What's this?

Hmmm. GI Joe.

Telephone.

Telephone.

Plasticine.

Hmmm. GI Joe.

Plasticine.

Telephone.

GI Joe.

Telephone.

Plasticine.

GI Joe.



## APPENDIX F

## Behavior Rating Sheet

NAME \_\_\_\_\_ Grade \_\_\_\_\_ Sex \_\_\_\_\_ Age \_\_\_\_\_

## TELEPHONE:

Dials phone with pen or pencil  
 Dials with object other than pen or pencil  
 Dials with finger  
 Holds receiver over head like a cap  
 Uses receiver as a microphone  
 Holds receiver upside down  
 Talks over phone  
 Other: 1.  
       2.  
 Unclassified:

## PLASTICINE:

Rolls a snake-like object  
 Uses plasticine as mustache  
 Uses plasticine as some other part of face  
 Gives plasticine judo chop  
 Hits plasticine in other manners  
 Swings plasticine around like helicopter  
 Uses plasticine as airplane  
 Rolls a ball  
 Tosses plasticine in the air  
 Throws plasticine at something/someone  
 Other: 1.  
       2.  
 Unclassified:

## DOLL:

Removes hat  
 Removes boot(s)  
 Removes suit  
 Places hat on his own head  
 Reverses boots  
 Throws plasticine at doll  
 Throws other things at doll  
 Uses fingers as scissors  
 Uses indirect motions for cutting actions  
 Other: 1.  
       2.  
 Unclassified:

**END OF  
REEL**