THE EFFECT OF PLAY INTERRUPTION ON SUBSEQUENT IMAGINATIVE PLAY

by

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To my family for their love and support,
Tasha for her patience, and
Saturday Morning for Saturday mornings.

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CHAPTER I

RATIONALE AND REVIEW OF THE LITERATURE

General Statement of the Problem

The intent of this study is to investigate factors in play situations that may tend to foster or inhibit the development of the child's tendency to engage in make-believe, fantasy play.

The toddler, attempting to attire the family dog in his own Sunday clothes and admonishing him not to get dirty, rarely fails to capture the attention of even the most preoccupied adult. In most children, this ability to become almost totally immersed in a world of his own creation, where all powers are his to choose and delegate, and where objects can be transformed repeatedly by the imagination, emerges sometime during the third year. However, many investigators (Andrews, 1930; Bach, 1945; Eifermann, 1971; Fineman, 1962; Hartley, 1952; Hartley, Frank & Goldenson, 1952; Hurlock, 1972; Markey, 1935; Singer, 1961, 1966, 1973; Smilansky, 1968; Sutton-Smith & Rosenberg, 1967) have noted that such imaginative play is not universal, and that all children do not develop these behaviors at the same rate, or to the same degree. Such observations have led to investigation of possible relationships between imaginative play development, and such environmental factors as family constellation (Singer, 1961, 1973; Sutton-Smith & Rosenberg, 1967), amount

and type of adult involvement in play (Bach, 1945; Bishop & Chace, 1971; Fineman, 1962; Freyberg, 1970; Marshall & Hahn, 1967; Pintler, 1945), socioeconomic status (Eifermann, 1971; Markey, 1935; Smilansky, 1968), and peer contacts (Markey, 1935; Singer, 1973).

However, such research is, as yet, far from comprehensive, and numerous possible factors in imaginative play development remain unexplored. One such factor involves the opportunity to engage freely in imaginative play without externally imposed interruptions. Singer (1961, 1968, 1973) has speculated that an optimal balance between benign parental contact and opportunity to play alone and uninterrupted is essential to the development of the capacity for rich fantasy play.

The role of parental contact has been supported by some preliminary research of Singer (1973), showing that children who were rated as highly imaginative reported greater association with their parents than children rated as low in imaginativeness. The recent findings of Freyberg (1970) and Gottleib (1968), showing a definite effect of modeling procedures on development of imagination, indicate that in such contacts,parents may serve as models, affecting the development of imaginativeness in their child through the behaviors that they, themselves, exhibit.

Equally important for development of rich fantasy life is sufficient opportunity for the young child to be alone, in order that he may practice imaginative behavior. This

contention is presently supported only by indirect evidence from Singer's (1973) preliminary finding that imaginative development is related to lessened opportunity for sibling contact in the early years. However, direct empirical investigation of the effect of this factor on the child's opportunity to practice imaginative activities is currently lacking.

A major aspect of such opportunity seems to be the factor of interruption or interference by the social environment. Every parent can cite examples of attempting to interrupt their child's imaginative game, only to obtain a reaction of attempted refusal or procrastination. Feeding a doll may temporarily seem to take precedence even over the child's own dinner.

Singer's finding, cited above, that degree of imaginativeness is negatively related to sibling contact in the early years, suggests that this effect may, in part, be a function of the degree to which such contact necessarily implies interference in a child's imaginative games. Similarly, the prevalent finding that ghetto youngsters generally demonstrate a marked lack of imaginative play (Freyberg, 1970; Hurlock, 1972; Smilansky, 1968) may also be partially due to repeated interruptions of imaginative behavior,resulting from crowded living conditions.

The available research on interruption of children's play is limited to one study by Farnham-Diggory & Ramsey (1971), relating play persistence on a non-fantasy play

task to social and object interruptions during a prior play session. While play persistence was found to be significantly reduced by social interruptions, intrusions caused by defective toys proved to have no such effect. Comparable work in the realm of make-believe play is currently lacking, and on the basis of the theoretical speculations outlined above, this is the undertaking of the present investigation.

A Definition of Imaginative Play

Attempts to define play are often highly ambiguous, and are frequently bound up with theoretical speculation. Adding to the lack of precision in definition, is prevalent failure to distinguish between motivation, goals, results, and peripheral outcomes of play (Singer, 1973). An additional impediment in defining play has been the attempt to subsume all types of play activities under one global definition. In order to minimize confabulation by these factors, Klinger (1969) has proposed a tentative, negative working definition of play, awaiting substantially more empirical investigation. Play is described as,

> waking behavior other than a) consummatory behavior; b) instrumental behavior leading detectably to consummatory behavior or to a detectable goal extrinsic to the play activity itself; c) competition with a standard of excellence; d) socially prescribed, institutionalized, or ritual behavior when it occurs in the context in which the prescription is socially sanctioned and enforced; and e) behavior constrained by the requirements of social interaction. [p. 279]

Such a negative working definition, while relatively uninfluenced by theoretical bias, still leaves one with

the problem of a wide diversity of behaviors included, but not specifically defined. This heterogeneity has led this author to the view that any positive definition of play must necessarily be preceded by categorical, descriptive analysis of each type of play emitted by the child. The type of play here referred to as make-believe, imaginative play, refers to a restricted type of play behavior characterized by an "as if" quality. In the realm of this limited type of play, a descriptive account includes a) thematic content (Andrews, 1930; Fineman, 1962); b)animism, involving attribution of life qualities, affects, and attitudes to inanimate objects (Andrews, 1930; Buhler,1930; Markey, 1935); c) transformation, involving assignments of qualities to objects other than those dictated by the objects, themselves (Markey, 1935); d) dramatization, involving delegation of powers, attributes, and roles to oneself and others, according to thematic content (Buhler, 1930); and e) manifestations of joy and delight (Hartley, Frank & Goldenson, 1952; Leiberman, 1965; Singer, 1973). Inherent in these qualities,is a basic disregard for the constraints imposed by reality, and the child in his make-believe world appears as supreme governor of all that takes place there.

However, although delineation of the structural characteristics of make-believe play provide a framework for definition, the sterility of the above descriptives becomes immediately obvious to anyone who has ever watched a child's

imaginative game. Omitted is a subjective quality, the curious admixture of joyful spontenaiety, serious intensity, the whimsical, and the fantastic,which dominates the play situation. Such subjective impressions have led to consideration of the elements of fantasy in make-believe play (Bettelheim, 1972; Dattner, 1969; A.Freud, 1966; S.Freud, 1959; Klein, 1973; Klinger, 1969; Lowenfeld, 1967; Singer, 1966, 1968, 1973; Waelder, 1933). Perhaps the most explicit and detailed analysis of this interrelationship has been Klinger's (1969) proposal that both play and fantasy have a common origin. Undifferentiated until the age of about three years, play and fantasy then undergo parallel development in terms of structural properties until puberty, at which time free play declines, and fantasy increases in frequency.

Keeping this interrelationship in mind, the next section considers theoretical formulations, only in so far as they attend to this specifically described realm of make-believe, imaginative play. Comprehensive historical reviews of theoretical positions on play in a more general framework may be found elsewhere (Ellis, 1971, 1973; Gilmore, 1966, 1971; Klinger, 1969; Millar, 1968;.Stamm,1973).

Imaginative Play: Attempted Catharsis or Competency

Modern theories of play and fantasy may be divided into those stressing the function of play as basically cathartic (A. Freud, 1966; S. Freud, 1955; Greenacre, 1959; Klein, 1973; Peller, 1954; Waelder, 1933), and those which stress

its function as an attempt to develop competence in dealing with the real world (ElKronin, 1971; Hartley, 1969; Piaget, 1962; Singer, 1973; Sutton-Smith, 1971).

Play as attempted catharsis. The most influential exponent of the cathartic position has been the psychoanalytic school, in whose formulation the intimate relationship between the processes of fantasy and play is clear (Abadi, 1967; Freud, 1959; Greenacre, 1959; Klein, 1973; Peller, 1954; Waelder, 1933). Waelder views play as simply "fantasy woven about a real object [p. 233]." Similarly, Greenacre (1959) views play as the acting out of preconceived fantasies.

Despite some variation, major psychoanalytic theorists generally concur that fantasy play represents a dual function, that of attempted catharsis and wish-fulfillment. In his make-believe world, the child attempts to divest himself of intrapsychic conflict, and also to satisfy drives for which there is no adequate opportunity in reality.

Play is seen basically as a function of the repetition compulsion (Abadi, 1967; Freud, 1955; Greenacre, 1959; Isaacs, 1933; Lowenfeld, 1967; Waelder, 1933), whereby the child attempts mastery of anxiety provoking situations or conflicts through repetition of the elements of those situations. The painful event that the child has passively endured, in play is transformed into one where he actively effects a pleasurable resolution.

In addition, in his imaginative play, the child exercises defensive functions aimed at mastery of libidinal

impulses (A. Freud, 1966). Peller (1954) has argued that at each psychosexual stage of development, the play exhibited by the child reveals defenses characteristic of that stage. Thus, in psychoanalytic thought, the function of play in development of mastery is a relatively limited one, restricted to overcoming stimulation from anxiety laden conflicts. Within this framework, the motivation for fantasy play is anxiety, content is determined by libidinal conflicts, and outcome is some degree of mastery of these conflicts.

Elements of a competency function within the cathartic position. The germination of a second trend of thought regarding the function of play as more constructive, and functioning to increase the child's mastery of reality, can be seen even within the writings of the aforementioned psychoanalysts. Greenacre (1959) has posited the idea that "play may appear as a kind of make-believe reality testing." [p.66]. Similarly, Peller (1971) has suggested that repetitive play may be indespensible in concept formation. Bettelheim (1972) notes that fantasy play provides an opportunity for dominance of an environment, albeit a miniaturized one. Such a view is implied also in White's (1959, 1960) proposal that play is motivated by effectance, the drive to become competent in dealing with one's environment.

The chief proponent within psychoanalysis of a concept of play functioning to increase the child's mastery over reality has been Erikson (1940, 1963). Proposing three

sequential stages of play, dealing respectively with worlds of oneself, objects, and other people, he claims that experience with each sphere endows it with its own reality, and the child with a sense of mastery of that reality. Through creation of model situations within these three play worlds, the child develops a sense of mastery of life experiences outside the play situation itself. In such a formulation, imaginative play is an ego mechanism which helps the child to cope with reality, and efforts to overcome anxiety provoking conflicts are but a specific application of a more general function.

Play as attempted competency. The concept of play as functioning to develop the child's competence in dealing with the environment has arisen more from the work of cognitive theorists than from orthodox psychoanalysis. Piaget (1962) has delineated three consecutive stages of play through which the child must pass as part of the natural developmental process towards operational thought. Intrinsically pleasurable, these three processes function to integrate elements of the child's reality into his pre-existing conceptual framework. Symbolic play, the second of Piaget's proposed stages, has an adaptive aspect in development and retention of new abilities and skills, as well as a compensatory element when it is used to enhance reality.

Within the Piagetian framework, the role of mastery is quite extended. While symbolic play may result in mastery of conflicts, this would be thought to be due to the assimilative process inherent in such play, rather than a specific

goal in and of itself.

More recently, (Klinger, 1969; Millar, 1968; Singer, 1973) emphasis has been given to the role of information processing as it relates to imaginative, make-believe play. Based on Tomkins' (1962, Izard & Tomkins, 1966) position that personality is a dual directional communication with the physical and social environments, Singer (1973) has postulated a cognitive-affective theory which holds that information processing and make-believe play are concommitant. Within this framework, the motivation for such play is held to be positive affect which derives from stimulus complexity of the environment. The child's somewhat cautious exploration of his environment produces a moderate increase in stimulus complexity, evoking the positive affective experience of interest or surprise. As too sudden or too great an increase in complexity of stimulation may evoke fear, the rate of increase must be carefully controlled for the child to experience the positive affect which motivates play. During playful exploration, as the child becomes increasingly familiar with the stimulus material and there is a decrease in unassimilated stimulation, the child experiences joy, manifested by smiling and laughter.

The Piagetian position can be comfortably encompassed within such a position. Confronted with novel situations, the child attempts either to manipulate or imitate them. When elements of that situation are no longer present, the child appears to have some memory of them and attempts to reconstruct the experience. Such efforts at assimilation

repeatedly create new stimulus patterns and sequences, which, if not excessively complex, maintain the child's interest and evoke positive affects of surprise and interest. With repetition, the child experiences joy as material is assimilated, and the complexity of stimulation is reduced.

Although Singer's (1973) formulation in no way denies the existence of a conflict reduction function of play, discrepancies between this model and that proposed by psychoanalysis concern both the motivation for, and outcomes of imaginative play. While the psychoanalytic position holds play to be motivated by biological drives and negative affect, Singer (1973) emphasizes the role of positive affect in motivating and sustaining play. In terms of the outcomes of play, while both positions suggest a result of positive affect,the psychoanalytic model links this resultant pleasure to mastery of anxiety laden conflicts, while Singer's position views this pleasure as concommitant with mastery derived from assimilation of any stimulation. This latter distinction seems to be one of emphasis, rather than disagreement. In so far as one considers psychic mechanisms that function in defense to also function in other areas of personality development and adaptation (Hartmann, Kris, & Lowenstein, 1947), Singer's position becomes compatible with the psychoanalytic model. Imaginative play may be held to encompass a conflict mastery function in so far as conflictual material provides stimulation for the child's assimilation.

Factors in the Development of Imaginative Play

Explicit in Singer's (1961, 1968, 1973) view that make-believe play represents a fundamental cognitive skill, is the concept of imaginative play predisposition. A predisposition towards fantasy oriented play is thought to result from interplay between constitutional neurological capacities and a particular set of early environmental stimulation. Thus far, empirical investigation of the factors that influence the child's orientation towards make-believe play have concerned elements of the family circumstances and aspects of the play situation itself.

The family environment. Several studies have attempted to relate the child's orientation to imaginative play to his social and home environments. The relationship of fantasy play with the child's family constellation has been studied by Singer (1973), who demonstrated that children with a high degree of imaginative play tend to have lower birth order scores and report greater association between themselves and their parents, than do children who manifest little imaginative play. This is corroborated by a study by the same author (1961) which demonstrated parallel relationships with frequency of daydreaming in children, aged six to nine years. Further, in a study of role-playing competency of primary grade children, Sutton-Smith and Rosenberg (1967) demonstrated that girls with brothers were perceived by their peers as better at dramatization than were girls with sisters. However, no comparable results were obtained for the boys in

their study.

The role of the child's socioeconomic environment in the development of capacity for make-believe activity has also received considerable attention. As early as 1935, Markey found differences in the imaginative behavior of children in free play situations to be linked with socio-economic level. In that study, middle class children manifested more fanciful and elaborate play, while those from a lower socioeconomic background demonstrated imaginative play more closely linked to their everyday experience. More recently, Smilansky (1968) reported that disadvantaged Israeli kindergarten children were less able to engage in sociodramatic play than were their middle class peers. However, Eifermann (1971), disconfirming Simlansky's findings, determined that culturally deprived Israeli children, between ages of six and eight, engage in social symbolic play to an even greater extent than do non-deprived children. Cultural differences were also reported. Arab children, it was found, engaged in such play to a greater extent than did their Jewish peers. This latter finding is consistent with the result of an investigation by Singer and McCraven (1962) regarding frequency and content of daydreaming in American subcultural groups. Finding that frequency of daydreaming is related to relative recency of immigration of one's cultural group, the authors conclude that the sociological effect of upward mobility and social insecurity are active in determining the richness of imagination.

The play environment. The specific environment provided for the child's play activities has frequently been proposed to affect the course of play development (Crosscup, 1966; Forbush, 1914; Garrison, 1926; Hartley, 1952,1971; Hartley & Goldenson, 1957; Hils, 1961; Hutt, 1971; Maynard, 1973; Schwartz, 1973: Wolf, 1930). Undoubtedly the factors discussed above influence the play situation that is provided for the child. Socioeconomic conditions and family patterns may dictate the amount of time and space available, frequency of parental and sibling involvement, as well as the physical resources provided for the child's activities. Similarly, the role of parental attitudes and personality is formative in determining the child's play environment. An observational study by Fineman (1962) has indicated that the capacity for imaginative play is dependent upon the explicit or implicit permission of the mother, which, in turn, depends upon her ability to accept and express aspects of her own fantasy life. Bishop and Chace (1971) have reported that conceptually abstract mothers are more likely than concrete mothers to enhance the playfulness of the home play environment through attitudes of flexibility, exploration, and fostering of the child's autonomy.

A stimulus element of the play situation that has received experimental investigation concerns the involvement of adults in the child's play activities. Bach (1945) reported that adult verbalization during a play session failed to reveal any simple relationship with fantasy

behavior. While stating that adult verbalizations tended to minimize situational anxiety, the author concluded that questioning the child about his play probably tends to inhibit demonstration of unorthodox fantasy play. In contrast, Pintler (1945), utilizing similar types of adult interaction, determined that those children provided with frequent interaction tend to manifest a greater frequency of non-stereotyped and aggressive fantasy play. This is in line with the results of a more recent investigation by Marshall and Hahn (1967). This study determined that adult interaction in a child's play, consisting of enactment of themes prevalent in sociodramatic play with peers, will subsequently increase the frequency of the child's dramatic play with peers.

Regarding the development of imaginative play skills, Freyberg (1970) found that imaginative training sessions, consisting of introduction of themes, demonstration of imaginative use of play materials, and encouragement by an adult, increased the imaginativeness of play exhibited by children exposed to such procedure. A study by Gottleib (1968), demonstrating the effects of modeling on fantasy in interpretation of ambiguous visual material, suggests that the behavior of an adult, interacting with a child in play, may serve as a model, thus influencing the development of the child's imaginative skills.

Aim of the Present Study

The above reviewed studies provide ample evidence that a child's fantasy play is influenced by aspects of his social environment. Based on Singer's (1961,1968,1973) speculation that a child requires periods of privacy to practice make-believe skills, the present investigation proposes to examine the effects of interruption in the child's private play environment on subsequent play behavior. It is predicted that children will differ in the imaginative play exhibited, as a consequence of interruption encountered in the play environment.

The factor of play interruption. A major and unavoidable intrusive element in the play environment is that produced by other individuals interrupting the child's fantasy play. A parent who calls the child to dinner, when the child is seriously playing the role of Superman, introduces an element of reality into the play situation which shatters the fantasy of omnipotence that the child experiences both through adoption of that role and in controlling his play world. A play situation where a child is tenderly feeding a doll will be similarly disrupted if someone enters the room and directs the youngster to do her homework.

Anna Freud (1966) has suggested that reality frequently intrudes on the child's fantasy play, in that adults tend to consent to such play under certain strict conditions, but expect the child to restrict enactment of his fantasy within these limits. Although the child implicitly expects others

to fall into the pattern of his own fantasy behavior (Isaacs, 1933), it is unlikely that our young Superman, attempting to fly over the kitchen table when called to dinner, would receive accolades from his parents. Such considerations have led to suggestions that parents should place minimal constraints on their child's play (Ellis, 1973), and should give the child sufficient warning of a change in activity, so that he might complete an ongoing play sequence (Matterson, 1967).

Empirical literature on the effect of social intrusions on the child's imaginative play are currently sparse. The well known investigation of Barker, Dembo, and Lewin (1941) on the frustration-regression hypothesis contains an element of such interruption, although this factor was not specifically considered by the authors. In the frustration procedure, which consisted of an adult requesting that the child cease playing with elaborate toys and return to less attractive ones, an element of interruption is evident. However, the extent to which this factor influenced the results obtained cannot be isolated, as no controls for this variable were instituted within the experimental design.

In a study of the effect of toy structure on fantasy play, Pulaski (1970) also introduced the variable of adult interruption in a procedure calling for the experimenter to request that the child stop playing and tell a story. Although no attempt was made to relate this to subsequent play behavior, she found that children with a high predis-

position towards imaginative play responded less negatively to the change and demonstrated greater ease in coping with increased demands upon their ability of fantasy production than did children with low fantasy predisposition.

Only one study (Farnham-Diggory & Ramsey, 1971) has specifically attempted to manipulate the variable of play interruption with respect to subsequent play behavior. In their study, five year old girls were randomly assigned to one of three play conditions: a) neutral (free play), b) defective toys (play with materials that were incomplete or damaged), and c) interruption (interruption by the experimenter whenever the child appeared fully occupied with a toy). Following this procedure, assessment was made of the childrens' persistence on play with parquetry blocks. The factor of adult intrusion was the most significant of the three factors, reducing play persistence on on the parquetry task by approximately one half, compared with yoked controls. The authors concluded that " constant intrusions upon the play activities of young children may set up emotional tensions, and/or scrambled expectancies, that interfere with subsequent play persistence [p.298]"

In conjunction with Singer's contention that time alone is a prerequisite for the development of imaginative play skills, this finding that adult interruption of play subsequently reduces persistence of manipulative play suggests that similar results may be obtained if the following situation calls for imaginative play. Specifically, it is hypothesized that following play sessions including adult

interruptions, children will manifest a lower level of fantasy in their make-believe play, as compared with children not experiencing such intervention during the previous session. Further, on the basis of Singer's proposal that play is motivated and sustained by positive affect, such hypothesized reduction of fantasy level in play is expected to be accompanied by lessened interest and joy.

The factor of fantasy predisposition. If predisposition towards make-believe and fantasy is a cognitive skill, it should be possible to experimentally relate the effects of different degrees of fantasy predisposition to the consequences of play interruption discussed above. The effect of different degrees of fantasy predisposition in experimental situations has been demonstrated by Singer (1961, 1973), who found that high fantasy predisposition (HP) children were able to remain seated or standing quietly for significantly longer time periods than were low fantasy predisposition (LP) children.

In Pulaski's (1970) procedure which approaches the intent of the present study, assessment of fantasy stories produced by HP and LP children following interruption of their free play was attempted. She found significant differences between the HP and LP groups, in that the former produced stories that were better organized, less anchored to everyday reality, and included a greater variety of themes , than the latter. From these studies, it is suggested that

fantasy predisposition is a skill which will remain influential despite manipulation of contingencies of play. Specifically, it is hypothesized that following interruption of play, as well as in a control (non-interruption) situation, HP children will demonstrate a greater level of fantasy than will LP children. In addition, again based in Singer's contention that imaginative play is motivated by positive affect, it is expected that following both interruption and non-interruption situations, HP children will demonstrate greater interest and joy in play than their LP peers.

Interaction effects. An interaction between fantasy predisposition and manipulation of environmental contingencies, in determining the effectiveness of experimental manipulation has been demonstrated by Freyberg (1970). Her finding that with imaginative training, HP children improved significantly more than LP children in both imaginativeness and concentration of play, suggests that a factor which impedes imaginative play may produce a reverse interaction. The hypothesis is advanced that in comparison with control groups of comparable fantasy predisposition, play interruption will subsequently produce a less marked effect on level of fantasy and positive affect for HP than LP children.

Summary of Hypotheses

Accordingly, after review of the literature, the following hypotheses are proposed:

Hypothesis 1. Children experiencing interruption of imaginative play will subsequently play at a lower level of fantasy than children not experiencing such interruption.

Hypothesis 2. Children experiencing interruption of imaginative play will subsequently display less positive affect in imaginative play than will children not experiencing such interruption.

Hypothesis 3. Following interruption and non-interruption play situations, high fantasy predisposition (HP) children will play at a higher level of fantasy than low fantasy predisposition (LP) children.

Hypothesis 4. Following interruption and non-interruption play situations, HP children will display greater positive affect in imaginative play than will LP children.

Hypothesis 5. The effect of play interruption proposed in Hypothesis 1 will be greater for LP than for HP children.

Hypothesis 6. The effect of play interruption proposed in Hypothesis 2 will be greater for LP than for HP children.

Clinical Phase

After completion of the experimental phase of this investigation, attempt will be made to preliminarily explore environmental factors which may be contributing to the development of fantasy predisposition in children. As discussed earlier, Singer (1973) and Freyberg (1970) have demonstrated relationships between such factors as family composition, home living arrangements, and parent-child interaction and recreational activities, and the development of predisposition to fantasy. Singer (1961) attempted to assess such factors through interviewing children about enjoyed play activities, patterns of family closeness and

other aspects of family life. He found that HP children tended to be the oldest or only child in a family, reported being closest to their mothers, and had time and opportunity to be alone at home. Freyberg(1970), using a very limited sample, interviewed parents of HP and LP children. Although her findings were not subjected to any statistical analysis, she listed the following as distinguishing factors between the HP and LP groups: ordinal position; person per room ratio; number of children in family; parents' educational level; whether mother worked or tended young siblings during the child's preschool gears; type of parent-child interaction; child's usual play activity; parents' attitudes towards imaginativeness; closeness to mother; general interest and concern of parent for child.

As will be discussed in the next chapter, the present subject population is to be relatively large and accessible. Therefore, attempt is being made to further explore such factors as noted above in relation to the development of fantasy predisposition. This phase of the study aims to elicit and offer further support for possible concrete factors within the child's home environment which may warrent further research in this area. As the purpose of this phase is solely exploratory, no directional hypotheses are advanced. Rather, each of the variables being studied here in relation to fantasy predisposition will be donsidered within the context of a null hypothesis as follows:

Hypothesis 7. There is no relationship between level of fantasy predisposition and family composition as measured by a) mother's age, b) father's age, c) number of siblings, and d) birth order.

Hypothesis 8. There is no relationship between level of fantasy predisposition and home living arrangements as measured by a) room per person ratio, and b) play area afforded to the child.

Hypothesis 9. There is no relationship between level of fantasy predisposition and home recreational activities as measured by a) amount of mother's reading, b) amount of father's reading, c) amount of parents' reading with child, d) amount of mother's television viewing, e) amount of father's television viewing, f) amount of child's television viewing, and g) the primary person responsible for selection of television programs viewed by child.

Hypothesis 10. There is no relationship between level of fantasy predisposition and the child's play activities at home as measured by a) amount of solitary play, b) amount of play with other children, c) amount of play with parents, and d) frequency of play interruption.

CHAPTER II

METHOD

Subjects

The subjects for this study were 60 preschool children enrolled in the Learn and PLAYGARTEN School, a suburban nursery school and kindergarten located in Rockland County, New York. Children attending this school are fairly homogeneous; they are mainly white, of average intelligence, and from middle class families. Selection of a preschool population was based on Singer's (1973) contention that three and four year olds are yet in a period of change and growth, which makes the degree of imaginative play exhibited keenly subject to the impact of environmental contingencies. As the implications of this investigation concern a factor thought to influence the development of fantasy play ability, selection of an age range where this cognitive skill is already in evidence, but yet in the process of development, was thought appropriate.

The subjects were selected from all those whose parents had provided written consent for their involvement in this study. A secondary consideration in the selection was verbal intelligibility, which was essential to the experimental procedures and data analysis enumerated below. Of this group, 60 children were randomly selected, ranging in age from

37 to 64 months. The mean age for this sample was 51.7 months, with a standard deviation of 8.12 months.

Those children chosen for participation were subjected to screening procedures for assignment to high fantasy predisposition (HP) and low fantasy predisposition (LP) groups. Screening for this factor consisted of individual interview of the 60 children by the investigator. After rapport had been established, each child was told that the investigator wanted to ask him a few questions about what he likes to play. The following four questions, comprising Singer's Imaginative Play Predisposition Interview (1961,1973), were then posed to each child.

1. What is your favorite game? What do you like to play the most?

2. What game do you like to play best when you're alone? What do you like to do best when you're all alone? Do you ever think things up?

3. Do you ever have pictures in your head? Do you ever see make-believe things or pictures in your mind and think about them? What sort of things?

4. Do you have a make-believe friend? Do you have an animal or toy or make-believe person you talk to or take along places with you?

All responses were recorded verbatim,and each question was followed by a brief inquiry if the child provided an unclear response or hesitated in answering. Inquiry was used only as necessary to obtain sufficient information for subsequent scoring of the question. Scoring of this interview consists of assigning a rating of 1 to each question which indicates a preference for solitary or fantasy activity, and a rating of 0 to each question which

does not. Total scores range from 0 to 4, the limits respectively defined as no fantasy replies, and all four replies indicating fantasy activity. Differentiation of imaginativeness and make-believe play has been demonstrated for kindergarten children (Freyberg, 1970) as well as preschoolers (Singer,1973), by dividing subjects into those yielding a score of 0-1 from those yielding a score of 2-4. However, to provide additional verification for this procedure, the mean score for the present group was established. This mean score was calculated at 1.75, supporting the procedure of using scores of 0-1 and 2-4 for differentiation of imaginativeness. In the current study, this was the procedure employed, yielding HP and LP groups of 30 subjects each.

Although the literature indicates that there is no significant difference in intelligence between HP and LP children (Singer, 1973), in order to ascertain this definitively for the present sample, an individual intelligence test was administered to each subject. The Vane Kindergarten Test (Vane, 1968) was employed for this purpose. This test is easily administered, and provides norms for the selected age group.Table 1 provides the mean I.Q. scores and standard deviations for both groups. Equality of distribution of this factor was evaluated by a t-test ($t=.629$, $df=58$, $p > .05$), which indicated that no significant difference exists between the HP and LP groups regarding the factor of intellectual ability.

In addition, a t-test was computed for chronological age to verify equality of distribution of this factor across groups. The mean age and standard deviation for each

Table 1

Means and Standard Deviations for I.Q. and Chronological Age Across Levels of Fantasy Predisposition

	HP		LP			
	$\bar{X}$	SD	$\bar{X}$	SD	t value	p
I.Q.	122.1	14.9	119.8	13.9	.629	$>.05$
Chronological Age	54.3	7.6	53.2	8.3	.558	$>.05$

group is also included in Table 1. The t-test computed for this factor also indicated no significant difference between the mean age across groups ($t=.558$, $df=58$, $p>.05$). Therefore, in this investigation, the HP and LP groups were considered adequately equated for intelligence and chronological age.

Control and experimental groups of 30 subjects each were established by randomly assigning HP girls, HP boys, LP girls, and LP boys to each group. Code identification numbers were assigned to each subject, and discs with these numbers were placed in a box, one group at a time (HP girls, HP boys, LP girls, LP boys). Equal numbers of discs were withdrawn for each the experimental and control group. This procedure ensured that sex distribution was equivalent across groups, and that equal numbers of HP and LP children were placed in each group.

Materials

Careful review of the literature was undertaken (Garrison, 1926, Hartley & Goldenson, 1957; Hils, 1961; Kawin, 1934; Matterson, 1967) to select toys appropriate to the age group of this sample. In addition, attempt was made to provide playthings suitable to both boys and girls, and to include a variety of masculine and feminine play objects. The general categories of playthings were as follows:

1. artwork materials
2. construction materials
3. toy buildings and environments with appropriate objects, furniture, and proportioned dolls of both sexes.
4. costumes and props
5. dolls with accessories

The specific play items selected within each category are listed in Appendix A.

A Panasonic portable videotape recorder was selected for use in the present study as it is relatively compact and mobile. This unit was employed during the subsequent play session for each subject, to record the play activities and behaviors which provided the data for statistical analysis.

Play Session Procedures

Each subject was taken individually from his classroom by the experimenter on two occasions for play sessions in a separate playroom. The first play session for each child was of 17 minutes duration, and was employed for manipulation of the factor of interruption. The second session was of 10 minutes duration, and provided data for measurement of dependent variables.

Interruption situation. As each child entered the playroom, E pointed out all the playthings available. Toys were displayed in a constant, pre-arranged pattern when each child entered the playroom. E then told the child, " You may play with anything here, but I'd like you to make up a story or a play for me. Tell me the story you are making up while you play."

E then seated herself across the room from the toys, at a small table on which there was a pad, pencil, and stopwatch. The purpose of E's recording was to ensure that interruptions occurred during play that was fantasy oriented. E attempted at all times to appear interested and attentive

but gently discouraged attempts by the child to involve her in the play.

An adult serving as the interruptor (I) was provided with a stopwatch, and stood outside the playroom awaiting scheduled times for her to interrupt the child's play. Interruptions were scheduled at three minute intervals. If the subject (S) was not relating a story, or was not clearly involved in imaginative play after 2 minutes, 45 seconds had elapsed from the beginning of the session, E asked, " What's happening? Can you tell me the story?" If the child was clearly involved in imaginative play after 2 minutes, 45 seconds had elapsed, no such inquiry was pursued. The purpose of inquiry with children who did not appear involved in fantasy activity was to insure that interruptions occurred during fantasy sequences. At 3 minutes, I entered and interrupted S's play. The same procedure of inquiry to elicit fantasy activity was used 15 seconds prior to all scheduled interruptions as follows.

Inquiry if Needed	Interruption
2 minutes,45 seconds	3 minutes, 0 seconds
5 minutes,45 seconds	6 minutes, 0 seconds
8 minutes,45 seconds	9 minutes, 0 seconds
11 minutes,45 seconds	12 minutes, 0 seconds
14 minutes,45 seconds	15 minutes, 0 seconds

The types of interruptions presented to each child were held constant, and occurred in the same sequence for each S. At all times, I remained pleasant, but appeared oblivious to the play in which the child had been involved at the time of her entrance. The sequence of interruptions during each interruption session was as follows:

Interruption #	Time	Type of Interruption
1	3 min.,0 sec.	I entered, introduced herself and asked the child's name. I briefly conversed with S about his age, and commented positively about his clothing. I then left, saying goodbye, and telling S to have a good time.
2	6 min.,0 sec.	I entered and told S that she needed a red crayon. She then asked the child to help her look for one. After several seconds, I found a pre-placed crayon, thanked the child for his help, and left.
3	9 min., 0 sec.	I entered with 5 sheets of blue paper and 5 sheets of yellow paper. Placing one sheet of each color on the floor, she asked S to help her to separate the papers. After S did so, I thanked him and left.
4	12 min., 0 sec.	I entered and asked the child if _____ (name of another child in S's class) was in the playroom. When S responded, I then asked if he knew where _____ is, does he live near S etc. After several seconds, I thanked the child for his help and left.
5	15 min., 0 sec.	I entered and asked the child if she could borrow a toy. I always requested a plaything with which S was not involved. Whether S acceded to the request, I thanked him and left the playroom.

Two minutes following I's last interruptive statement, E said to the child, "Come, we have to go back to the

classroom now, but you can come back and play more in a little while." E then returned with S to his classroom, and brought the next child, while an assistant reorganised the toys in the prearranged display.

Non-interruption (Control) situation. The Non-interruption group received treatment identical to the Interruption group, save only the interruption procedures. To provide maximal equality of treatment, inquiry if necessary, was provided at 2 minutes 45 seconds, 5 minutes. 45 seconds, 8 minutes 45 seconds, 11 minutes 45 seconds,and 14 minutes 45 seconds. This was the only manipulation occurring in the control play sessions. At the end of 17 minutes, Ss were also told by E, " Come, we have to go back to the classroom now, but you can come back to play more in a little while."

Subsequent play session. The second play session followed the same procedure for all subjects regardless of experimental grouping. Toys were presented in the same, constant arrangement for all subjects. A portable videotape recorder was positioned in the room to record the child's play for subsequent evaluation of dependent variables. E, assuming the same position as she had during the previous session, simultaneously recorded the child's verbalizations and play behaviors,in order to avoid any possible loss of data through mechanical difficulties.

The subsequent play session occurred on the same day as the interruption or non-interruption session for each child.

The rationale for this was based in the desirability of having a constant time interval between the interruption manipulation session and the subsequent play session for all subjects. As illnesses and absences may have unpredictably forced alteration of such a constant time interval, having both sessions on the same day aimed to minimize discrepancies in the intervals between sessions. For all subjects, there was a 30 minute interval between the interruption or non-interruption session and the subsequent play session.

For the subsequent play session, each child was again taken individually from his classroom by E. Approaching the child, E said, "We can go back and play again now. Come, let's go play again." On entering the playroom with the child, E again pointed out all of the toys saying, " You can play with anything you want, but I want you to tell me the story that you're playing, or make up a play for me." Again, E remained interested and attentive, but attempt by the child to involve her in the play was gently discouraged. Inquiry of the type used in the previous sessions was used only if the child did not respond voluntarily, or engaged in fantasy play without sufficient verbalization. However, attempt was made to use such inquiry as infrequently as possible.

Data

The main source of data for this investigation was the videotaped record of the subsequent play session for each subject, supplemented by E's recorded account. A typed play protocol for each S was compiled by E from the tape in conjunction with the written record of the subsequent play session.

Dependent variable 1 - level of fantasy. The source of data for evaluation of level of fantasy was the play protocol compiled for each child. Level of fantasy was measured according to the criteria and procedures developed by Hall (1966) for the unitizing and scaling of fantasy play behavior. The scoring manual for these procedures may be found in Appendix B. Rules for unitizing play behavior are clearly delineated in this scoring manual, and the procedure was followed by E in compiling the protocol for each S. The basic dimension for scoring of fantasy level as defined by Hall is " the degree of deviation of play action from what would be routine and realistic in real life. A related dimension is the literalness with which the play materials were used." (1966, p. 22-3.) Scoring for fantasy of this five point scale was done by E and an independent judge, trained in the scoring technique, but with no knowledge of the hypotheses or procedures involved in the study. Although Hall (1966) reported very high interrater reliability on this scale, interrater reliability for the current investigation was assessed, and will be reported in Chapter III.

Dependent variable 2 - level of positive affect. The source of data for assessment of level of positive affect was the videotaped record of the subsequent play sessions for all subjects. The scale employed was the Affect Rating Scale developed by Pulaski (1968), with modifications introduced by Freyberg (1970) and this investigator. The basic dimension of this modified scale is the degree of pleasure and joyful involvement during the ten minute play session. This modified scale, with instructions to raters, may be found in Appendix C. Scoring for level of positive affect was done directly from the videotaped record by both E and the independent judge. Interrater reliability was assessed and will be discussed in the Results section of this paper.

The dependent variables as outlined above were employed in evaluation of hypotheses in the present study as follows. Dependent variable 1 (level of fantasy) provided evidence for Hypotheses 1,3, and 5. Dependent variable 2 (level of positive affect) provided evidence for Hypotheses 2,4, and 6.

Design

Statistical analysis of data was accomplished by two separate two-way analyses of variance for independent groups, providing for separate evaluation of each dependent variable. The analysis of variance design was conducted consistently according to the procedures outlined by Winer (1971).

The two factors or independent variables used in the analyses of variance are:

A: Interruption manipulation	a_1: interruption a_2: non-interruption (control)
B: Fantasy predisposition	b_1: high b_2: low

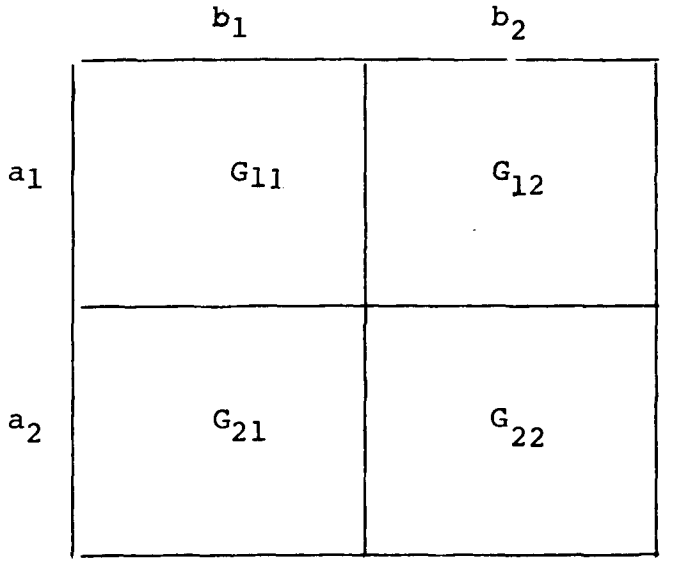
The design of this experiment is illustrated in Figure 1.

No apriori or posteriori comparisons were required, as Hypotheses 1 and 2 concern the main effect of the two levels of factor A, and Hypotheses 3 and 4 concern the main effect of the two levels of factor B. Similarly, as Hypotheses 5 and 6 predict significant interaction effects, no apriori or posteriori comparisons were required.

The required level of significance used for evaluation throughout this phase of the study was set at the p=.05 level.

Clinical Phase

The final stage of this investigation concerned further exploration of home environmental factors which may contribute to the development of high and low fantasy predisposition. The procedure entailed a parent questionnaire (Appendix D), focusing on factors in family composition, home living arrangements, recreational activities, play at home, and parent-child interaction. This questionnaire was sent to parents of all children participating in the study. Forty of the sixty self-report questionnaires sent were completed and returned, comprising the data for this phase of the



A: Interruption Manipulation: a_1: interruption
a_2: non-interruption (control)

B: Fantasy Predisposition: b_1: high
b_2: low

Figure 1. 2x2 Factorial Analysis of Variance

investigation. Data derived from these questionnaire is provided in tabular form and discussed in the Results section. The exploratory nature of this phase of the study has led the investigator to consider these results at the $p = .10$ level of significance.

CHAPTER III

RESULTS

Interrater Reliability

Although this investigation is empirical in nature, inherent in the collection of data is a process of naturalistic observation. Each subject was observed during the subsequent play session, and later in review of the videotaped record, to compile the individual play protocols used for measurement of dependent variables. This, in connection with the use of rating scales as measures, raises the issue of inter-observer agreement regarding scoring of play protocols on the rating scales employed. This issue is heightened by the fact that the primary investigator in this study served as one of the two judges employed for the purpose of rating subjects on the dependent variables. Thus, before any confidence can be placed in the results of this study, assessment of the degree of interrater agreement had to be determined to insure that E's ratings were objective and reasonably bias free. To this end, an independent judge was selected who had no knowledge of the purpose, variables or experimental procedures of this study. This judge was trained in the use of the affect rating scale employed, and in the procedures of scoring and rating protocols for fantasy level. This independent judge based his ratings on the same raw data as the primary investigator for both scales. The typed play protocol

was employed for assessment of fantasy level, and the videotaped record was used for rating level of positive affect. Both E and the judge rated all 60 subjects on both dependent measures. Separate Pearson product-moment correlations were computed for each dependent measure, as presented in Table 2. As can be seen from inspection of this table, the inter-rater reliability on the fantasy measure was high, and that on the affect measure, moderate, although statistical significance was obtained on both instruments. This is in keeping with the reliability findings of Freyberg (1970) regarding a very similar Affect Level Scale, and those of Hall (1966) regarding his Fantasy Level Scale. In light of the significant reliability coefficients presented, it appears justifiable to consider the findings of this study to be relatively bias free, and to place confidence in the results obtained.

Presentation of Data

The results of this study will be presented in the following manner. The main effects of Factor A (experimental manipulation of interruption) and Factor B (levels of predisposition to fantasy) will be presented as measured by the following criteria:

1. Level of Fantasy, as determined by Hall's Fantasy Rating Scale (Appendix B).
2. Level of Positive Affect, as determined by Level of Positive Affect Rating Scale (Appendix C).

After presentation of the main effects of Factor A (Hypotheses 1 and 2) and Factor B (Hypotheses 3 and 4), the effects of

Table 2

Reliability Coefficients for
Rating Scales

Instrument	Raters	Reliability			
		Correlation Coefficient	Value	df	p
Fantasy Level Scale	E,Judge	Pearson r	.96	58	$p < .01$
Positive Affect Level Scale	E,Judge	Pearson r	.74	58	$p < .01$

interaction between these two factors on each dependent criteria (Hypotheses 5 and 6) will be discussed. Finally, the results of the clinical phase of the study will be provided, with the understanding that no directional hypotheses have been advanced. Rather, as this phase was exploratory, each variable considered is viewed within the context of the null hypothesis, that no relationship exists between that variable and level of fantasy predisposition in children.

The results of the empirical investigation will be discussed at the previously set $p=.05$ level of statistical significance. However, for the clinical phase, results will be considered significant at the $p=.10$ level, as this phase aims only to provide leads for future research with more extensively developed methodology.

Hypothesis 1 - Effect of Interruption on Subsequent Level of Fantasy

The first hypothesis was designed to test the main effect of play interruption on a child's later level of fantasy in play. It predicted that children experiencing interruption of imaginative play would subsequently play at a lower level of fantasy than children not experiencing such interruption. This effect was tested by comparing the fantasy play level ratings of all Ss after exposure to the Interruption and Non-Interruption conditions.

The factor of interruption (A) showed a significant main effect on the dependent measure employed. There was a significant difference ($F= 19.05$, $df = 1,56$, $p < .01$)

in fantasy levels of subsequent play, with a significantly higher level of fantasy being produced by children experiencing the Non-Interruption situation. The mean fantasy level ratings for both groups and statistical analysis is shown in Table 3, with graphical representation provided in Figure 2.

The hypothesis may thus be considered confirmed, as Ss demonstrated a significantly higher level of fantasy play after exposure to the Non-Interruption than the Interruption play situation.

Hypothesis 2 - Effect of Interruption on Subsequent Level of Positive Affect

The second hypothesis concerned the main effect of play interruption on later level of positive affect during play. It predicted that those children experiencing interruption of imaginative play would subsequently display less positive affect in play than those not exposed to such interruption. This effect was tested by comparison of the affect level ratings of all Ss following exposure to the Interruption and Non-Interruption situations.

The mean affect level ratings for both groups, with corresponding statistical analysis, is shown in Table 4, with graphical representation of this data in Figure 3. The factor of interruption (A) demonstrated a clearly significant main effect ($F=12.97$, $df = 1,56$, $p < .01$) on the measure assessing level of positive affect, indicating that following the Non-Interruption play condition, children demonstrated a significantly higher level of positive affect than after

Table 3

Statistical Analysis of Fantasy Level Across Levels of Interruption and Fantasy Predisposition

Group	N	Total Sample $\bar{X}$	Interruption Condition $\bar{X}$	Non-Interruption Condition $\bar{X}$
Total Sample	60	1.61	1.47	1.80
LP	30	1.42	1.25	1.60
HP	30	1.84	1.69	1.99

Summary of Analysis of Variance

Source of Variance	df	MS	F	p
Total	59			
A	1,56	1.60	19.05	$p < .01$
B	1,56	2.54	30.23	$p < .01$
AxB	1,56	.021	.25 1/F=4.00	$p > .05$ $.10 > p > .05$
Error	56	.084		

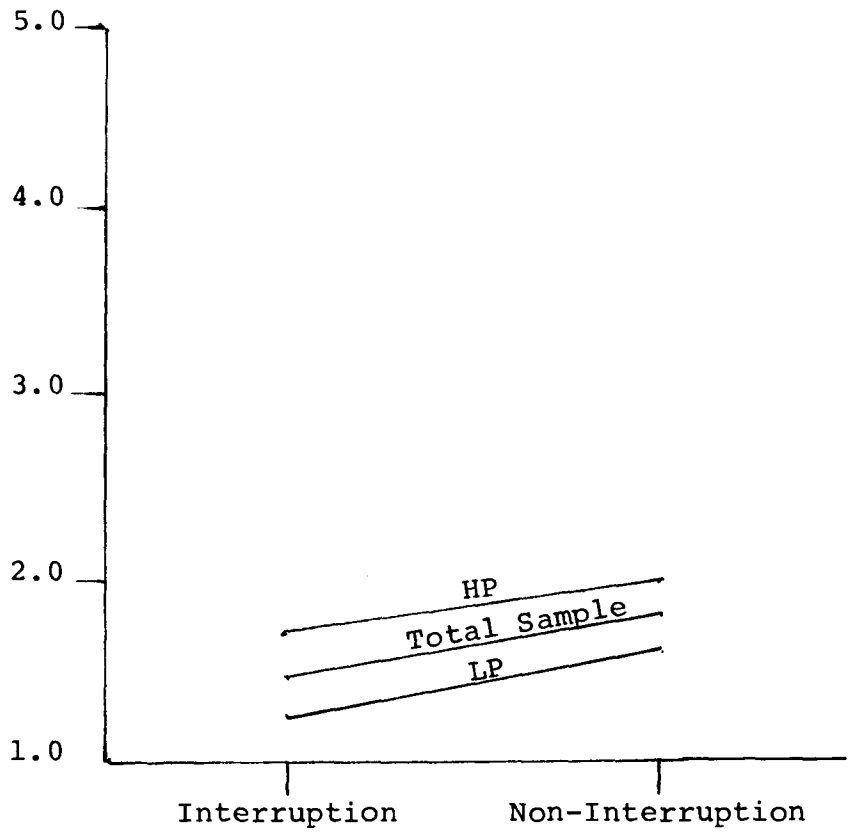


Figure 2. Fantasy Level Means
Across Levels of Interruption

Table 4

Statistical Analysis of Positive Affect Level Across Levels of Interruption and Fantasy Predisposition

Group	N	Total Sample $\bar{X}$	Interruption Condition $\bar{X}$	Non-Interruption Condition $\bar{X}$
Total Sample	60	2.86	2.47	3.27
HP	30	3.67	3.33	4.00
LP	30	2.06	1.60	2.53

Summary of Analysis of Variance

Source of Variance	df	MS	F	p
Total	59			
A	1,56	9.6	12.97	$p < .01$
B	1,56	38.4	51.89	$p < .01$
AxB	1,56	.27	.365 1/F=2.75	$p > .05$ $.20 > p > .10$
Error	56	.74		

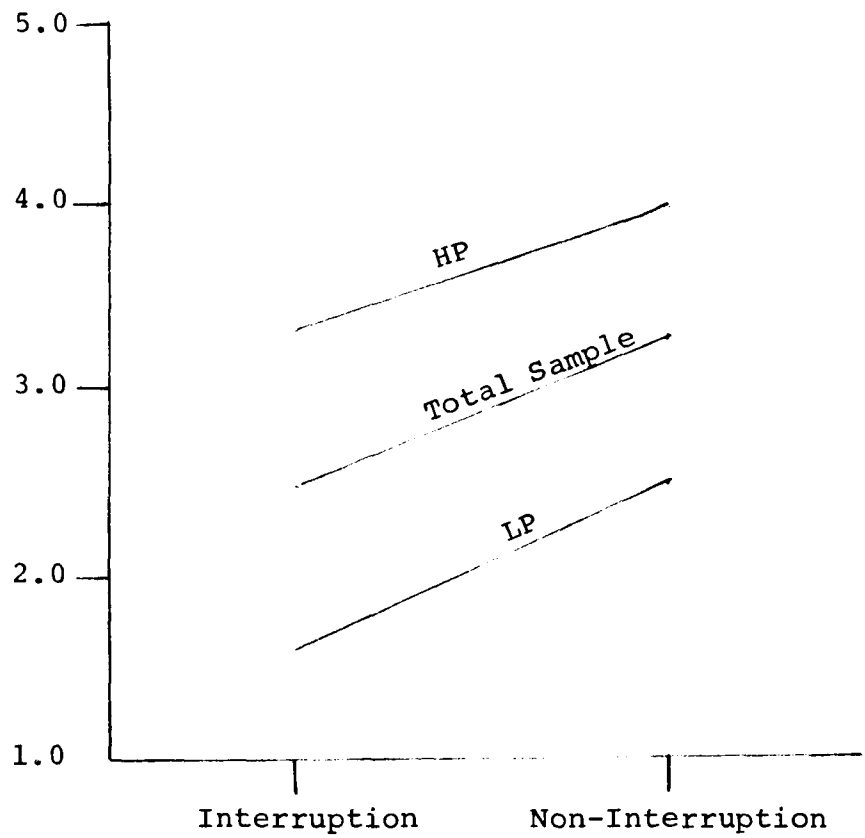


Figure 3. Positive Affect Level
Means Across Levels of Interruption

the interruption play situation.

Hypothesis 3. Effect of Fantasy Predisposition on Level of Fantasy

The third hypothesis stated that following both the conditions of interrupted and non-interrupted play, HP children would play at a higher level of fantasy than LP children. The factor of fantasy predisposition (B) was tested by the pre-selection of HP and LP groups. The mean fantasy level scores and statistical analysis for both groups are included in Table 3,and shown figurally in Figure 4. The significant main effect of Factor B obtained ($F= 30.23$, $df=1,56$, $p < .01$) offers strong support for the prediction that following both interruption conditions, the play of HP children would demonstrate a higher level of fantasy than that of LP children.

Hypothesis 4. Effect of Fantasy Predisposition on Level of Positive Affect

The fourth hypothesis postulated that following both conditions of interruption, HP children would display greater positive affect in play than LP children. The factor of fantasy predisposition (B) was also tested by comparison of the pre-selected HP and LP groups with respect to this dependent measure. Table 4 includes the mean affect level scores and analysis of relevant data for this hypothesis. Graphical representation of this effect is found in Figure 5. A strong main effect for Factor B on this measure was obtained ($F= 51.89$, $df= 1,56$, $p < .01$), providing clear confirmation for a significant

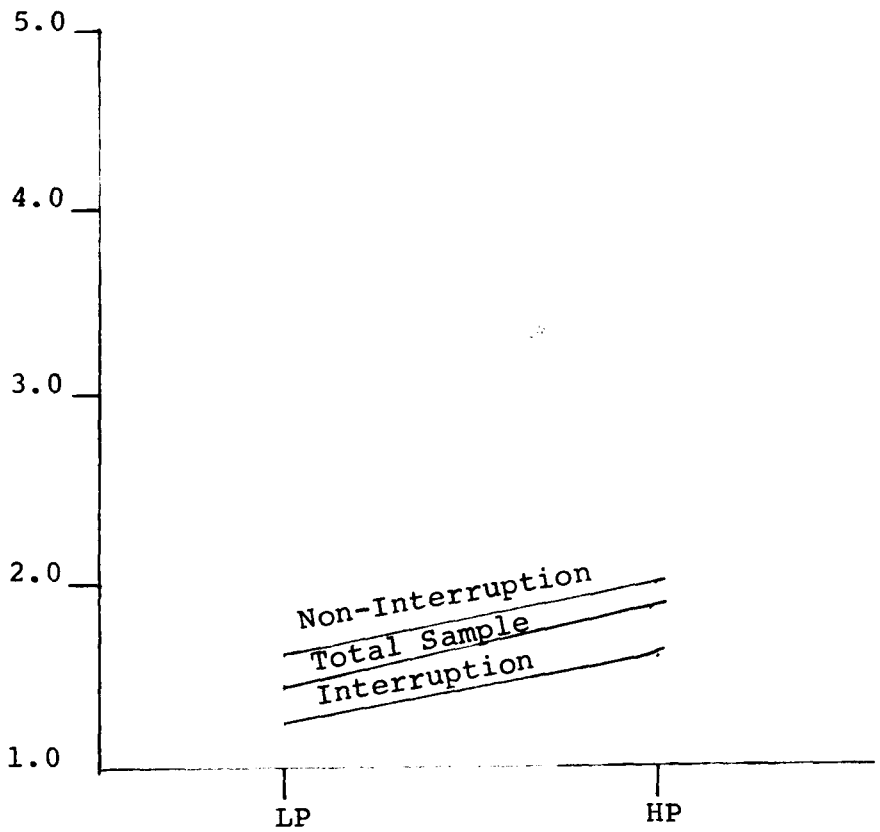


Figure 4. Fantasy Level Means
Across Levels of Fantasy Predisposition

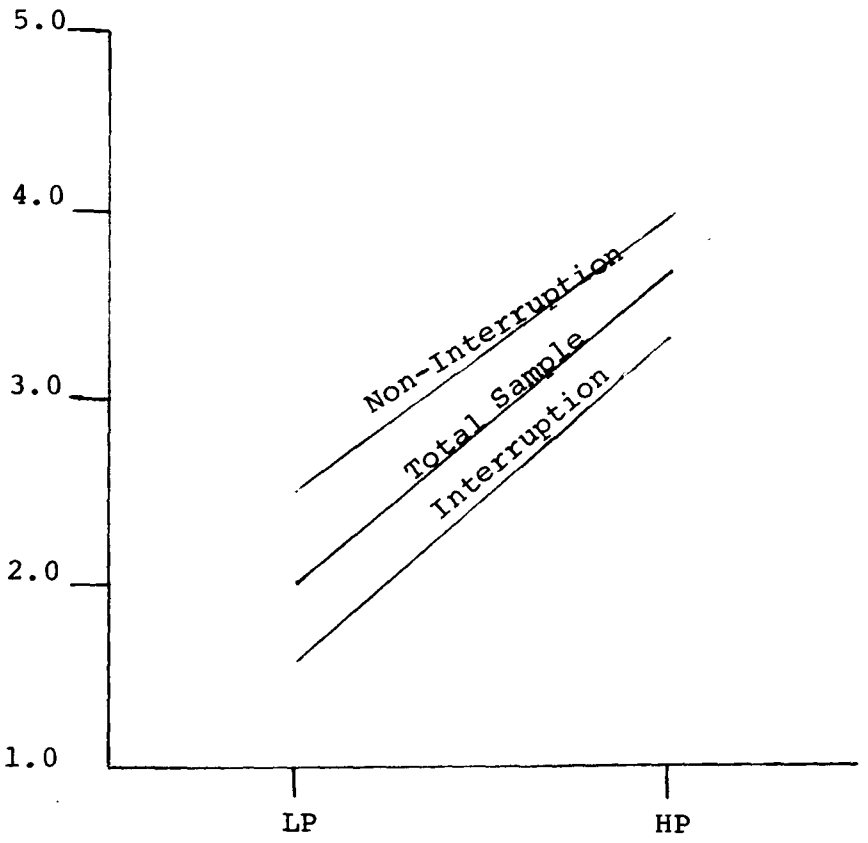


Figure 5. Positive Affect Level Means Across Levels of Fantasy Predisposition

difference in affect levels between the play of both predisposition groups in the predicted direction.

Hypothesis 5 - Effect of Interaction Between Interruption and Fantasy Predisposition on Level of Fantasy.

The fifth hypothesis concerned the interrelationship of interruption and fantasy predisposition as effecting the level of fantasy observed in play. It proposed that the effect of interruption as set forth in Hypothesis 1 would be less marked for HP than for LP children. That is to say that interruption was predicted to have a greater effect in lowering level of fantasy in play of LP than HP children. This effect was tested by the interaction of Factors A and B regarding level of fantasy in the subsequent play sessions. The means and statistical analysis for the AxB interaction are included in Table 3. As indicated by reference to this table, no support for this hypothesis was found ($F=.021$, $df= 1,56$, $p > .05$). However, as the interaction mean square is less than the error mean square, the ratio may be transformed into a 1/F ratio. When reaching significance, this indicates that the interaction effect is even less than might be expected of purely random samples. As pertains to this hypothesis, the effect of the 1/F ratio closely approaches significance ($1/F=4.00$, $df= 1,56$, $.10 > p > .05$). As this ratio nearly approaches a significant level, it bears out the fact that the groups were quite homogeneous regarding the interaction effect, further reinforcing the very strong main effects of both Factors A and B, uncontaminated by their interaction regarding

the variable of fantasy level.

Hypothesis 6 - Effect of Interaction Between Interruption and Fantasy Predisposition on Level of Positive Affect

The sixth hypothesis was designed to test the interrelationship of interruption and fantasy predisposition as affecting the level of positive affect during subsequent play. It was predicted that the effect of interruption postulated in Hypothesis 2 would be less marked for HP than LP children. Specifically, it was here hypothesized that interruption would have a greater effect in lowering the level of positive affect in play of LP than HP children. This effect was evaluated by the interaction of Factors A and B as related to the dependent measure of affect ratings during subsequent play sessions. The AxB interaction means and statistical analysis are included in Table 4. The data demonstrates that this hypothesis id disconfirmed, with no significant interaction emerging in analysis of this measure ($F=.365$, $df=1,56$, $p > .05$). Here, the transformation of the F value in this interaction into a 1/F ratio does not reach significance (1/F, df, 1, 56, $.20 > p > .10$). Therefore, regarding the measure of positive affect level, the absence of a significant interaction effect does not provide any additional support for the significant main effects of Factors A and B.

Clinical Phase

After the main part of this investigation, a questionnaire regarding family composition and living arrangements, home recreational activities, and play activities at home was sent to all parents of children participating in this study. Of those 40 parents completing and returning the questionnaire 19 had children in the HP group and 21 had children in the LP group. These questionnaire comprise the data which was analyzed for assessment of Hypotheses 7,8,9, and 10. As previously discussed, results of this phase of the investigation will be assessed with reference to the p=.10 level.

Hypothesis 7 - Fantasy Predisposition and Family Composition

This hypothesis predicted that no relationship exists between level of fantasy predisposition and family composition as measured by a) mother's age, b) father's age, c) number of siblings, and d) birth order. Table 5 provides pertinent data for each measure of this hypothesis, as well as the statistical procedure employed and obtained significance level. From this table, it can be seen that no significant difference between the HP and LP groups emerged on three of the four measures employed to assess family composition. No significant difference occurred for the measures of mother's age ($t=1.22$, $df=38$, $p > .10$), father's age ($t=1.496$, $df= 38$, $p > .10$), or number of siblings ($t=.032$, $df= 38$, $p > .10$) The only measure of family composition tested to reach statistical significance was that of birth

Table 5

Statistical Analysis of Measures of Family Composition as Related to Fantasy Predisposition

Measure	HP N=19	LP N=21	Statistical Procedure	Statistical Value	df	p
Mother's Age	$\bar{X}$=31.9	$\bar{X}$=31.2	t-test	1.22	38	p > .10
Father's Age	$\bar{X}$=33.9	$\bar{X}$=35.8	t-test	1.496	38	p > .10
Number of Siblings	$\bar{X}$=1.052	$\bar{X}$=1.047	t-test	.032	38	p > .10
Birth Order	Freq: 0-1:15 1: 4	Freq: 0-1: 7 1:14	Chi square	6.64	1	p < .01

order (χ^2=6.64, df=1, $p < .01$). HP children were significantly more frequently 1st or only children than were LP children. Thus, the findings call for acceptance of Hypothesis 7 regarding the measures of mother's age, father's age, and number of siblings, but for rejection of this hypothesis regarding birth order. This suggests that while overall family structure may not be related to fantasy predisposition, the child's ordinal position is likely to affect the development of a high or low predisposition to fantasy.

Hypothesis 8 - Fantasy Predisposition and Home Living Arrangements

The eighth hypothesis predicted that there is no significant relationship between fantasy predisposition and a child's home living arrangements as measured by a) the number of rooms per person, and b) the play area afforded to the child. Table 6 provides the relevant data, statistical procedures, and analysis for both measures employed for assessment of this hypothesis. Reference ot this table demonstrates that there was no significant of the number of rooms per person in distinguishing between HP and LP children (t=.519, df=38, $p > .10$). However, the number of rooms available to the child for play did distinguish between the groups (χ^2=4.81, df=1, $p < .05$), with HP children more frequently than LP children having more than one room at home afforded for their play activities. Thus, Hypothesis 8 must be accepted regarding the measure of number of rooms per person, and rejected regarding the

Table 6

Statistical Analysis of Measures of Home Living Arrangements as Related to Fantasy Predisposition

Measure	HP N=19	LP N=21	Statistical Procedure	Statistical Value	df	p
Number of Rooms per Person	$\bar{X}$=2.25	$\bar{X}$=2.18	t-test	.519	38	$p > .10$
Number of Rooms Afforded as Play Areas	Freq: 1: 7 1:12	Freq: 1: 16 1: 5	Chi square	4.81	1	$p < .05$

variable of home play areas available to the child. The data suggests that the number of rooms allotted for play is differentially related to the development of fantasy predisposition in children.

Hypothesis 9 - Fantasy Predisposition and Home Recreational Activities

Hypothesis 9 was devised to assess the relationship between fantasy predisposition and home recreational activities. Specifically, it predicted that HP and LP groups would not be differentially related to measures of a) amount of mother's reading, b) amount of father's reading, c) amount of parent's reading with child, d) amount of mother's television viewing, e) amount of father's television viewing, f) amount of child's television viewing, and g) the primary person responsible for selection of the child's television programs. Relevant data and statistical analysis of this hypothesis are provided in Table 7. As may be seen from this tabular representation, significant results emerged only for the measures of amount of mother's reading ($t=1.81$, $df= 38$, $p < .10$), amount of parent's reading with child ($t=2.39$, $df= 38$, $p < .05$), and the primary person selecting television programs viewed by the child ($\chi^2 = 18.85$, $df=1$, $p < .10$). Regarding these three measures, Hypothesis 9 stands disconfirmed. Mothers of HP children spend significantly more time reading than those of LP children. Parents of HP children also report significantly more time spent reading with their children than do the parents of LP children.

Table 7

Statistical Analysis of Measures of Home Recreational Activities as Related to Fantasy Predisposition

Measure	HP N=19	LP N=21	Statistical Procedure	Statistical Value	df	p
Mother's Reading(hrs.)	$\bar{X}$=1.74	$\bar{X}$=1.57	t-test	1.81	38	$p < .10$
Father's Reading(hrs.)	$\bar{X}$=1.53	$\bar{X}$=1.43	t-test	.30	38	$p > .10$
Parent-Child Reading(hrs.)	$\bar{X}$= .87	$\bar{X}$= .46	t-test	2.39	38	$p < .05$
Mother's T.V. viewing (hrs.)	$\bar{X}$=1.95	$\bar{X}$=1.86	t-test	.216	38	$p > .10$
Father's T.V. viewing (hrs.)	$\bar{X}$=1.61	$\bar{X}$=1.71	t-test	.339	38	$p > .10$
Child's T.V. viewing(hrs.)	$\bar{X}$=2.34	$\bar{X}$=2.29	t-test	.155	38	$p > .10$
Selection of Child's T.V.	Freq: Parent 3 / Child or w.Parent 16	Freq: Parent 10 / Child or w.Parent 11	Chi square	3.27	1	$p < .10$

Regarding the variable of responsibility for selecting the child's television programs, parents of HP children more frequently report that the child participates in program selection, either independently or in conjunction with them, while parents of LP children more frequently consider themselves to be responsible for program selection.

No significant relationships were obtained regarding any of the other criteria of home recreational activities. Therefore, Hypothesis 9 stands rejected as related to the amount of mother's reading, parent-child reading activities, and responsibility for selection of child's television, but accepted for the measures of amount of father's reading, amount of television viewing by both parents, and the amount of child's television viewing.

Hypothesis 10 - Fantasy Predisposition and Child's Play Activities at Home

This final hypothesis concerned the relationship between play at home and levels of fantasy predisposition. It postulated that no relationship exists between fantasy predisposition and the child's play activities at home, as measured by factors of a) amount of solitary play, b) amount of play with parents, c) amount of play with children, and frequency of interruption of play occurring at home. The relevant data for this hypothesis are provided in Table 8. Reference to this table shows that results reached a significant level for the measures of solitary play ($t=2.22$, $df=38$, $p < .05$), play with parents ($t=2.87$,

Table 8

Statistical Analysis of Measures of Play at Home as Related to Fantasy Predisposition

Measure	HP N=19	LP N=21	Statistical Procedure	Statistical Value	df	p
Solitary Play (hrs.)	$\bar{X}$=2.23	$\bar{X}$=1.55	t-test	2.22	38	$p < .05$
Play with Parents(hrs.)	$\bar{X}$=2.16	$\bar{X}$=1.07	t-test	2.87	38	$p < .01$
Play with Children (hrs.)	$\bar{X}$=2.29	$\bar{X}$=4.57	t-test	.069	38	$p > .10$
Frequency of Play Interruption	$\bar{X}$=2.68	$\bar{X}$=4.57	t-test	2.44	38	$p < .05$

df=38, $p < .01$), and frequency of play interruption ($t=2.44$, df=38, $p < .05$). HP children were reported to engage in significantly more solitary play and play with their parents than LP children. Further, the parents of HP children reported significantly less interruption of their children's play than those of LP children. No significant difference emerged regarding a differential relationship of play with other children between the HP and LP groups ($t=.069$, df=38, $p > .10$) Thus, Hypothesis 10 is supported regarding only one of the measures tested, that being the amount of play with other children. For the measures of solitary play, play with parents, and frequency of play interruption, the data obtained supports rejection of this hypothesis.

Summary of Statistical Results

A comprehensive overview of the data reveals that the factors of interruption (A) and level of fantasy predisposition (B) both yielded significant results in the predicted direction on each dependent criteria. The main effect of Factors A and B on fantasy level emerged even more clearly due to the negligable AxB interaction obtained on this criterion. While the hypothesized A x B interaction was also not significant regarding level of positive affect, the 1/F ratio here did not quite approach significance, so that the main effects of Factors A and B do not receive additional support on this dependent variable.

In the clinical phase, all hypotheses received at least

partial disconfirmation. Significant relationships were found to exist between fantasy predisposition and some variables of family composition (birth order), home living arrangements (rooms available for play), home recreational activities (mother's reading, parent-child reading, and responsibility for selection of child's television), and home play activities (solitary play, play with parents, frequency of play interruption). However, no relationships were obtained between fantasy predisposition and other investigated factors within each of these areas.

A summary of results and statistical tests of the hypotheses of this study is provided in Table 9.

Table 9

Summary of Tests of Hypotheses

Hypothesis	Criterion Measures	Tests & Results	Conclusions
1. Interruption will produce a lower level of fantasy in play.	Level of Fantasy Rating Scale	ANOVA Main A $p < .01$	Confirmed
2. Interruption will produce a lower level of positive affect in play.	Level of Positive Affect Rating Scale	ANOVA Main A $p < .01$	Confirmed
3. HP children will demonstrate higher level of fantasy in play.	Level of Fantasy Rating Scale	ANOVA Main B $p < .01$	Confirmed
4. HP children will demonstrate higher level of positive affect in play.	Level of Positive Affect Rating Scale	ANOVA Main B $p < .01$	Confirmed
5. The effect of Hypothesis 1 will be greater for LP than HP children.	Level of Fantasy Rating Scale	ANOVA AxB $p > .05$	Disconfirmed
6. The effect of Hypothesis 2 will be greater for LP than HP children.	Level of Positive Affect Rating Scale	ANOVA AxB $p > .05$	Disconfirmed

Table 9 (Continued)

Hypothesis	Criterion Measures	Tests & Results	Conclusions
7. Fantasy predisposition is not related to family composition.	Mother's Age	t-test: $p > .10$	Confirmed
	Father's Age	t-test: $p > .10$	Confirmed
	No. Siblings	t-test: $p > .10$	Confirmed
	Birth Order	χ^2 : $p < .01$	Disconfirmed
8. Fantasy predisposition is not related to living arrangements.	Rooms per Person	t-test: $p > .10$	Confirmed
	Play Areas Allotted	χ^2 : $p < .05$	Disconfirmed
9. Fantasy predisposition is not related to home recreational activities.	Mother's reading	t-test: $p < .10$	Disconfirmed
	Father's reading	t-test: $p > .10$	Confirmed
	Parent-Child reading	t-test: $p < .05$	Disconfirmed
	Mother's T.V.	t-test: $p > .10$	Confirmed
	Father's T.V.	t-test: $p > .10$	Confirmed
	Child's T.V.	t-test: $p > .10$	Confirmed
	Selection of Child's T.V.	χ^2 : $p < .10$	Disconfirmed
10. Fantasy predisposition is not related to play at home.	Solitary play	t-test: $p < .05$	Disconfirmed
	Play with parents	t-test: $p < .01$	Disconfirmed
	Play with children	t-test: $p > .10$	Confirmed
	Play Interruptions	t-test: $p < .05$	Disconfirmed

CHAPTER IV

DISCUSSION

The Effect of Interruption

In a brief, seventeen minute free play period, the introduction of only five benign interruptions produced a differential degree of imaginativeness and positive affect in the subsequent play of preschool children. Supporting Singer's (1973) contention, this suggests that,at preschool age, components of imaginative play are yet in a state of flux, subject to modification and development by the experiences that a child encounters. Further, as this study maximized similarity of experimental treatment exclusive of the interruption factor, it appears that this variable strongly influences exhibition of imaginative play skills. In accordance with Freyberg's (1970) conclusion that play may be easily modified and enhanced in imaginativeness through relatively few provided experiences, this finding suggests that very few experiences may also be sufficient to reduce the imaginativeness of play. Thus, it appears that in young children, imaginative play skills are cuite malleable, and that even relatively few incidents of interruption are sufficient to effect quite dramatic changes in the child's readiness to bring fantasy to and and derive enjoyment from the play situation.

How is it that interruptions effect a reduction in the imaginatuveness of a child's play? From Tomkin's (1962)

view, it is the moderately increasing complexity of stimuli, changing as the child adds his imagery and fantasy, that yields the interest and involvement which sustains play. However, the sudden, unexplicable interruption provides a large, equally sudden increment in the stimulus novelty which, according to Tomkins,would result in a negative affective experience. This obviates the child's interest and surprise, and in fact, breaks the assimilation cycle inherent in play before the child experiences the joy and smiling concommitant with a decrease in unassimilated material. Thus, the natural positive affect cycle of the play situation is altered and the motivating forces for imaginativeness lessened, resulting in a reduction of fantasy and imagery brought to the play situation.

In considering how the variable of interruption influences the development of fantasy predisposition as a cognitive skill, the limitations of the current study are evident. A child's play experiences are vast and complex, comprising a major portion of his waking life. Within this, the singular experimental manipulation of this study is only very minute. As the remainder of these experiences could by no means be held constant, the current study provided no procedures for follow up determination of long term effects. However, it was determined that an experience of interruption inhibits the positive affect and fantasy level of subsequent play, and it is these resultant variables which

theoretically are instrumental in development of fantasy predisposition. If, as suggested by Singer (1961, 1968, 1973), a child requires practice to develop fantasy play skills, any experience which reduces fantasy in play would accordingly lessen the child's opportunity to rehearse and enhance imaginative skills. Similarly, as positive affect is regarded as the major motivational force in fantasy play (Singer, 1973), any factor which impedes the child's enjoyment in the play situation accordingly would lessen his motivation to play imaginatively,and thus practice these skills. In this regard, during the current study it was observed that children in the interruption condition appeared more hesitant to return to the play room, and seemed to require more coaxing than those in the non-interruption condition.

One may also consider this issue in light of Singer's (1973) proposal that the development of fantasy skills requires infolding of relatively long imagery sequences. Interruptions demand that the child make immediate motoric or perceptual response which competes for expression with the imaginative sequence underway. As the external demand of the interruption draws attention from the internal imaginative process and competes for expressive reaction, the child is prevented from rehearsing and developing fantasy sequences, impeding refinement of imagery skills and imaginative expression.

Thus, it is likely that experiences with interruption influence the developmental course of fantasy

predisposition, whether directly or indirectly. This is further reinforced by the results of the parent questionnaire, which indicated that HP children experience less frequent play interruption at home than their LP counterparts. From this one may speculate that even if the impact of a singular interruption be fleeting and momentary, recurrance may produce a long term effect in regard to the degree of imaginative play predisposition ultimately achieved by a child.

The Effect of Fantasy Predisposition

The factor of fantasy predisposition distinguished between children subjected to identical experimental treatment, with respect to both fantasy level and degree of positive affect demonstrated in play. This provides reinforcement for Singer's (1973) argument that this personality trait is already in evidence at preschool age, strongly differentiating between the types of play that children exhibit.

It appears that there is a very early orientation towards imaginativeness which remains potent despite enhancing or inhibiting environmental experiences. Although such experiences undoubtedly modify the development of fantasy predisposition, this early orientation would seem to cyclicly draw upon itself to some extent. In that HP children display greater positive affect in play, their motivation to play and seek play opportunities is heightened. As their play involves a higher level of fantasy production,

this greater amount of play will necessarily entail more practicing and refinement of imaginative skills. Therefore, even with identical play experiences, one might expect increasingly marked distinction in imaginative predisposition as children mature. The very early orientation towards imaginativeness may determine the types of play experiences towards which a child gravitates, which he practices, and from which he derives the satisfaction, enjoyment, and gratification which motivate him to continue his particular play orientation.

Parental Attitudes, Home Environment, and Imaginative Tendency

It was primarily to elicit possible determinants of of fantasy predisposition within the child's home environment that the parent questionnaire was devised and employed. While some investigation into this area has been undertaken (Freyberg, 1970; Singer, 1961, 1973), the literature here remains sparse and relatively unreplicated. In attempt to provide replication of findings and possibly determine other operating variables, the current study focused on aspects of family composition, living arrangements, recreational activities, and play activities. The procedure employed differed from that used by Singer and Freyberg, that being direct interview of children and parents respectively. This departure was selected in order to obtain data from the maximum number of subjects, facilitate data collection, and provide reassessment of variables by yet another experimental procedure.

Family composition demonstrated relationship with fantasy predisposition regarding birth order, with HP children being more frequently the first or only child in a family. Substantiating the earlier findings of both Freyberg and Singer, this suggests that imaginative development may be related to a lower level of peer contact and more parental attention during the early years. In accord with Singer's (1973) study, chronological age showed no relationship with imaginative predisposition.

Regarding home living arrangements, Freyberg's finding that HP children have more living space at home than LP children was not supported by the current sample. The discrepancy between these findings may largely be based in the differences in sample groups employed. Freyberg's sample consisted of twelve socio-economically disadvantaged families living in an urban ghetto environment. In marked contrast, children in the current study lived in a middle class, suburban surrounding, consisting mostly of private, one family dwellings. Thus, both the HP and LP children here lived in homes with ample amounts of space for all family members, while in contrast, the home space available in Freyberg's sample was much more limited. That differences in fantasy predisposition emerge regarding available space in constricted living quarters but not where there is ample space suggests that there may be a critical amount of room, above which this factor does not distinguish between HP and LP children.

In this study, however, an interesting difference did emerge regarding the amount of space afforded to the child for play activities , with HP children having more room for play than their LP peers. While suggesting that HP children have more space for practice of imaginative play skills, the existence of a greater amount of play area also entails different room environments with a greater novelty of stimuli, providing material for assimilation through play. In addition, the amount of play area provided would seem to reflect parental attitudes and acceptance of this behavior within the home. This would be in accordance with Freyberg's (1970) finding that parents of HP children express more positive attitudes towards imaginativeness than those of LP children.

Beyond this, the role of parental attitude is reflected in their contact and participation in the child's imaginative behaviors. The role of this interaction in effecting development of imaginative predisposition was left equivocal in Freyberg's study. In the current investigation, however, parents of HP children reported more interaction with the child in play and reading activities than parents of children judged low in imaginativeness. While expressing their own acceptance of imaginative behavior, parental participation provides the child with implicit sanction

and approval of his fantasy activities. In addition, direct participation by parents increases their availability and role as a model for identification and direct imitation, a factor shown by Freyberg (1970) and Gottleib (1968) to foster the dev elopment of a tendency towards fantasy activity in children.

In regard to parental involvement and enjoyment of their own fantasy activities, mothers of HP children in this study reported that they, themselves, read more than those of LP children. In so far as reading enjoyment reflects a positive attitude towards imaginativeness and satisfaction in fantasy behavior, this lends further support for the notion that maternal attitude is a key factor in the development of fantasy predisposition. Although no corresponding results were obtained for fathers, this is in accordance with Bishop and Chace's (1971) report that playfulness is related to the mother's conceptual style, while unrelated to that of the father. It was the mothers in the current sample that generally had more daily contact with the children, as most of the fathers worked during much of the childrens' waking hours. As modelling is an important process in imaginative development, it is likely that a mother who participates in and values fantasy behavior herself will enhance identification and ultimately foster a tendency towards imaginativeness in her child, as

she is the primary adult available to him daily.

It also appears that attitudes towards the child's autonomy and independence are instrumental in effecting fantasy predisposition. High predisposition children were reported to more often participate in television selection, either independently or with parents, than LP children. At the same time, however, they engaged in greater solitary play, with fewer interruptions being imposed by family routine. It thus seems that parents of HP children may allow them freer rein regarding fantasy input and expression, placing less control over their child's imaginative activities.

From this, Singer's (1973) argument that imaginative development is fostered by an optimal balance of benign parental contact and opportunity for private, uninterrupted fantasy expression gains additional support. Beyond this, it seems likely that there is a common denominator of parental attitude and orientation towards imaginativeness and the child's fantasy autonomy, in which many of the differentiating home environmental factors noted may be based. It may well be these attitudes, operating to provide the child with direction and facilitating experiences, which create a very early orientation towards fantasy,and continue to foster this tendency as

the child grows and matures.

Implications for Parents and Educators

The cognitive skills of imaginativeness have been linked to development of personal ity characteristics and a general pattern of living (Singer, 1973). Children having a high orientation towards fantasy have been demonstrated to be more creative (Singer, 1973), flexible in approaching tasks (Pulaski, 1970), and better able to contain impulses and behavioral expression (Singer, 1973), than those judged low in imaginativeness.

One implication for the psychologist or educator working with young children is that it might be possible to enhance such adaptive abilities by fostering the cognitive skills employed in fantasy and make-believe activities. It has been shown both here and elsewhere (Freyberg, 1970), that this may be approached by experimental manipulation of the child's play experiences. Beyond imposition of a calculated, experimental procedure, however, one might think of altering the child's daily play experiences to encourage the capacity for rich, imaginative expression.

Within the home environment, the current study suggests that the child's parents play a crucial role in the development of such cognitive skills. It would therefore seem possible and beneficial to educate parents about

imaginative development as a constructive and positive aspect of their child's maturation. Further, it is necessary that parents be alerted to their own role in determining their child's orientation towards fantasy, and shown how they may directly and concretely enhance this orientation through the daily experiences and play materials which they provide (Dattner, 1969; Feldhusen & Hobson,1972; Forbush, 1914; Freyberg, 1970; Garrison, 1926; Gottleib, 1968; Hartley, 1952; Hils, 1961; Hurlock, 1972; Marshall & Hahn, 1967; Matterson, 1967; Maynard, 1973; Schwartz, 1973; Wolf, 1930.)

As modeling has been shown to enhance childrens' imaginativeness (Gottleib, 1968), parent education should include teaching them how to function as effective models for fantasy activities. In addition, such training should focus on discussion of various types of play activities to foster imaginativeness, as well as developing family routines which insure the child's opportunity to practice imaginative skills without disruption.

Moreover, as parental attitudes seem to be a common denominator in determining these home play experiences, it seems essential that psychologists and educators help parents to evaluate their own attitudes towards fantasy and independence in their children. Parents who place

value on their child's play and fantasy will more naturally provide an environment which is conducive to imaginativeness. It is felt that they will more freely provide time and opportunity to practice fantasy skills as a part of the family routine. In contrast, even if parents afford the child with concrete fostering experiences, those with negative attitudes towards this type of activity may subtly undermine their child s imaginative tendencies. Thus, it would seem beneficial to help parents explore and evaluate their attitudes towards fantasy activities and behavior, with the goal of creating in them a more positive perspective, and ultimately enhancing the creative and imaginative efforts of their children.

Much of the research in imaginative play development has taken place within the school setting (Freyberg,1970; Gottleib, 1968; Pulaski, 1968; Singer, 1973), demonstrating that factors in this environment also are effective in modifying the child's fantasy orientation. Thus, it would seem important to inform and guide daycare and nursery teachers and staff in the same manner as parents, helping them to evaluate their attitudes, and guiding them in developing activities and classroom routines which are conducive to imaginative development.

Implications for the Child Psychotherapist

The important role of fantasy expression and make-believe play in the psychotherapy of children has been long recognized as a major route of communication between the child and the therapist. Play is the medium through which the child attempts assimilation of new stimuli and problems, including anxiety laden issues and conflicts. In attempting such mastery, a child's play expresses the very issues with which he or she is grappling. For the therapist trained in play interpretation, the child's inner experience now becomes accessible and available to therapeutic intervention. However, the child must be able to express his imagery in either verbal or play form for this to occur.

Singer (1973) has speculated that fantasy predisposition may play a key role in determining whether or not a positive therapeutic outcome is possible. All too frequently, a child comes to treatment very constricted and withdrawn. Despite efforts to make this child comfortable, establish rapport, and overtly encourage play, he or she refrains from engaging in make-believe activity or imaginative expression, closing off the major avenue of communication with the therapist. It has been proposed that therapists might attempt to heighten fantasy predisposition, and thus increase imaginative

expression in such children by providing appropriate experiences and serving as a model (Singer, 1973). Regarding such attempts, the implications of the current study are evident. It would seem best that the playroom remain consistent and free from extraneous distractions or disturbances which might interrupt the child's play. Equally important, the therapist working with such children must be on guard against being a source of interruption himself. It would appear prudent, at least initially, to refrain from all but minimal intervention, taking care not to frequently intrude on any modicum of imaginativeness expressed. Interpretations and reflections would have to be judiciously presented, and assessed as to whether they serve as interruptions in the child's experience.

In addition to opening communication with the therapist and making the child more accessible to therapeutic intervention, such enhancing efforts would hopefully heighten the child's fantasy predisposition. This would provide the child with increased imaginative abilities, a resource through which to master and assimilate aspects of his life including conflicts, confusion, and painful experiences (Singer, 1973).

Suggestions for Related Research

A primary conclusion of this study is that a child's imaginative tendency is malleable, supporting the notion that fantasy skills are subject to modification by the events that he experiences in his daily life. Interruption of play was shown to be one type of effecting experience. However, only one type of interruption was investigated here, that of an adult intruding into the child's play situation. It would seem valuable to investigate other sources of interruption that the environment provides. One of these sources is invariably sibling or peer contact in the play situation. To what extent does such group participation interrupt the dramatic sequence an individual child has underway and ultimately affect the degree of imaginative predisposition achieved?

In addition, it seems worthwhile to explore qualities of the physical, object environment which might provide such disruption to the child. One major aspect of this would be the toys and play objects themselves. Toys are the very props of the child's make-believe world, and he imbues them with attitudes and affects as intense as his own. The child is the supreme ruler of his toys, and any spontaneous alteration of playthings may serve as interruptions, impinging on his imaginative efforts.

Such alteration occurs all too frequently as a result of the fragility of modern play objects, a subject discussed at length by Swartz (1971) and Costello (1972). This fragility may produce interruption, to the extent that a toy suddenly breaks while in the service of a child's make-believe play. In the Farnham-Diggory and Ramsey (1971) study, the variable of defective toys failed to produce a significant reduction of manipulative play persistence. However, in the realm of fantasy play, the effects of toy breakage remain unexplored. In light of the current findings regarding interruption as a potent factor modifying imaginativeness, the role of such spontaneous breakage of playthings as a disruption to the child seems to warrent empirical investigation.

The demonstration of this study that imaginative predisposition is in evidence and measurable at preschool age points towards the need for more research into imaginative behavior in the earlier stages of development. As the current study indicates that there may be a very early orientation towards fantasy, it would seem worthwhile to explore the onset of this behavior, including possible precursers of imaginative predisposition perhaps as far back as infancy.

Finally, this investigation clearly indicated the need for extensive research into the area of parental

attitudes as related to the child's imaginative development. This area of study has remained almost totally uninvestigated, save very tentative, exploratory efforts by this author and Freyberg (1970). Based on these preliminary findings, however, it appears warranted to systematically undertake sophisticated empirical research , with the goal of elucidating those attitudes of importance in creating an orientation towards fantasy. This research could then, in turn, be utilized in our work with parents and educators, to help them encourage and stimulate imaginative development in their children.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the effect of externally imposed interruptions upon the imaginative expression and enjoyment in childrens' play. It was hypothesized that interruption would produce a reduction in both the fantasy level and positive affect expressed during play activities. It was also predicted that children with a high predisposition to imaginativeness would show a greater degree of fantasy and positive affect in play than would those with a low predisposition to fantasy. An interaction between these factors regarding both variables was also postulated. Additional non-directional hypotheses were advanced regarding possible formative factors in the development of fantasy predisposition within the home environment.

The S's were 60 preschool children at the Learn and PLAYGARTEN School in Rockland County, New York. On the basis of screening tests, they were divided into H^P and LP groups (high and low predisposition to fantasy), matched for age and intelligence. S's from both groups were randomly assigned to Interruption and Non-Interruption conditions. All S's were individually invited to a 17 minute free play

session, during which they were urged to engage in imaginative activity. Those in the Interruption condition experienced five benign intrusions by an adult during this session, while those in the Non-Interruption condition encountered no disturbance of any kind. At a later point, all S's were again invited to the playroom for assessment of fantasy production and level of positive affect.

The data, consisting of the childrens' play behavior during the subsequent session, was assessed via rating scales for fantasy level and affect level. A separate analysis of variance was performed for each of these dependent variables.

Following completion of the experimental phase, a questionnaire was sent to all parents of children participating in the study to obtain data regarding family composition, living arrangements, and home play and recreational activities. This questionnaire provided the data for consideration of possible formative factors in imaginative development within the home.

The factor of interruption produced significant main effects in the prediction direction, regarding both the levels of fantasy and positive affect observed in play. Similarly, a significant main effect was obtained regarding fantasy predisposition, as hypothesized for both dependent variables. The interaction hypotheses received no support in analysis of either fantasy level or degree of positive affect.

Within factors of the home environment explored, fantasy predisposition was shown to relate to family composition, only in regard to birth order, with HP subjects more frequently being first or only children than LP subjects. Home living arrangements demonstrated relationship to fantasy predisposition regarding the amount of room allotted for play activities, with HP children having greater play area than their LP peers. Fantasy predisposition was significantly related to home recreational activities, in that parents of HP children read and play more with them, as well as allow them to participate more in television selection than do parents of LP children. Finally, it was demonstrated that HP children engage in more solitary play with less frequent externally imposed interruptions than their LP counterparts.

The results of this study seem to indicate that:

1. In preschool children, imaginative tendency is already in evidence, strongly distinguishing between fantasy expression in play as well as the degree of positive affect that children express during play activities

2. During preschool years, fantasy expression and play enjoyment are quite malleable and subject to modification by the play experiences that a child encounters.

3. The introduction of even a few, benign interruptions is sufficient to reduce the child's readiness to bring imaginative skills to the play situation and derive enjoyment from play activities.

4. Environmental factors within the home clearly differentiate between children of high and low fantasy predisposition, with such factors appearing to be based in the parents' attitudes towards the imaginativeness and autonomy of their children.

Appendix A

Selected Play Materials

Artwork Materials

1) Playdough (4 bright colors)
2) Crayola crayons (box of 24 colors)
3) 8-1/2 x 11" white drawing paper
4) Colored construction paper
5) Cotton balls
6) Paste
7) Yarn (various colors)
8) Buttons

Construction Materials

1) Wooden Kindergarten blocks
2) Varied colored beads and strings

Toy Buildings and Environments

1) Realistic, seven room plywood doll house, with rooms fully furnished with appropriate and proportionate furniture and room decoration. Included was a family of 5 flexible rubber dolls, realistically dressed and proportioned to the doll house.
2) Model Motel with indoor and outdoor furnishing, cars, proportionately sized "people" of both sexes, luggage, and dog.
3) Model village with various shops and facilities, cars, and appropriately uniformed and dressed dolls of both sexes proportioned to size.
4) Model playground with miniature playground facilities and whimsical "Weeble" people type" dolls.
5) Western fort with mounted and unmounted Cavalry soldiers and Indians of appropriate size.
6) Construction yard with trucks, tracks, cranes, and warehouse buildings.
7) Airport model with runways, airplanes and observation tower.

Dolls

1) Twelve inch baby doll with clothing and baby bottle.
2) G.I. Joe doll with soldier accessories.
3) Barbie doll, casually dressed.
4) Johnny West doll, dressed in cowboy outfit.
5) Twenty inch girl doll in party dress.
6) Puppets, one male and one female adult.

Costumes and Props

1) Nurse uniform with medical kit.
2) Doctor's uniform with medical kit.
3) Cowboy/cowgirl outfit with hats, guns, holsters, and stick horse.
4) Fireman costume with helmet, badge, and loudspeaker.
5) Bride costume with veil and bouquet.
6) Several Halloween monster costumes with masks.
7) Aprons, pocketbooks, hats, high heeled shoes, fishing cap, ski cap.
8) Jewelry including watches.
9) Child size kitchen stove, pots and pans.
10) Child size "sports car".

Appendix B

Hall's Scoring Manual

Rules for Unitizing Play Behavior and Scoring for Fantasy[1]

Coding Play Behavior

Coding of Ss's play requires three operations. The behavior is first unitized from the tape recordings, then it is scored for both degree of fantasy and degree of arousal. The S's behavior in the experimental situation can be divided into two broad categories:

I. Tangential Behavior. This kind of behavior is neither unitized nor scored for realism and intensity. It includes all behavior which is not concerned with the provided toys or with fantasies built around these toys. Tangential behavior includes such acts as: examining the room, comments or questions about topics not related to the toys or to fantasy, playing with or handling any objects other than the provided toys, etc. -- any behavior, in short, in which the S's attention is not directly focused upon the toys or some idea related to them.

II. Play Behavior. Play behavior is defined as any manipulation of the toys or any verbalization pertaining to them. Play behavior is unitized according to the following rule and then scored for realism, or fantasy, and arousal.

Rules for Unitizing Play Behavior

A "play unit" is defined as an act or a series of acts which expresses a single idea. A unit may be thought of in grammatical terms as a "subject" (doll, furniture, or imaginary character) and a verb (the action being carried out). The most simple example of a unit is a single doll being used to act out a single, discrete action. In more complex cases, the scorer will have to decide what primary idea is being acted out, since a single unit may subsume a series of acts. The following criteria and examples of unitizing will aid the scorer in making most of his decisions, but he should at all times keep in mind the basic definition of the unit.

Criteria and examples of changes in play behavior which define a unit:

1. Any change in the main object of the action. The "main object" is the doll or dolls, furniture, or imaginary character which is the chief agent of action or the chief object being acted upon in a unit.

Examples: S examines refrigerator/ S examines stove/ F (father doll) sits in chair; M (mother doll) sits in chair.

[1] Taken from Hall, 1966, p. 86 ff.

Note: Not all changes in furniture being used are sufficient to indicate a change in unit. At times, different pieces will be used in a way which is secondary to the main thought being expressed.

Example: F knocks down all living room furniture/ S stacks kitchen furniture, etc. In these examples, there is no differentiation of the various pieces involved.

2. Any change in the location of the action (room of house, outside area, floor of room, etc.).

Examples: F sits in kitchen chair/ F sits in living room chair/ F is moved from living room to bedroom (with no further elaboration)/ kitchen sink is placed in living room/ B fights with G in kitchen/ B fights with G in kitchen/ B fights with G in small bedroom.

Note: Changes in location may be secondary to the main action, in which case they are not sufficient to indicate a new unit. The most common example is of a doll simply being walked through several rooms; each room he enters is secondary to the main idea being expressed, which might be "walking from kitchen to bathroom."

3. A significant change in the kind of action being expressed. If a series of acts by a given doll are discrete and require a different verb to describe the action, a change in unit is indicated.

Examples: M opens refrigerator/ M puts food on table/ M washes dishes/ B runs to living room/ B walks to bedroom/ B is put (simply picked up and placed) in kitchen.

4. A significant change in the quality of the action. A series of acts which would otherwise be included within one unit may vary in some qualitative way, such as the realism with which the act is carried out.

Examples: M is being walked from one room to another, during which S is quite knowingly turning her upside down; S is bending legs of doll in usual way, then begins to twist its limbs intensely.

5. A significant change in S's emotionality or the tempo of play.

Examples: B is being walked through the house, during which S suddenly begins moving him faster, and S seems to become more excited, talking faster, voice rising, etc.

6. A verbalization of S's which indicates that the idea connected with a given action has changed or has been significantly added to. A verbalization alone may in some cases be scored as a separate unit, even if no manipulation of objects occurs.

Examples: S looks at dolls in bed and says " They're dreaming." B is seated in a chair, and S says, " He thinks he hears a robber outside."

7. Any interruption in the course of play by tangential behavior, such as talking to E, dropping dolls, and looking about room, etc.

Some special cases:

A separate unit is not scored if, during the course of some action, a piece of furniture or a doll is accidentally knocked over. In such cases, if S interrupts himself to replace or rearrange the knocked-over piece, a unit is scored.

Frequently a subject will spend a great deal of time in arranging a doll in a chair, during which the doll will fall over, the chair will be knocked over accidentally, etc. If no significant change occurs in S's emotionality or in the intent of his action, this activity would be subsumed within one unit.

FANTASY RATING SCALE

1. Realistic; stereotyped and structured.

Thematic:

Actions which reproduce routines and events which can be assumed to be a common part of the child's experience and which are played out within the structure of the materials as presented.

Examples: Eating at table, sleeping in bed, bathing in tub, cooking on stove, children playing, realistic quarreling and fighting between siblings, disagreement about T.V., arguing with parents about going to bed, etc. Such actions must occur in an appropriate setting. Children sleeping in large bed, for example, or parents sleeping in small beds is not appropriate and ould be scored "2".

Imaginary elements do not contraindicate rating of "1" if they are common and appropriate to the context of the action; turning imaginary spigots on sinks or tub, turning knob on T.V., taking food or dishes from kitchen furniture, taking clothes from dresser, putting on pajamas to go to bed, undressing to bathe, pillows and covers on beds, etc.

Special case: All units which are exact replications of E's story are scored "1".

Non-thematic:

Exploration of materials; examination of dolls or furniture, opening and closing doors, comparing height of dolls, commenting on color or feature of dolls, etc.

Simple, non-elaborated bending and manipulation of dolls.

Picking up doll and putting it back down in same place, or moving it to another room, with no comment or elaboration.

Moving of furniture, if it is kept within the same room

as presented and is placed in a reasonable arrangement.

2. Realistic; non-stereotyped or non-structured.

Thematic:

Actions which quite possibly could occur in reality, but which have some aspect of originality, imagination, or freedom form the given functions and structure of the toys.

Unusual but possible actions: putting T.V. on couch, sitting on vanity, standing on chairs; people sick, riding piggy-back, falling out of bed, exercising; child hiding in some likely place, such as cabinet, sink, under bed, etc. (but not in stove, refrigerator, or dresser).

Unusual interactions between dolls. whispering, telling secrets, F picking up M, children "boxing", kissing, child saying something unusual to parent, etc.

Inventing a realistic object, such as a telephone, toaster, bed, knife, rope, etc. which has central significance in the action.

Major, but realistic re-definition of some area of house, piece of furniture; or doll; calling outside area of house a porch, pond, basement, sidewalk, father's office, etc; calling couch dresser, or table a bed; callying boy-doll a girl, father doll a stranger, etc.

Looking over walls, if S mentions a " window."

Special case: replication of E's story with a change in character or a slight change in action.

Non-thematic:

Moving furniture from one room to another. Stacking furniture in reasonable fashion, such as putting chairs on table, T.V. on dresser, etc. Arranging furniture realistically on floor of room.

Trying to take clothes off dolls. Putting doll aside or returning it to E.

3. Realistic, but with large component of fantasy.

Thematic:

Actions which are possible but improbable, events which could occur in reality, but which most children cannot be expected to have experienced.

Examples: Doll breaking a leg, standing on furniture, M and F hitting each other, realistic knocking over of furniture while fighting; people falling out windows, etc.

Pure invention of some realistic character who acts in appropriate ways: mouse hiding in hole, cat meowing for food, cleaning woman washing windows, etc.

Introduction of stereotyped fantasy character who has clearly defined role and who behaves according to this role: Santa Claus coming down chimney, robber breaking in, etc.

Using wall as representation of realistic fantasy

object, such as car, horse, bannister, etc.

Use of physical characteristics of doll house in concrete fashion: dolls climbing or looking over walls as if in reality they would be barriers only 2 or 3 feet high, dolls falling out of house onto floor, etc.

Realistic fantasy woven around height of house from floor of room: dolls falling off "cliff" into "river" etc.: dolls traveling up and down from house to floor by ladder, stairs, or elevator; describing house as on a hill, with dolls looking down.

Unusual actions which have some very rare or nonsensical elements: doll talking to T.V., punishing furniture, sitting on chair on top of table, lifting chair with one hand by child, etc.

Nonthematic:

Literal use of walls: placing furniture or dolls on walls.

Literal use of furniture: treating pieces as objects rather than as representations of real furniture; stacking furniture, dropping dolls to floor with no elaboration or justification.

Re-arranging furniture so that doors are blocked; arranging all furniture in one room; wholesale transfers of furniture from one place to another.

4. Unrealistic, structured

Thematic:

Actions which are physically impossible or which would be highly unlikely to occur in reality, but which are acted out with fairly close use made of the given structure and function -- the structure is used as a necessary context of the action.

Examples: dolls knocking each other out of house, eating table, eating another doll, father hiding under bed, baby sticking mother with pin, baby lifting furniture, father lifting sink, tub, etc., mother stuffing boy in refrigerator, dolls throwing furniture at each other, boy holding father in wrestling hold, etc.

Wildly exaggerated actions: doll being blown up in air when another sneezes, jumping extremely high, being blown in air by bursting ball, etc.

Pure invention of some realistic character or stereotyped fantasy character who behaves in unusual way; mouse stealing cheese from refrigerator, mouse knocking over furniture, Santa Claus cooking mother, robber fighting with boy, etc.

Unrealistic traveling up and down from house to floor; crane lifting doll up, use of parachute, climbing down tree, firepole, etc.

Dreaming, irrational pretending: baby dreaming that he is flying (acted out), father pretending to be a child, mother pretending to be dead, etc.

Non-thematic:

Twisting, bending, or squeezing dolls in open attempt to injure them; hitting dolls against house or each other; throwing dolls or furniture wildly about with no justification or elaboration; jumbling of furniture.

5. Unrealistic, unstructured

Thematic:

Actions which are unrealistic and which occur independently of given structure and function -- structure is a secondary consideration, temporarily forgotten or ignored.

Examples: dolls flying about, dive-bombing house, climbing walls of room, etc.

Any action involving invented character which is unrealistic and not stereotyped, such as monster, dinosaur, ghost, etc.

Any highly fantastic action with large component of pure invention; mouse blowing up mother by putting dynamite in her pants, boy made into ice cream, etc.

Magical acts; furniture being rearranged by "magnet," drawers opening by magic, etc.

Animism: chair walks by itself, stove knocks father out of house, T.V. talks to boy, etc.

S pretending he himself is some unrealistic character in action; S becomes a "lion" and tries to get into house; S is a giant monster who grabs the dolls, etc.

Non-thematic:

Picking up rooms of house; biting or stamping upon dolls aggressively.

Appendix C

Level of Positive Affect Rating Scale

The following is a five point rating scale on which you are to rate the child's level of joyful involvement and pleasure during the ten minute videotaped play session. Please read the entire scale before assigning a rating to any child. You may find it helpful to proceed with the ratings in the following manner:

1st. Ask yourself if the extreme points (1 and 5) on the scale can be ruled out. If they can, then;

2nd. Consider which end of the scale (2 or 4) comes closest to describing the child. If you find this decision difficult, consider the midpoint (3) of the scale.

The steps of the scale are as follows:

1. Shows no interest in playthings - manipulates toys only briefly and with indifference. Shows no joyful involvement or pleasure in play activities. Much tangential behavior; Much exploration of playroom, and objects other than play materials; Much conversation with E; Critical remarks about toys or play activities; No smiling, laughter, or evidence of joy or pleasure in playing.

2. Shows mild interest in toys and playthings - manipulates them in a desultory or casual manner, with wavering enjoyment. Shows sporadic involvement and pleasure in play activities; Much looking around; Occasional smiling and laughter.

3. Shows moderate interest in toys - manipulates playthings with shallow, but sustained enjoyment. Talking freely about play activities. Somewhat lost in quiet enjoyment. Considerable smiling and/or laughter during play. Some animation.

4. Shows deep interest and enjoyment in toys; Sustained pleasure and involvement in play activities; Frequent smiling, and/or laughter; Spontaneously describes and/or acts out fantasies in play.

5. Shows extreme delight in toys and play activities. Frequent and spontaneous laughter, singing, and/or smiling. Thoroughly engrossed in play activities. Completely enjoying self in play.

Appendix D

Play Project Parent Questionairre

I. Family Composition & Living Arrangements

a) Mother's age:_____
b) Father's age:_____
c) Number of children:_____
d) How many of your children are older than the child participating in this study?_____
e) How many of your children are younger than the child participating in this study?_____
f) Number of rooms in home:_____
g) Hcw many rooms does your child use for play?(check one)
One room_____
More than one room_____

II. Home Recreational Activities

a) How much time is spent reading daily by mother?_____ hrs.
b) How much time is spent reading daily by father?_____ hrs.
c) How much time is spent reading with your child daily?_____ hrs.
d) How much time is spent viewing television daily by mother?_____ hrs.
e) How much time is spent viewing television daily by father?_____hrs.
f) How much time is spent viewing television daily by child?_____ hrs.
g) Who selects the television programs viewed by child? (check one or more) parents_____
child_____

III. Child's Play Activities

a) How much time does your child spend playing alone at home?_____ hrs.
b) How much time does your child spend playing with other children (including siblings) at home?_____ hrs.
c) How much time does your child spend playing with parents at home?_____ hrs.
d) How frequently does family routine (mealtimes, bedtime, chores, etc.) require interruption of your child's play activities?_____ times daily.

References

Abadi, M. Psychoanalysis of playing. Psychotherapy and Psychosomatics, 1967, 15, 85-93.

Andrews, E. The development of imagination in the preschool child. University of Iowa Studies in Character, 1930, 3 (4).

Bach, G. Young childrens' play fantasies. Psychological Monographs, 1945, 59(2), 3-69.

Barker, R.G., Dembo,L., & Lewin, K. Frustration and regression; An experiment with young children. University of Iowa Studies in Child Welfare, 1941, 18, No. 386.

Bettelheim, B. Play and education. School Review, 1972, 81(1), 1-13.

Bishop, D.W. 7 Chace, C.A. Parental conceptual systems, home play environment, and potential creativity in children. Journal of Experimental Child Psychology, 1971, 12 (3), 318-338.

Bremer, G. The effect of two fantasy environments on childrens' doll play responses. Unpublished M.A. thesis, 1947, State University of Iowa.

Buhler, K. The imagination of the child at play. In The mental development of the child. New York; Harcourt, Brace, & Co., 1930.

Costello, M. Toy safely (Editorial Research Report # 19) Washington; Congressional Quarterly, Inc., 1972, Vol. 2.

Crosscup, R. Children and dramatics. New York; Charles Scribner's Sons, 1966.

Dattner, R. Design for play. Princeton; Van Nostrand-Reinhold, 1969.

Eifermann, R.R. Social play in childhood. In R. Herron & B. Sutton-Smith (Eds.) Child's play. New York; Wiley, 1971

El'Konin, D. Symbolics and its function in the play of children. In R. Herron & B. Sutton-Smith (Eds.), Child's Play. New York; Wiley, 1971. (Originally published: Soviet Education, 1966, 8 (7), 35-41.)

Ellis, M.J. Play and its theories re-examined. Parks and Recreation, 1971, 6 (8), 51-55, 89-91.

Ellis, M.J. Why people play. Englewood Cliffs; Prentice-Hall, Inc., 1971.

Erikson, E.H. Studies in the interpretation of play I. Clinical observations of play disruption in young children. Genetic Psychology Monographs, 1940, 22, 557-671.

Erikson, E.H. Childhood and society. (2nd ed.) New York: Norton, 1963.

Escalona, S. Play and substitute satisfactions. In R.G. Barker, J.S. Kounin, & H.F. Wright (Eds.) Child Behavior and Development, New York: McGraw Hill, 1943.

Farnham- Diggory, S. & Ramsey, B. Play persistence: Some effects of interruption, social reinforcement, and defective toys. Developmental Psychology, 1971, 4 (2),

Feldhusen, J.F. & Hobson, S.K. Freedom and play: catalysts for creativity. Elementary School Journal, Dec., 1972, 73 (3), 148-155.

Feshback, S. The catharsis hypothesis and some consequences of interaction with aggressive and neutral play objects. Journal of Personality, 1956, 24, 449-462.

Fineman, J. Observations on the development of imaginative play in early childhood. Journal of the American Academy of Child Psychiatry, 1962, 1, 167-181.

Forbush, W.B. Manual of play. Philadelphia: George W. Jacobs & Co., 1914.

Freud, A. The ego and the mechanisms of defense. (Rev. ed.) New York: International Universities Press, 1966.

Freud, S. Beyond the pleasure principle. In J. Strachey (Ed.) The standard edition of the complete psychological works of Sigmund Freud, Vol. XVIII, London: Hogarth, 1959.

Freud, S. Creative writers and daydreaming. In J. Strachey (Ed.) The standard edition of the complete psychological works of Sigmund Freud , Vol. IX, London: Hogarth, 1959.

Freyberg, J.T. Experimental enhancement of imaginative play of kindergarten children in a poverty area school. (Doctoral dissertation, City University of New York) Ann Arbor, Mich: University Microfilms, 1970.

Garrison, C. Permanent play materials for young children. New York: Scribners, 1926.

Gilmore, J.B. The role of anxiety and cognitive factors in childrens' play behavior. Child Development, 1966, 37 (2), 397-416.

Gilmore, J.B. Play: A special behavior. In R. Herron & B. Sutton-Smith (Eds.) Child's play, 1971.(Originally published R.N. Haber (Ed.), Current research in motivation. New York:Holt, 1968.

Gottleib, S. Modeling effects on fantasy. Unpublished doctoral dissertation, City University of New York, 1968.

Greenacre, P. Play in relation to creative imagination. Psychoanalytic Study of the Child, Vol. XIV, New York: International Universities Press, 1959.

Hall, T. Some effects of anxiety on the fantasy play of preschool children. (Doctoral dissertation, Yale University) Ann Arbor, Mich: University Microfilms, 1966. No. 66-4897.

Hartley, R.E. New play experiences for children: Planned playgroups, miniature life toys and puppets. New York: Columbia University Press, 1952.

Hartley, R.E. Play, the essential ingredient. Childhood Education, 1971, 48 (2), 80-84. Also in J.L. Frost (Ed.) Revisiting early childhood education: Readings. New York: Holt, Rinehart, & Winston, 1973).

Hartley, R.E., Frank, L., & Goldenson, R. Understanding children's play. New York: Columbia University Press, 1952.

Hartley, R.E. & Goldenson, R.M. The complete book of children's play. New York: Crowell, 1957.

Hartmann, H., Kris, E., & Lowenstein, R. Comment on the formation of psychic structure. Psychoanalytic study of the child. Vol. II. New York: International Universities Press, 1947.

Hils, K. The toy; Its value, construction and use. (E. Fitzgerald, trans.) Chester Springs, Pa.: Dufour Editions, 1961.

Hurlock, E.B. Play. In Child Development, (5th ed.) New York: McGraw-Hill, 1972.

Hutt, C. Exploration and play in children. In R. Herron & B. Sutton-Smith (Eds.) Child's Play. New York: John Wiley & Sons, 1971.

Isaacs, S. Social development in young children. London: Routledge, 1933.

Izard, C. & Tomkins, S. Affect and behavior: Anxiety as a negative affect. In C. Spielberger (Ed.), Anxiety and Behavior. New York: Academic Press, 1973.

Jeffre, M.F.D. Fantasized mother-child interaction in doll play. Unpublished doctoral dissertation, University of Iowa, 1946.

Kawin, E. The wise choice of toys. Chicago: University of Chicago Press, 1934.

Klein, M. The psychoanalysis of children. (3rd ed.) London: Hogarth, 1973.

Klinger, E. Development of imaginative behavior: Implications of play for a theory of fantasy. Psychological Bulletin, 1969, 72, 277-298.

Levin, H. & Wardwell, E. The research uses of doll play. In R. Herron & B. Sutton-Smith (Eds.), Child's Play. New York: John Wiley & Sons, Inc., 1971.

Lieberman, J.N. Playfulness and divergent thinking: An investigation of their relationship at the kindergarten level. Journal of Genetic Psychology, 1965, 107, 219-224.

Lowenfeld, M. Play in childhood. New York: John Wiley and Sons, Inc. (Science Editions), 1967.

Markey, F. Imaginative behavior in preschool children. Child Development Monographs, 1935, No. 18.

Marshall, H. & Hahn, S.C. Experimental modification of dramatic play. Journal of Personality and Social Psychology, 1967, 5, -122.

Matterson, E.M. Play and playthings for the preschool child. Baltimore, Md.: Penguin Books, 1967.

Maynard, F. Guiding your child to a more creative life. Garden City, N.Y.: Doubleday & Co., 1973.

Mendoza, A. The effects of exposure to toys conducive to violence. (Doctoral dissertation, University of Miami) Ann Arbor, Mich: University Microfilms, 1972. No. 72-31,915.

Millar, S. The psychology of play. Baltimore, Md.: Penguin Books, 1968.

Moore, T. Realism and fantasy in children's play. Journal of Child Psychology and Psychiatry, 1964, 5, 15-36.

Osborn, D.K. Son of Robot Commando. Childhood Education, 1972, 48, 375-376.

Peller, L. Models of children's play. In R. Herron and B. Sutton-Smith (Eds.) Child's Play. New York: John Wiley & Sons, Inc., 1971.

Peller, L. Libidinal phases, ego development and play. Psychoanalytic Study of the Child., Vol. IX. New York: International Universities Press, 1954.

Phillips, R. Doll play as a function of the realism of the materials and the length of the experimental session. Child Development, 1945, 16, 123-143.

Piaget, J. Play, dreams, and imitation in childhood. New York: W.W. Norton & Co., 1962.

Pulaski, M. The effects of highly structured and minimally structured playthings on children's fantasy production. Unpublished Ph.D. dissertation, City University of New York, 1968.

Pulaski, M. Play as a function of toy structure and fantasy predisposition. Child Development, 1970, 41 (2), 531-537.

Robinson, E.F. Doll play as a function of the doll family constellation. Child Development, 1946, 17, 99-119.

Rutherford, B.R. and LaVoie, J.C. The effect of anxiety on children's play and stimulus preference. Proceedings of the 81st Annual Convention of the American Psychological Association, Montreal, Canada, 1973, 18, 61-62.

Schwartz, B.A fresh look at play objects. Art Education, 26, 1973.

Sears, R.R. Influence of methodological factors on doll play performance. Child Development, 1947, 18, 190-197.

Singer, J.L. Imagination and waiting ability in young children. Journal of Personality, 1961, 29, 396-413.

Singer, J.L. The importance of daydreaming. Psychology Today, 1968, 1 (11), 18-27.

Singer, J.L. The child's world of make-believe: Experimental studies of imaginative play. New York: Academic Press, 1973.

Smilansky, S. The effects of sociodramatic play on disadvantaged preschool children. New York: Wiley, 1968.

Stamm, I. The psychology of children's play: A review of theory and research from the point of view of psychoanalytic ego psychology. (Doctoral dissertation, Boston College). Ann Arbor, Mich: University Microfilms, 1973, No. 73-8249.

Sutton-Smith, B. & Rosenberg, B.G. The dramatic boy. Perceptual and Motor Skills, 1967, 25, 247-248.

Swartz, E.M. Toys that don't care. Boston: Gambit, 1971.

Tomkins, S.S. Affect, imagery, and consciousness. Vol. I. New York: Springer, 1962.

Vane, J. The Vane Kindergarten Test, J. Clinical Psychological Monographs Supplement, No. 24, April,1968.

Waelder, R. The psychoanalytic theory of play. Psychoanalytic Quarterly, 1933, 2, 208-224.

White, R.W. Motivation reconsidered: The concept of competnece. Psychological Review,. 1959, 66, 297-333.

White, R.W. Competence and the psychosexual stages of development. In M.R. Jones (Ed.), Nebraska Symposium on Motivation. Lincoln, Nebraska: University of Nebraska Press, 1960.

Winer, B.J. Statistical Principles in Experimental Design, (2nd ed.) New York: McGraw-Hill Book Co, 1971.

Wolf, A.W.M. Play and playthings. New York: Child Study Association of America, 1930.