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Children's Perceptions of Parental Responses to Boys' and Girls' Aggressive Behavior

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CHILDREN'S PERCEPTIONS OF PARENTAL RESPONSES TO BOYS' AND GIRLS' AGGRESSIVE BEHAVIOR

by

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ABSTRACT

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by

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The purpose of this study was to investigate differences in children's perceptions of mothers' and fathers' to aggressing girls and boys. A picture test of children aggressing was devised and administered to 52 fourth grade children from upper middle socio-economic backgrounds attending school in an Idaho community.

Sex of aggressor, type of aggression (verbal or physical), and sex of parent were investigated as factors possibly related to children's perceptions. None of these variables were found to be significant in this sample. However, boys' perceptions of how parents respond to children aggressing were significantly different from girls' perceptions. Girls perceived parents verbally helping or redirecting children and boys perceived parents physically punishing children more often than any other type of response.

(94 pages)

INTRODUCTION

There are many factors which contribute to one's personality. Gender is an obvious and important biological variable which predetermines certain physiological functions, but its effect on emotional, cognitive and intellectual development is a controversial topic. For example, many authors suggest that a process of sex-typing in early childhood reduces the range of emotional and cognitive development for both sexes resulting in sex differences in human behavior (Levin, 1972: Maccoby, 1966: Maccoby and Jacklin 1973: Sears, Maccoby and Levin, 1957). Unfortunately, there is limited empirical information describing specific factors involved in this socialization process.

In the past, aggressive behavior has been linked to innate differences and has been considered a differential sex characteristic in itself. However, there is direct evidence that adult responses can reinforce and sustain aggression or decrease its occurrence (Brown and Elliot, 1965: O'Leary, Kaufman, Kass and Drabman, 1970). Therefore, it is not surprising that recent research reviews concerning aggression conclude that the nature-nuture controversy still prevails and sustains much interest (Maccoby and Jacklin, 1974: Nelson, 1974; 1975).

In an effort to investigate a specific socialization factor (parental reinforcement) resulting in differential sex-typed behavior (aggression) there have been several studies which have tried to determine and then describe any differences in the way adults respond

to boys and girls when they aggress. However, as Yarrow and Campbell (1963) reported in their literature review, there were many contradictory findings. They attributed these contradictions to weak methodology that relied too excessively on parental reports. For example, Exstein and Komorita (1965) suggested parents were likely to distort and be defensive in their reporting. Even parents' daily diaries and later recollections concerning their responses to aggressive behavior demonstrated significant discrepancies, as shown in Goodenough's (1931) study of childrens' anger.

In an effort to correct this bias, children's perceptions of parental responses to aggressive behavior have been suggested as a new source of data (Ausbel, et al., 1954; Serot and Teevan, 1965). The rationale for an attempt to acquire perceived parental responses rather than actual parent reports or rater observations has been based on two assumptions. First, even though parental behavior can be observed, it affects the child's development only in the form and to the extent that the child perceives it. Second, it seems that children's perceptions of parental behavior and attitudes would be more easily disguised from children, and because parents and observers are more likely to perceive the parental role in a favorably stereotyped way due to their similar experiences and preconceived ideas.

Purpose

Therefore, in an attempt to contribute to an understanding of children's perceptions of parental responses to aggression, the purpose of this study was to investigate children's perceptions of parental responses to pictures of boys and girls engaging in aggressive behavior.

Hypotheses

1. Children perceive that parents respond differently to boys aggressing than they do to girls aggressing.
2. Children perceive that fathers treat aggressing children differently than mothers do.

REVIEW OF LITERATURE

Definition of Aggression

The word aggression has been used to cover a variety of behavior. For the purpose of this study Berkowitz's (1969) widely used and accepted definition will be used. He defines aggression as "behavior that delivers noxious stimuli to another organism or surrogate organism."

In order to clarify the different facets of aggressive behavior, three types of aggression will be described. These are dichotomized and described by Buss (1969) as: physical-verbal, active-passive, and direct-indirect. At one time or another most individuals engage in all of these types of aggression. Yet, according to Buss (1969) the mode of aggression that any one person consistently engages in also indicates most of that person's modes of interactions with other people. For example, an individual who physically rather than verbally aggresses would be a predominantly physical, active, and direct person in most realms of his behavior.

Physical aggression is an assault (cause injury/pain) against an organism. The hierarchy of physically aggressive responses is culturally determined but usually dependent upon the degree of injury. For example, the more a victim is injured the worse the aggressive response is considered.

Verbal aggression is a vocal response that delivers noxious stimuli to another organism. Grading the intesity of verbal aggression is extremely difficult because the amount of injury cannot be directly observed and measured. Thus, grading of verbal aggression such as rejection, hostile remarks, cursing, derogation, criticism and verbal threats has been avoided.

Physical and verbal types of aggression are classified as direct aggression because the aggressor and his aggressive behavior are easily identified. When the identity of the aggressor is difficult to identify it is classified as indirect aggression. An example is gossip. The noxious stimulus (gossip) is delivered by way of other people and their negative reactions. Arson is another type of indirect aggression because it affects the victim's valued possessions. Indirect aggression is considered a safer method of aggression in that counter attack is avoided because the aggressor's identity is more likely to remain obscure.

The third dichotomized type of aggression is passive versus active aggression. Active aggression is exactly what the word implies--the aggressor attacks. Most aggressive responses are active. Passive aggression is the aggressor's blocking of a victim's attempts to achieve goals or the aggressor's non-verbal rejection of the victim[1]. Passive behavior may be the aggressor's presence, his self denial, or the rejection the aggressor implies by his obvious, consistant

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[1]Note: The author of this research has classified non-verbal rejection as passive aggression rather than verbal aggression, contrary to Buss's (1969) description, which placed it in the "verbal aggression" category.

avoidance of the victim. For example, a child who avoids eye contact with his teacher may be displaying passive indirect aggression.

These three dichotomous types of aggression have been addressed in some detail to clarify future references in this literature review concerning various perspectives of aggression.

The Innate Theory of Aggression

There are two basic theories concerning the origin of human aggression: the innate theory of aggression and the social learning theory of aggression. According to Storr (1968) the innate theory states that in man, as in other animals, there are physiological mechanisms which cause aggression. Freud (1920) stated that life was an eternal conflict between a creative, growing force (Eros), and a destructive force (Thanatos or Death). He believed that there was a driving force within all humans to kill and destroy. This drive could be re-directed, but suppression would only cause the aggressive drives to accumulate into a more and more destructive force resulting in violence against the self (i.e. neurotic disorders or suicide), violence to others, and on a societal scale, war.

Lorenz (1966), a man who studies animals in their natural habitat through observation, views aggression as a necessary instinct; because without an animal's instinct to protect his territory and

defend his young, survival and evolution would not occur. Like Freud (1920), Lorenz (1966) believes that this aggressive instinct must be released or it accumulates.

When Storr (1968) referred to physiological mechanisms which cause aggression there were many studies which had provided a basis for biological aggressiveness in humans. For example, Bronson and Desjardins (1971) reviewed the role of hormones in aggression and found that androgens, specifically testosterone, acted on neural substance underlying aggression which enhanced development and responsiveness in organisms. Resko, Feder, and Guy (1968) found that the lack of proper amounts of testosterone in neonatal mice would result in low aggressive behavior. Extensive studies have discovered that in man, postpuberal castration was followed by a decrease in aggressiveness, but if testosterone were administered aggressive behavior returned. Suchowsky, Pegrassi, and Bonsignori (1969) found that the castration of male mice at birth left them unaggressive regardless of attempts in adulthood to inject androgens. But if shortly following birth and castration injections of testosterone were administer, then the male would demonstrate normal adult male aggressive behavior.

The following are descriptions of several studies which have been used to indicate that aggressive behavior is biological or innate. Eible-Eibesfeldt (1963) found that rats isolated since birth exhibited the same aggressive behavior to a rat of the same species placed in its cage as did experienced rats who had learned to be aggressive. Von Holst and Saint Paul (1962) found that by electrical stimulations of a particular area of the brain, cocks would look for an object to aggress against while stimulation of

another area of the brain released patterns of courtship. Kinsey (1953) listed fourteen physiological changes common to both aggressive and sexual arousal and suggested that aggression be viewed as no less instinctual than sex. In support of Kinsey's hypothesis, Heiligenberg (1965) found that when an aggressive fish was placed in isolation the percentage of its biting into the substrata of the tank was much higher than when it lived among young fish that it could bite at any time. This was interpreted as evidence that aggressive tension can be stored up like sexual tension supposedly is. According to Storr (1968) physical mechanisms for aggressive behavior are indeed "inborn." However, there would be no controversy if the extent and effect of human physiological mechanisms were verifiable. As Gough (1977) points out it is important to remember that studies of animals should not be generalized to humans and be expected to produce perfect results.

In conclusion, innate theorists believe that humans have an inborn, biological drive to aggress. They believe that physiological stimulants such as male hormones and electrical stimulation to certain parts of the animal brain support their theory of innate aggression in man.

The Social Learning Theory of Aggression

In direct opposition to the innate theory is the social learning theory of aggression which states that aggression is a learned response void of any internal mechanisms. According to Baldwin (1967) the basic tenet of this theory is that aggressive behavior is learned, reinforced, and is the result of many independent learning processes.

According to Gerwirtz (1969) there are two conventional types of learning processes by which children learn social behavioral patterns and values. The first type is direct instruction which involves differential reinforcement of responses and clear goals of socialization. The other type is an indirect method of learning which occurs when a child matches his behavior to cues provided by another persons's behavior.

Mussen (1969) described how parents, family and friends use direct instruction to teach children sex-appropriate responses. These people model the type of behavior that boys and girls should exhibit. They reward any of the child's behavior that is similar to the desired sex appropriate behavior they desire the child to display. On the other hand, sex-inappropriate behavior is likely to be punished and, thus, diminish in strength.

In respect to imitation, Miller and Dollard (1941) described how a person's capacity to imitate combined with the reinforcement he receives affects his learning. They suggested two basic ways of how imitation may be reinforced. For example, reinforcement may be extrinsic, as when a father praises his son for copying his older brother's desirable behavior. The reinforcement occurs because, by imitating someone else, the younger brother expects to achieve the same reward as his older brother. Or reinforcement may be intrinsic, as when a child says to himself the supporting words an absent, nurturant father might say if he were present. Thus, the child internal ly reinforces the stimuli necessary to produce the appropriate behavior.

Several different aspects of imitation have been studied. For example, Bandura and Huston (1961) found that children imitated nurturant models more than they imitated non-nurturant models. Bandura, Ross and Ross (1963) illustrated that subjects would imitate models even though they did not apparently receive any additional reinforcement. Mischel and Grusec (1966) discovered how imitation is affected by a person's perceptions of how much power the model has. In their study children imitated a strange person introduced to them as an adult visitor in the room less than they imitated an adult introduced as their teacher.

In summary, social learning advocates believe that aggressive behavior is learned through reinforcement or imitation. Their studies suggest that aggressive behavior is learned, sustained or decreased through proper reinforcement and the provision of models for observation and imitation. These findings, however, do not invalidate the theory that aggression is innate in origin or that physiological mechanisms cause aggressive behavior. The fact remains that research has supported both theories and the nature-nurture controversy remains open.

Sex Differences in Aggression

In their review of sex differences concerning aggression, Maccoby and Jacklin (1974) related the difficulty in reviewing literature reporting sex differences because sex differences have not always been of concern to researchers. This is expecially true concerning aggression. The reason researchers have held this

seemingly narrow perspective will be presented and the innate versus the social learning studies will be reviewed separately in order to provide a clearer conception of research perspectives.

Support for sex differences being innate

Broom and Selnik (1957) report that historically males have appeared to be more aggressive than females. This is confirmed by an extensive review of research by Maccoby and Jacklin (1974).

Many studies have been conducted to distinguish male and female aggressive behavior from a strictly hormonal perspective. Effects of testosterone on males were presented earlier (Bronson and Desjardins 1971; Resko, Feder and Guy 1968). These studies supported the innate theory by supplying physiological causes for aggression, but, until Resko's studies (1970), there was no direct evidence that testosterone was even present during gender differentiation. Resko (1973) has since demonstrated by gas liquid chromatography and radio immunoassay that the average quantity of testosterone in the male rhesus fetus is higher than in the female from day 59 (earliest time sampled) to day 163 of gestation. According to Phoenix (1974) these biochemical findings support the hypothesis that testosterone in the fetus is a mechanism whereby the psychosexual differences between sexes are translated from genetic substrata to mediating sexual tissues and sex related behaviors.

According to Edwards (1968), and Bronson and Desjardins (1968) single injections of testosterone to females early in life, followed by concurrent testosterone injections through adulthood increased the frequency of fighting among adult female mice to male-like levels.

An interesting study reported by Bronson and Desjardins (1972) illustrated how testosterone administered to female rhesus monkeys between six and one half to fourteen and one half months of age increased aggressive, dominant behavior whereas their untreated male "playmates" decreased their aggressive sexual behavior.

Studies done by Rose, Gordon, and Bernstein (1971, 1972) have indicated that highly aggressive male monkeys and male hormones have high levels of testosterone, and also that testosterone levels in males change with their experiences. For example, defeat for the male animals in their studies resulted in a lowering of their testosterone level; whereas the testosterone level rose with an active sex life and opportunities to dominate others. In other words, it appears that aggressive behavior can cause or be a result of high levels of testosterone.

In the past aggressiveness has been viewed as basically a male behavior and testosterone studies have resulted in fascinating positive results which may have been the primary reason why the study of females has been much too meager. However, the fact remains, females are aggressive.

Research taking female hormones into account has found that female hormones also stimulate aggressive behavior. In Michael's study (1969) female hamsters displayed pronounced aggressiveness when estrogen was administered. In another study using female hormones, Bronson and Desjardins (1968) administered estradiol to male and female rats and found that estradiol increased aggressiveness in females while it decreased in males. Bronson and Desjardins

(1972) referred to a study by Vanderberg (in press) which reported that both testosterone and estradiol cause aggressiveness in castrated male hamsters.

In conclusion, hormones affect aggressive behavior, but contrary to previous assumptions, both male and female hormones can produce aggression. However, this aggressive behavior can be strengthened, weakened, altered, or redirected by experiences. These findings have important implications for the study of sex differences in aggressive behavior.

Support for sex differences being learned

Social learning advocates agree that the apparent differences in male and female aggression is due to society's socialization process. Larwood, O'Neal, and Brennan (1977) suggested that American women learn to inhibit the direct expression of instrumental aggression, and instead react in other socially appropriate ways.

The following studies support this hypothesis. Maccoby and Jacklin (1974) reported that Feshback (1969) found six-year-old girls to be less accepting (more hostile) toward a newcomer than boys. In this study children were encouraged to form two person (same sex) "clubs". Badges and other materials were given to the children to encourage cohesion. Then a third child was introduced to the clubs and reactions of club members were recorded. Boys were more directly aggressive (displayed physical aggression, verbal aggression or threatening gestures) than girls. Girls were more indirectly aggressive (displayed avoiding, ignoring and excluding

behavior) than boys. Another study by Feshbach (1972) found differential aggressive responses of boys and girls reported by first grade teachers. The teachers related that boys were more physically aggressive but girls were more "mean and devious." In another study Sears and his colleagues (Sears, Rau and Alpert, 1965) distinguished boys as aggressing in an anti-social manner and girls aggressing in a pro-social manner. Anti-social acts were destructive in their effects whereas pro-social acts were more insistent or rationalized punitive actions to maintain law and order.

The above research supports the idea that females inhibit or display different types of aggression than do males. However, these findings are not conclusive. Results concerning sex typed aggression are often contradictory. Maccoby and Jacklin (1974) cited methodological problems in data collection as the cause of these contradictions.

Buss (1969) concluded from his research and observations that males and females appear to use different types of aggressive behavior. Like Maccoby and Jacklin (1974) Buss (1969) believes that the cause of these differences is difficult to verify and measure so he suggested studying different cultural ideas and human responses which may shape sex typed behavior. He believed that this might clarify the extent of environmental reinforcement in shaping appropriate aggressive responses in human males and females.

A good example of cultural differences has been reported in Mead's (1935) studies of three New Guinea Tribes. In one tribe (the Arapesh), both men and women were non-aggressive and domestic; in another (the Mundugumor), both sexes were equally aggressive, ruthless, violent and domestic; and in the third tribe (the Tchambali),

the aggressive behavior patterns for men and women were reversed from the U.S. culture. Das Gupta (1968), as reported by Lacey (1975), also found that Indian women were more aggressive than Indian men. Mead (1935) and Das Gupta's (1968) studies concluded that masculine and feminine traits were no more inherent than the sex appropriate clothes that humans wear.

The differences between aggressive responses of males and females in the U.S. culture and the cultures that Mead (1935) and Das Gupta (1968) discovered accentuate the importance of the social learning theory of aggression. In order to more clearly understand these differences it is necessary to study if and/or what types of differencial treatment parents give their sons and daughters. For a long time in this culture it was popular to assume that aggression was a masculine trait. Therefore, when Sears, Maccoby and Levin (1957) reported that mothers of boys allowed their sons to show more aggression than did mothers of girls, the results were not surprising. Through parental interviews Baumrind and Block (1967) reported that mothers of boys were more tolerant of resistive behaviors toward parents than were mothers of girls. Maccoby (1966), Lambert, Yackley and Hein (1971), and Block (1971) all found indications that fathers permitted more aggressive behavior from their daughters than from their sons, while mothers accepted aggressive behavior from sons more readily than from their daughters. Tasch (1952) reported that interviews with fathers indicated that they worried if their sons were not aggressive, whereas they had no concern if their daughters were nonaggressive. More recent studies Lambert, et al. (1971), Minton, et al. (1971), and Sears, et al. (1965), found that parents

reacted more harshly to their boy's aggressiveness than to their daughter's aggressive behavior. Recent studies conducted by Moss (1974) illustrated differential treatment shown to male and female babies by mothers. Males tended to show more fussy behavior than females (the difference was suggested to be a result of males being more prone to physical distress) which resulted in more mother-child interaction between male babies and their mothers. Mothers tended to be more vigilant in attempting to control and anticipate irritable behavior in male infants. Female babies showed more brief protesting behavior than males but they quieted themselves without as much maternal intervention as males.

There is no clear cut understanding concerning the inconsistency of the above data. One factor may be that most of the information is derived from adults reporting and observing their own actions or the actions of their peers (other adults). Maccoby and Jacklin (1974) suggest that the inconsistency may stem from the wide variety of personal definitions of aggression. Though the data is inconsistent concerning exactly how parents differentiate their responses to boys and girls it has been suggested by various authors (e.g. Biller and Weiss, 1970; Mussen and Rutherford, 1963; Sears et al., 1965; Heilbrum, 1965; and Baumind and Black, 1967) that fathers play an equal if not a more important role in their children's development of sex appropriate behavior than the mother. This is important in that Maccoby and Jacklin (1974) reported that aggression is often thought to be sex appropriate behavior for males. In a study by Mussen and Rutherford (1963) fathers of girls considered highly feminine encouraged their daughters more in sex

appropriate activities than did fathers of unfeminine girls. Sears et al. (1965) found a significant correlation between girl's femininity and father's expectations of their girl's participation in feminine activities. Heilbrum (1965) concluded from his study of the content of sex role differentiated behavior that fathers were more proficient in differentiating sex roles than mothers. Tasch (1952, 1955) interviewed fathers of boys and girls to try to explore their perceptions of the father role. Fathers reported that they more frequently used physical punishment with their sons than with their daughters. Sears, Pintler and Sears (1946) stated that on the basis of their findings in projective doll play sessions, girls with fathers not living in the home were more aggressive than girls whose fathers were present. Droppleman and Schoffer (1963), Rosenberg and Sutton-Smith (1968), and Rothbart and Maccoby (1966) conclude that differences in parent-child interactions seem to be both a function of the sex of the child as well as the sex of the parent.

The data are still inconclusive concerning how or even if parents differentiate their responses to male and female children's aggressive behavior. It is interesting to note that preconceived ideas concerning aggressive behavior are still prevalent. For example, in a study by Fagot (1973), 102 unmarried men and women (20-25 years of age) were asked to rate 38 behaviors as appropriate to 24 month old boys, girls, or equally appropriate to both sexes. Only 6 out of the 38 behaviors were sex typed. "Rough house play" and "aggressive behavior" were typed for boys by both the men and women raters. One might speculate how influential such preconceptions and stereotyping are to adult's responses to boys' or girls' aggressive behavior

To conclude this section of social learning theory, the following represents an overall conception of how social learning theorists view the way children learn aggressive behavior. In the first year or two the parents reinforce behavior they think is appropriate for their child. Their ideas usually stem from culturally approved sex roles. Thus, the child learns sex typed behavior (boys-aggressive, girls-passive) the same way s/he learns any other appropriate response rewarded by their parents. The child does not understand nor realize that there are cultural rules behind the parent's reinforcement until s/he becomes older and learns to internalize the rule, and act accordingly. In the past these internalized rules, motivating without apparent reinforcement, have been called modeling behavior. However, indications show that the young child, before seeking to model behavior, is already knowledgable in some appropriate sex role responses.

Children's Perceptions

According to Piaget (1955), adults and children perceive things differently. Children substitute a fragmentary world of their own in which everything can be simply justified. The young child's egocentrism is closely connected with his incapacity for true causal explanation and logical justification. The adult and the child function on different cognitive levels perceiving the causality of what happens around them from different vantage points. For example, a study conducted by Yarrow and Campbell (1963) found that children perceived other people's behavior differently than adults did. These children's descriptions of the behavior of their peers was found

to be extremely different than descriptions made by trained adult observers. This is important to know because, as Serot and Teevan (1965) reminded us, children react to their perceptions of a situation, not to the situation itself. Thus, exploring children's perceptions of parental behavior and attitudes would be expected to produce a clearer understanding of children's behavior (as opposed to adult's reports and observations). The following studies are concerned with differences in boys' and girls' perceptions, children's perceptions of parental responses, plus age and social class influences.

Yarrow and Campbell (1963) hypothesized that the different perceptions of boys and girls are related to different experiences, expectations and personal needs. The research of Emmerich (1959), Kell and Aldous (1960), and Kohn and Fiedler (1961) indicated that boys and girls perceived significant adults in their lives differently. For example, girls were more favorably oriented to parents and teachers than were boys. In a study conducted by Stouwie (1972) second and third grade children had difficulty in perceiving or reporting that a female can be dominant face to face to a male, or that a male can be warm face to face to a female after a brief (6-7 minute) interaction period.

Kagan (1965), Kagan and Lemkin (1960), and Hoffman (1963) reported that children perceived fathers as a major source of authority and mothers as the major source of affection. Parental roles were differentiated by seven year old children in Finch's (1955) study. The children perceived the father's role as that of an economic provider and the mother's role as a homemaker and child care provider. Obviously children recognized and defined male-female, father-mother

roles quite early in their lives. According to Cox (1962) and Jourard and Remy (1955) a child's personality can be shaped by the reactions of significant adults to the child and the attitudes that the child formulates towards those significant adults tend to generalize to others.

In regard to children's perceptions of adult controls, Droppleman (1963) reported that the same sex parent uses more direct methods (more involved, emotional types of negative behaviors defined by scales of nagging and irritability) of control than the opposite sex parent. They also reported mothers as using more indirect (more detached types of negative behaviors defined by scales of rejection, neglect and ignoring) controlling methods than fathers.

Kell and Aldous (1960) believe that most mothers have an ideology of what they want their child to be like and what they must do to encourage such behavior in their children. In return the child's perception of his mother is influenced by his contacts with her as she tries to instill in the child proper attitudes and behavioral patterns. The Kell and Aldous (1960) study sought to explore any relationship between mothers' control of children's behavior. The results indicated that males and females perceived very differential treatment from their mothers. Middle class mothers were perceived by their children as being less rigid with their sons than with their daughters.

Both age and social class have been studied and found to be significant variables in children's perceptions. Emmerich (1959), and Kohn and Fiedler (1961) found that the older a person is, the better able she is in perceiving distinctions in sex roles.

Davidson and Lang (1960), and Rosen (1961) found that the lower social class child perceived the teacher's attitudes toward him or her less favorably than the child from a higher social class.

In conclusion, children perceive causes and intentions and/or meanings of human behavior differently than adults. Therefore, exploring children's perceptions of parental responses to boys' and girls' aggressive behavior may provide more understanding of the observed differences in male and female aggression. Since age and social class have also been reported as factors affecting children's perceptions, these variables should be taken into consideration.

Summary of Literature Review

Two basic theories of human aggression have been discussed. A review of research indicates that there is support for some aspects of both theories, (i.e. certain kinds of aggression can be caused by physiological factors while other kinds of aggression can be caused by environmental factors.)

Unfortunately the study of observed differences in male and female aggression has been hampered by the assumption that males were more aggressive than females. Thus, biologists have centered their studies on male hormones and social learning researchers have focused theirs on male subjects. Studies comparing the effects of male and female hormones and male and female subjects are necessary to clarify causes of human aggression.

Many authors attribute contradictions in social learning research concerning differences in male and female aggression to the methods researchers have used in collecting their data (i.e. parental reports and rater observations), and to the limited types of aggression which have been studied (i.e. mainly physical aggression). This is a significant criticism because it has been suggested that females learn to channel their aggressive responses into verbal, indirect, or pro-social aggression; whereas physical, direct, antisocial aggressive behavior has been culturally attributed to males in the U.S. Therefore, children's perceptions of how parents respond to boys and girls engaged in aggressive behavior have been suggested as an alternate to previously used methods of data collection concerning differential reinforcements in sex typed behavior. This may prove to be a more informative method of gathering the type of data that will answer the researchers' questions. There is also evidence that children's personalities are shaped by their perceptions of other people's responses to them. Additionally, studies indicate that children perceive people's intentions and attitudes differently than adults do. These reasons strongly suggest that we need to determine children's perceptions of adult responses to boys' and girls' aggressive behavior.

In an effort to provide data consisting of children's perceptions rather than adults' perceptions of how parents respond to their sons' and daughters' aggression the following two hypotheses were formulated:

1. Children perceive that parents respond differently to boys' aggression than they do to girls' aggression.
2. Children perceive that fathers treat aggressing children differently than mothers do.

METHODS AND PROCEDURES

The description of the methodology includes an evaluation of the PPS (Parental Punitive Scale), an existing instrument used to collect children's perceptions of parental responses, weaknesses of the scale, and a brief chronological description of the development of the instrument and methodology used for this study.

Epstein's and Komorita's (1965) Parental Punitive Scale is the only instrument that has been devised to measure children's perceptions of adult responses to aggressive behavior. The PPS seems too general in its available responses, especially in collecting data regarding differential parental responses to aggressive behaviors of boys and girls. The only response alternatives in the PPS, from least to most punitive, are: (1) "Have a long talk with me;" (2) "take away my television:" (3) "send me to bed without supper:" and (4) "whip me." How accurate are these descriptions? Does "have a long a long talk with me" mean that the child is strongly criticized and shamed, or does it mean that the paret wants to help the child solve his problem? If one or both parents are using more verbal responses in dealing with children's aggressive behavior, could they be using different verbal responses for sons than for daughters?

Data collected in the formulation of the PPS revealed no "problem solving," "verbal helping behavior," or, what Afronfreed (1969) terms "inductive discipline." Since the PPS data was collected in the early 1960's it may be that parental response alternatives have shifted emphasis in the past decade, or that the scale is not sufficiently complete.

In order to more objectively and effectively measure contemporary children's perceptions of parental responses to children's aggressive behavior, a picture test was devised. This type of instrument had the advantage of controlling many variables; sex of aggressor, sex of parent and type of aggressor. This measure should identify the content of children's perceptions more accurately since the categories were determined on the basis of children's open ended responses rather than predetermined categories.

Instrument

The Picture Test for Assessment of Aggression (PTAA) consists of eight drawn pictures depicting lifelike boys and girls engaged in physical and verbal aggression against another child with either an adult male or an adult female watching. A professional artist drew eight pictures to the following specifications:

1. Each picture shows a front view of a child wither physically or verbally aggressing towards another child.
2. Only the victim's back is pictured. The sex of the victim is undistinguishable.
3. All pictures contain a full body, backside picture of an adult (whose gender is readily identifiable by attire, hair, etc.) facing the aggressive act.
4. There is no background to cue the child as to the time or place of the aggressive act.

The following situations were depicted:

1. boy hitting child with adult male watching
2. boy hitting child with adult female watching
3. girl hitting child with adult male watching
4. girl hitting child with adult female watching
5. boy yelling at child with adult male watching
6. boy yelling at child with adult female watching
7. girl yelling at child with adult male watching
8. girl yelling at child with adult female watching

After pretest 1 a simple drawing of either a boy or a girl engaged in prosocial behavior was inserted between each test picture to break up any response set. The pretest 1 pictures were placed in Appendix B. The final PTAA pictures were presented in Appendix E.

Pretests

To establish the precision of the instrument, the best procedure for administering the test, the most appropriate age level for subjects, and the reliability of the instrument, three pretests were required. First, the pictures were redrawn to clarify the gender of the aggressor, the identity of the victim, and the uniformity of the adults' posture. Secondly, it was determined that questions which were prefaced with, "What do you think...?" yielded more frequent and extensive responses from children. All questions were changed accordingly. Thirdly, three different ages (four, five and nine year old) levels were tested. After examining the data,

it was decided that fourth grade (nine year old) subjects would be used because they gave less repetitive, more extensive and informative answers. Finally, a test-retest yielded a reliability quotient of 77% for the fourth grade students' perceptions. A detailed description of the procedures and conclusions concerning the three pretests were recorded in Appendix A.

Sample

The subjects who were used to test the hypotheses of this study were 52 fourth grade children (26 boys and 26 girls) attending Higbee Elementary School in Idaho Falls, Idaho. In order to control for socio economic status, Higbee school was selected because it is located in an upper middle income area in Idaho Falls, Idaho. Consequently, the children were from upper middle income homes. All subjects were Caucasion. All fourth grade subjects who attended school on the selected testing afternoons participated except one child who had not returned his permission slip. Data from three children were not used because both parents were not present in the home.

Test Administration

The PTAA was individually administered at the school the subject attended. Each child was called out of his/her classroom and directed to the testing room by the experimenter. The procedure was identical to that of the previous pretests except that the adult in the test pictures was identified as either a mother or a father rather than "the woman" or "the man."

After the subject had entered the testing room the female experimenter said,

> "Hi! We're not going to sing today but would you be willing to answer some questions for me about some pictures I have?
>
> I have my tape recorder here so I'll turn it on, O.K.?
>
> Because you are willing to help me you will receive some sugarless gum when we are finished. This is not a test. There are no right or wrong answers. I want you to tell me what you see in the pictures or what you think will happen. It's fun and easy. Let's start."

The experimenter showed each subject one picture at a time and asked the following questions:

1. What do you think is happening in this picture?
2. What do you think that the mother (father) will do?

If the subject gave too general of an answer such as, "He'll punish the little boy." then the experimenter picked the cue word (in this example, punish is the cue word) from the child's response and asked another question to clarify the child's response. For example, "What kind of punishment do you think the father will give his son?" When the relief pictures were shown the experimenter asked only the first question.

Scoring

In order to facilitate scoring and data analysis the following list of 39 perceived adult responses to the pictures of boys and girls aggressing were assessed and classified:

Have them talk it over

Try and make them friends again

Ask, "Why did you do that?"

Help 'em solve their problems

Have a little talk

Tell them to stop

Tell 'em you're sorry

Tell him to hit the boy back

Tell him to be nice

Ask her nicely to quit doing that

Say cut that out

Go play a game

Go play with your toys

Suggest something for them to do

Go watch TV and knock it off

Scold

Get mad

Say, "It's not nice to hit another person."

Get mad cause girls don't fight boys

Yell back

Tell not to hit or he'll get in trouble

Spank

Whip

Spank and go to bed

Smack him

Hit back

Slap

Ground him/her

Send to room

Go outside (inside) and make her/him do work

No more playing

Sit in the corner

Go to bed

Send friend home

Bring inside

Do some chores for punishment

Send to bed without food

Set them apart

Do nothing

Assessment of these 39 perceived responses were categorized into five basic categories:

Verbal Help - Any adult verbal helping or problem solving response in which the adult encourages the children to talk about their fighting.

Verbal Direction - Any verbal response directing (redirecting) the child (or children). The adult tells the child what to do without conveying anger and/or punishment.

Verbal Discipline - Any verbal response indicating disapproval or reprimanding the child such as lecturing, warning, getting mad, or talking angrily.

Physical Punishment - Any response indicating physical harm to the aggressor such as slapping, hitting, spanking.

Physical Restriction - Any response which physically restricts the aggressor from being free to do as he wants to do. Punishment is obvious.

Combinations - All combinations were recorded under appropriate separate headings denoting the exact combination.

As responses were categorized, whenever a "get mad" response was accompanied with a physical punishment or physical restriction response and there was no other reference indicating that the "get mad" was a verbal reaction then it was considered to be an aspect of the physical punishment or restriction response not a combination.

To insure scorer reliability two individuals independently scored all responses. There were discrepancies on 38 or 9.1% of the total responses. The interscorer reliability was 90.9%.

Categorization of the data produced 11 response categories: the five previously mentioned categories, five combination categories and one "do nothing" category. These eleven categories were originally used to test both hypotheses (see Appendix F). However, in an attempt to clarify the data and facilitate the analysis of more variables, the eleven categories were condensed into four major categories: verbal discipline, verbal help plus verbal direction, physical punishment, and physical restriction.

Data Analysis

Chi square was used to analyze the data and establish differences between children's perceptions of the manner in which parents respond to boys and girls when they aggress. The level of confidence used in this study was .05.

FINDINGS

The purpose of this study was to determine if fourth grade children perceived that boys and girls who aggressed towards another child were treated differently by fathers and mothers.

The hypotheses in this study were:

1. Children perceive that parents respond differently to boys aggressing than they do to girls aggressing.
2. Children perceive that fathers treat aggressing children differently than mothers do.

Hypothesis One

The results of testing the first hypothesis are presented in Table 1. As can be seen, the subjects did not perceive any significant differences in the way boys and girls were treated when they aggressed.

It can also be seen from Table 1 that children perceived parents using verbal help and direction more often than verbal discipline. However, girls were seen receiving more verbal punishment than boys. Physical punishment was perceived as being used more often than physical restriction. Physical punishment and verbal help plus direction were used about an equal number of times for boys and girls.

Table 1

Children's Perceptions of Parental Responses to Aggressing Boys and Girls

Perceived parental response	Sex of the aggressor in the picture			
	Boy		Girl	
	N	%	N	%
Verbal discipline	19	9.2	28	13.5
Verbal help + direction	69	33.3	66	31.9
Physical punishment	69	33.3	65	31.4
Physical restriction	50	24.2	48	23.2
	207[a]	100.0	207	100.0

Degrees of freedom = 3 Chi square = 1.9502 N.S.

[a]The total number of responses for pictures of boys aggressing was 208 (4 test pictures of boys aggressing X 52 subjects = 208.) The total number of responses for pictures of girls aggressing was was also 208. Two responses were eliminated because they fit none of the response categories. This left both totals at 207 rather than 208.

Hypothesis Two

The results of testing the second hypothesis are presented in Table 2. Children perceived fathers responding primarily the same way they perceived mothers responding to children aggressing. There was a tendency for mothers to be perceived as using more verbal discipline than fathers, while fathers were perceived as using more physical restriction than mothers. These differences were not statistically significant, however.

Table 2

Children's Perceptions of Mothers' and Fathers'

Responses to Aggressing Children

Perceived parental responses	Sex of the adult			
	Father		Mother	
	N	%	N	%
Verbal discipline	18	8.7	29	14.0
Verbal help + direction	63	30.4	72	34.8
Physical punishment	68	32.9	66	31.9
Physical restriction	58	28.0	40	19.3
Total	207[a]	100.0	207	100.0
Degrees of freedom = 3	Chi square = 6.5104		N.S.	

[a]The total number of test pictures with a male adult observing was 4. Fifty-two boy and girl subjects gave their perceptions of how the father would respond. Total perceptions of a father responding equalled 208. This was the same for perceptions of a mother responding. However, one female subject perceived that both the father and the mother would "do nothing" to a girl and a boy aggressor in two different pictures, causing the total of each category to be 207 rather than 208.

The findings of this study provide no support for either the first or the second hypothesis. Chi square tests indicated that fourth grade children perceived no differences in the way boys and girls are treated when they aggressed nor in the way fathers and mothers treated children when they aggressed.

Despite the lack of significant differences concerning the hypotheses, when the data were being tabulated it appeared that the boy and girl subjects responded differently. Thus, the data were further analyzed to investigate this observation.

Additional Findings

This section includes the results of chi square testing to determine any differences between perceptions of male and female subjects, an explanation of how the data were reanalyzed, and a report of the outcome of the reanalyzed data. Findings concerning the perceived gender of the neutral figure (the victim) in the test pictures have also been presented.

The results of testing differences in male and female subjects; perceptions of parental responses to children aggressing is presented in Table 3. It should be noted that females' perceptions are significantly different at the .005 level of confidence from males' perceptions.

As Table 3 shows, 68 percent (39+29) of male subjects' perceptions of parental responses to aggressing children were physical type responses compared to 44 percent (26+18) of the perceptions of the female subjects.

Verbal help plus direction is the only parental response that is nonpunitive. This category includes verbal helping responses such as, "he'll help the child work out the problem" and redirecting statements such as, "go watch TV" or "go play a game." Girls perceived that parents would respond to children aggressing in this nonpunitive manner more often than boys did. Even though boys perceived parents

responding with verbal type responses (combination of verbal help plus direction and verbal discipline) much less than girls; the boys perceived that parents would use more verbal discipline responses than the girls did.

Table 3

Perceptions of Parental Responses to Aggressing Children by Sex of Subject

Perceived parental responses	Sex of the subject			
	boys		girls	
	N	%	N	%
Verbal discipline	30	14.4	17	8.3
Verbal help + direction	36	17.3	99	48.0
Physical punishment	81	39.0	53	25.7
Physical restriction	61	29.3	37	18.0
Total	208	100.0	206[a]	100.0

Degrees of freedom = 3 Chi square = 44.7265 P=.005

[a]Twenty-six male subjects viewed eight pictures of either a boy or a girl aggressing. There were 208 responses from male subjects. There were also 208 responses from the female subjects but two responses could not be coded into any of the response categories. These two responses were from a female subject who stated that the parent would "do nothing."

Both male and female subjects perceived parents using more physical punishment than physical restriction (39 percent vs. 29 percent, and 2 percent vs. 18 percent). Girls perceived parents using the non

punishing response, verbal help plus direction, more often than any other type of treatment to children aggressing. Male subjects perceived parents using physical punishment more often than any other type of response to children aggressing.

Given these findings, a re-examination of the original hypotheses seemed critical. The data were analyzed again examining the effects of the sex of the parent, the sex of the aggressor, the type of aggression (physical or verbal) and the sex of the subject. In order to accurately test four types of independent variables and possible variable interactions the Utah State University computer was employed in analyzing the data. Goodman's loglinear model was implemented. All variables were tested and as previously discovered only the interaction between the sex of the subject and the type of perceived parental response was found to be significant. A detailed description of the computer analysis and results are reported in Appendix G.

In each test picture the aggressee (victim) was depicted as a child whose gender was undistinguishable. As reported in Table 4, chi square testing indicated no significant differences at the .05 level between male and female subjects' perceptions of the gender of the victim.

As can be seen by Table 4, about 50 percent of both male and female subjects perceived the neuter victim as a "person" of undistinquishable gender. However, both boys and girls perceived the victim as a male more often than they did as a female.

Table 4

Children's Perceptions of the

Sex of the Victim

Perceived sex of the victim	Sex of the subject			
	Male		Female	
	N	%	N	%
Boy	76	36.5	56	25.9
Girl	31	14.9	44	21.2
Neutral figure	101	48.6	108	51.9
Degrees of freedom = 2	Chi square = 5.518		N.S.	

Discussion

Although the literature review indicated inconsistant findings concerning how parents differentiate their responses to boys and girls, there is considerable evidence that adults treat boys and girls differently. Rothbart and Maccoby (1966) concluded in their literature review that fathers treat boys and girls somewhat differently than mothers treat boys and girls. These findings stimulated the formulation of the hypotheses for this study. Instead of studying adult reports and observations, children's perceptions of adult responses to children's aggression were collected. The findings indicated that children perceived no differences in the way men or women treat boys and girls when they aggress. However, further analysis indicated the perceptions of male and female subjects were different at the .005 level of significance. Male subjects reported that they thought parents would respond more often with physical rather than verbal type responses. Female subjects reported that they thought parents would more often respond with verbal rather than physical type responses.

The problem seemed obvious in that the original hypotheses should have separated the data by the subjects' gender (i.e. 4th grade boys' perceptions should have been separated from 4th grade girls' perceptions rather than grouped together and referred to as "children's perceptions") and then analyzed. When this was done, it was found that boys perceived (68.3 percent of their perceptions) both boys and girls as generally receiving physical type responses, while

fourth grade girls more often perceived (56.3 percent of their perceptions) both boys and girls as receiving verbal type responses from both fathers and mothers. Boys' perceptions were significantly different from girls' perceptions.

Verbal help plus direction was the only category that contained nonpunishing parental responses. If parents responded in a helping manner they merely "helped the child solve his problem" by asking questions or encouraging the children to talk about the problem. If parents responded in a directive manner, they told the child what to do such as, "go watch TV," or "go play a game." Female subjects perceived that adults would respond in a nonpunishing manner twice as often as male subjects did. It was also interesting to note, that even though boys perceived adults responding verbally much less than girls, the boys perceived that adults would verbally punish (verbal discipline) children more often than girls did. In other words, male subjects perceived that adults would punish aggressing children more often than female subjects. Female subjects perceived that adults would help plus direct aggressing children more often than male subjects.

Why these differences in male and female perceptions exist is not clear. Could it be that the subjects perceived parents responding to children aggressing in the way that the children themselves are treated when they aggress? It is difficult to understand why nine-year-old boys and girls would not perceive differential treatment by men and women if they consistently learn, generalize, imitate, receive reinforcement, receive punishment and/or through a process

of identification recognize and imitate gender appropriate behavior. One might hypothesize that the significant differences in boys' and girls' perceptions stemmed from differential treatment from adults but that the boys and girls in this study were so egocentric they did not recognize that boys and girls receive different treatment. Each child merely assumed that adults respond to others the same way that adults respond to him/her.

Data concerning the perceived gender of the victim basically supports previous findings in that both males and females perceived the victim of aggression as a male more often than they did a female. However, about 50% of both the male and female subjects in this study perceived the victim exactly as "it" was depicted: a child of undistinguishable gender.

Maccoby and Jacklin (1974) reported that there are no clear cut answers as to why males are perceived as the victims of aggression more often than females. In their review of literature it was reported that girls and women were less often the objects as well as the agents of aggressive action. After exploring various hypotheses (i.e. girls are non-reactive to aggressive acts, boys give positive reinforcement to aggressive acts, boys are more active than girls, etc.) Maccoby and Jacklin could not find support for any particular hypothesis. They concluded that aggression is learned but that biological functions might also be determining factors in the apparent sex differences in aggressive behavior. However, this study strongly suggests that the reason girls and women are less often the objects rather than the agents of aggressive actions, is because boys perceive

that children are taught (i.e. parents model and negatively reinforce) and/or are put in a positions (restricted and thus frustrated) to aggress more often than girls.

Implications

Research seems to indicate that verbal responses to children's aggressive behavior might be more advantageous to children than physical responses. These implications primarily address this issue and also indicate which type of verbal response would be most beneficial to both boys and girls.

Maccoby and Jacklin (1974) reported in their literature review that girls have greater verbal abilities than boys. The results of this study indicate parents respond to girls' aggression more often in a verbally rather than a physically disciplining manner. This may be a reaction to their daughter's greater verbal fluency or a contributing factor to girls having greater verbal skills. If it's the latter, boys are being disadvantaged.

Another possible advantage to the female is related by McCandless (1968) in that physical punishment is likely to turn a child into a rebel and rebels are usually punished in our society. This may be another source of continued learned aggression for the male. Since our society appears to be presently changing it's values from an aggressive, power welding leadership style to a more contemporary, supportive, verbally skilled leadership style geared to guiding groups toward agreement rather than an imposition of one's will on another, it may be wise to look at and reconsider parental responses to boys in terms of what we want to teach.

It appears that adults should study the consequences of their responses to children's aggression and act according to their values. For example, Afronfreed (1969) reports that a number of studies suggest the use of reasoning or explanations by parents in disciplining situations to be positively correlated with a child's future skills of positive self direction. Even if males prove to be innately predisposed towards aggression it appears that parental responses to children's misbehavior may have a significant effect on their future emotional and social development.

Limitations of this Study

The two primary limitations concerning this study are variable control and independence. The ultimate original limitation of this study was in not considering and testing for the sex of the subject. However, this limitation was corrected and the study yielded interesting results. Another possible limitation was independence. A common assumption in chi square testing is that each test is independent. In other words, each test picture should not have affected the subjects' responses to the following test picture. Unfortunately, it was impossible to determine independence. Often times subjects' perceptions were similar from one picture to another but whether or not this was due to a lack of independence or the actual perception of the child is not known. However, one relief picture (a non test picture depicting pro-social behavior) was placed between each test picture in an attempt to limit repetitive, non attentive, dependent perceptions.

SUMMARY AND CONCLUSION

Summary

The purpose of this study was to investigate and compare children's perceptions of fathers' and mothers' responses to pictures of boys and girls engaging in aggressive behavior. Fifty-two fourth grade children from an upper middle economic school in Idaho Falls, Idaho constituted the sample for this study.

The data were collected by the use of a picture test consisting of eight pictures of either a boy or a girl physically or verbally aggressing towards a child of undistinguishable gender. Either a father or a mother was depicted as watching the aggressive act. The subjects were asked to tell what they thought the mother or the father would do. Children's perceptions were recorded and then categorized. Chi square testing was used to identify any significant findings.

This study investigated the following hypotheses:

1. Children perceive that parents respond differently to boys aggressing than they do to girls aggressing.
2. Children perceive that fathers treat aggressing children differently than mothers do.

There was no support for either of these hypotheses. The fourth grade children in the sample did not perceive differential treatment to boys and girls or differential treatment from fathers and mothers during

aggressive situations. However, further analysis indicated that when the data were separated by the gender of the subjects and compared, the perceptions of male subjects were significantly different at the .005 level from the perceptions of female subjects. Again the data were separated by gender of the subjects and differences between parental responses to boys and girls, between fathers and mothers, and between physical and verbal pictures of aggression were tested. Combinations of variables were also analyzed but no significant differences were found except by the sex of the subject. Male subjects perceived parents responding to children aggressing with a physically punishing or restricting response more often than female subjects.

There was only one response category where the adults were primarily nonpunishing; this was verbal help plus direction. When the adults responded in this manner they either "helped the child work out the problem" or they told the child what to do rather than punish or get angry at him/her. Forty-eight percent of the girls perceived parents responding in the nonpunishing manner but only seventeen percent of the boys perceived adults responding this way.

Conclusion

In conclusion, the results of this study did not support the hypotheses. The fourth grade subjects did not perceive that parents treat boys differently than they treat girls when they physically or verbally aggress. However, when the subjects' responses were separated by the sex of the subject, male subjects' perceptions

were found to be significantly different than female subjects' perceptions. Male subjects perceived parents using physical type responses more often than verbal type responses. Female subjects perceived adults using verbal type responses more often than physical type responses. Even though both boys and girls perceived that adults usually punish aggressive behavior, girls perceived that parents help and direct aggressing children more often than boys.

Suggestions for Further Study

Several areas of investigation for further study are suggested by the present study. Age and culture are recommended. It is evident that more studies using subjects of various ages would be interesting. However, studies with samples from populations with dissimilar backgrounds and characteristics might yield the most significant findings in reference to learning about a specific socialization factor (parental reinforcement) as a cause of differences in male and female aggression.

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APPENDIXES

APPENDIX A

Description of Pretests

Pretest No. 1

Sixteen four-year-old boys and girls attending the Weber State College Nursery School in Ogden, Utah were subjects for the pretest. In an effort to build rapport and insure that subjects were unafraid and cooperative before and during the testing procedure the experimenter spent about ten minutes with the group of subjects singing songs before the day of data collection.

On the test day, each subject was individually called from his or her classroom and interviewed by the experimenter in a separate room. A tape recorder was placed on the table and each subject granted permission for the interview to be recorded. The experimenter showed each subject one picture at a time and asked questions according to the following procedure:

1. "What is happening in this picture?"

   If the child did not describe the adult's response from this first question the experimenter asked,

   "What about the man (woman)?"

   After the child described what he thought the adult would do or say then the experimenter re-defined the sex of the adult and asked,

2. "Will the man (or woman) do anything else?"

When the subject had finished she/he was offered a piece of sugarless gum and was thanked for talking with the experimenter.

Results of this pretest suggested that two of the pictures needed to be redrawn to clarify the gender of the female aggressor. Most of

the subjects perceived the girl aggressor in two of the pictures as a little boy. It was also noted that the subjects tended to give quick, repetitive responses to test pictures. This indicated that four-year-old children might be too young for this type of test. Two older age groups were selected for the second pretest. It was also concluded that pictures of animals or children playing should be interspersed between test pictures to break up any response set.

Pretest No. 2

Sixteen five-year-old and twenty nine-year-old boys and girls attending the Higbee Elementary School in Idaho Falls, Idaho were subjects for the second pretest. The test pictures had been revised to clarify the gender of the female aggressor. Eight pictures of either a boy or girl engaged in pro-social behavior were selected. One of these pictures was placed between each test picture and the next to break any possible response set. The procedure was identical to pretest no. 1 in all other ways.

Results from this pretest indicated that the experimenters needed more training (one experimenter did not follow precise testing procedures and added judgemental comments or asked additional biased questions such as, "You mean your Dad never spanks you?"), more precise questions needed to be used (the words man or woman needed to be changed to father or mother so that principal, teacher, aunt, etc. would not be referred to), and the procedure had to be more flexible. The experimenter needed to feel free to pick up on the child's cue and ask probing questions to find out what "bad trouble", "punish hard", etc. meant. Often times during the testing period a child

would answer, "I don't know." When this happened one of the experimenters said, "There is no right or wrong answer. What do you think is happening?" Then the child would proceed to answer the question. This indicated that more success would be gained if the questions were re-worded to include, "What do you think?" at the beginning of each question. Questions were changed accordingly.

Pretest No. 3

The following year after pretest no. 2, twelve five-year-old and sixteen nine-year-old subjects from the Higbee Elementary School were selected for the third pretest. Changes discussed in the results of pretest no. 2 were incorporated. The questions used to collect data were changed to ask what the subject thought was happening and the adults in the pictures were referred to as "mother" and "father." The experimenter was free to ask additional probing questions if the subject's answers were ambiguous.

This pretest was set up as a test-retest to establish the reliability of the instrument. Two weeks after the pretest was given, the same children went through the test procedure again. When comparing each child's individual responses on the two tests 77% of the time fourth grade students and 76% of the time kindergarden students answered questions identically or identically with elaborations (See Appendix D).

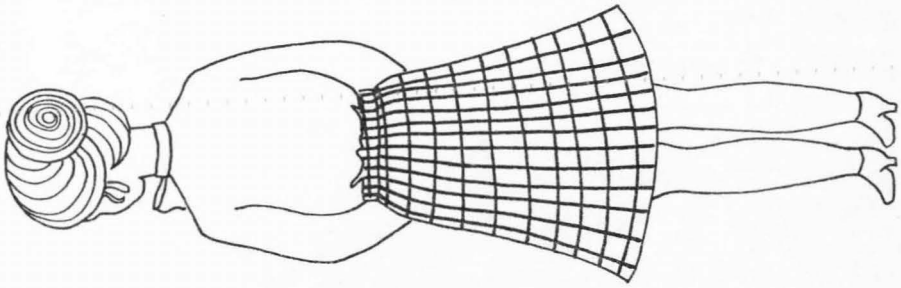
A comparison of the answers of the five and nine-year-olds suggested that the five-year-old children were not always able to perceive differences between test pictures. Five-year-olds would even comment that the pictures were all "the same." Answers from

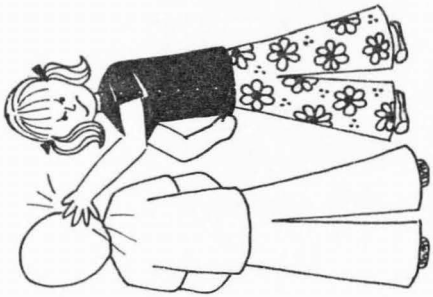
five-year-olds were usually simple and repetitive. This was not the case for the nine-year-old subjects. Piaget (1955) offers a plausible explanation for these differences. He states that children younger than eight years of age do not have the ability to perceive a picture in its entirety. In addition, the young child is extremely egocentric, which has the effect of making him unable to view situations from other peoples' viewpoints. Both of these inabilities of the young child provided explanations of why this picture test might be an inappropriate instrument to use with children under 7-8 years of age. Based on Piaget's general suggestions for age levels and on the nine-year-olds' perceptions gathered in this pretest, nine-year-olds were selected as the appropriate age level for subjects for the final test.

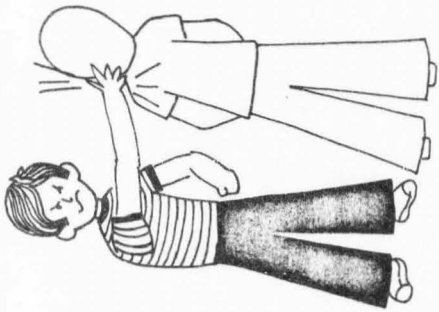
A close examination of the data indicated that the following changes would be beneficial. First, the posture of the verbal aggressor needed to be facing the victim more directly to ensure that the subject knew to whom the aggressive act was directed (two subjects perceived that the child in the test picture was verbally aggressing towards the adult rather than the child-victim). Secondly, the arms of adults in all of the pictures needed to be held in front of their bodies to control for possible biases introduced by different postures. The pictures were redrawn accordingly (See Appendix E).

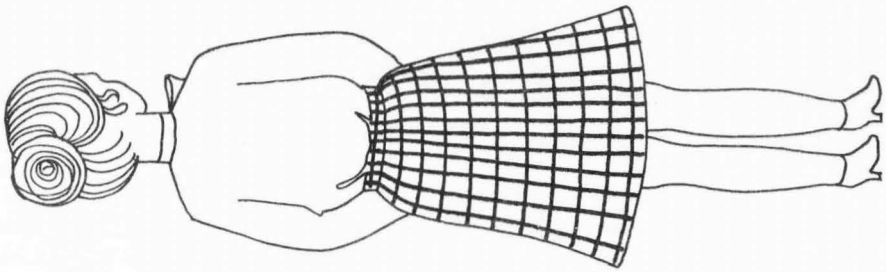
APPENDIX B

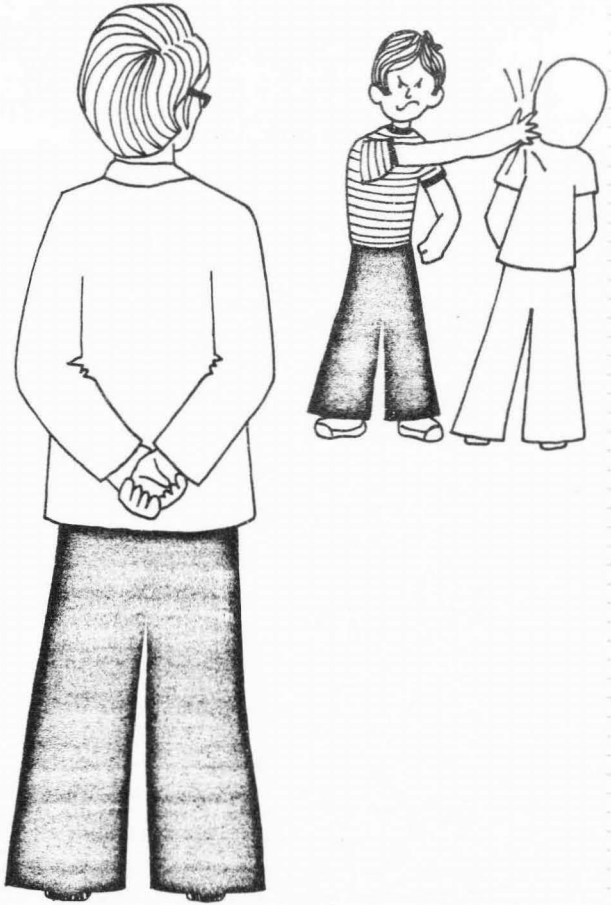
Pretest Pictures

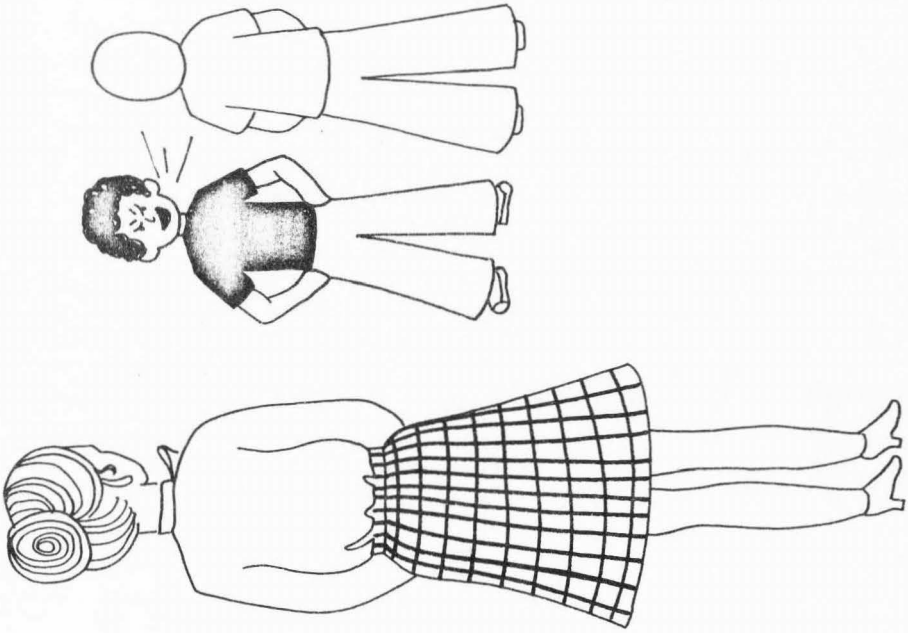


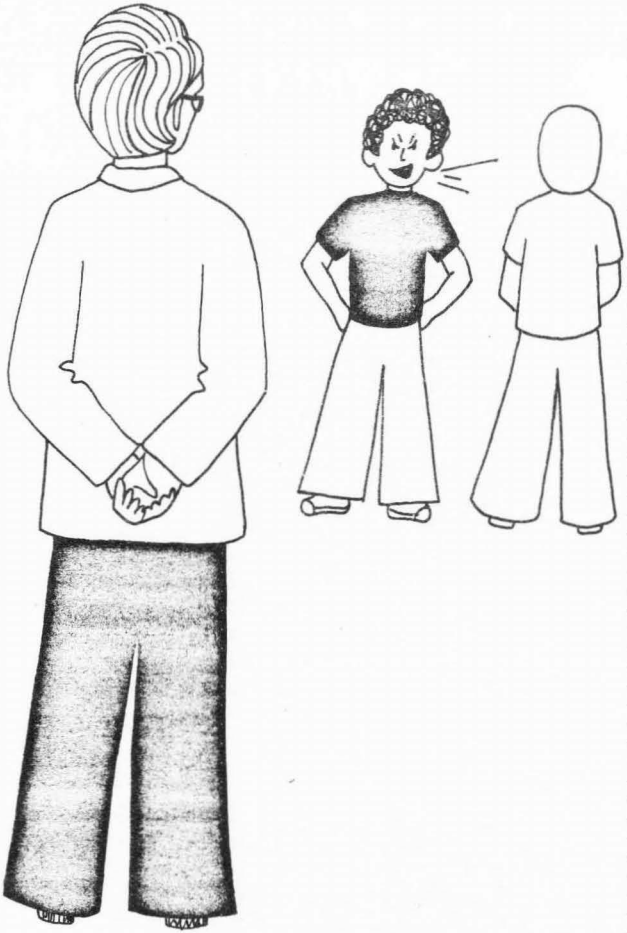


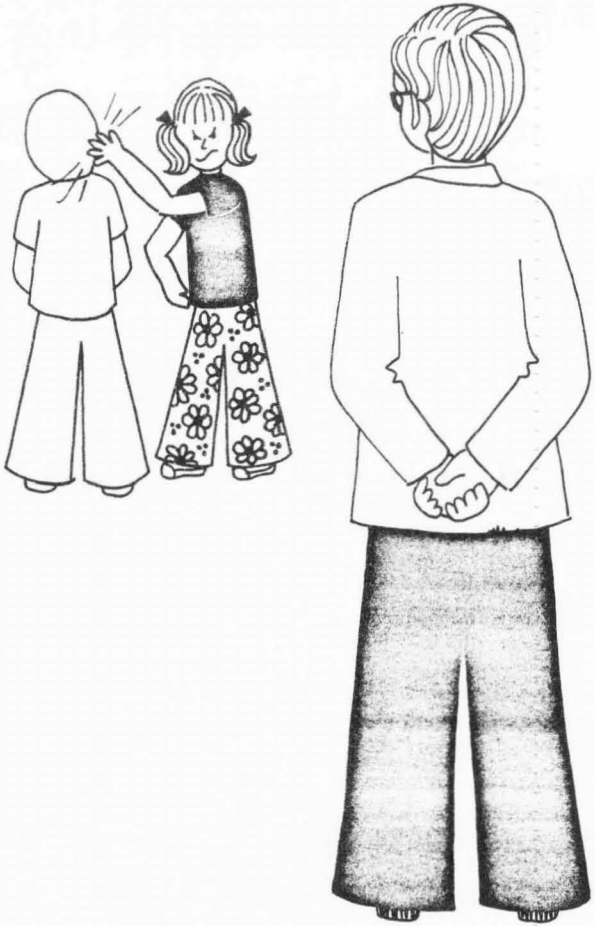


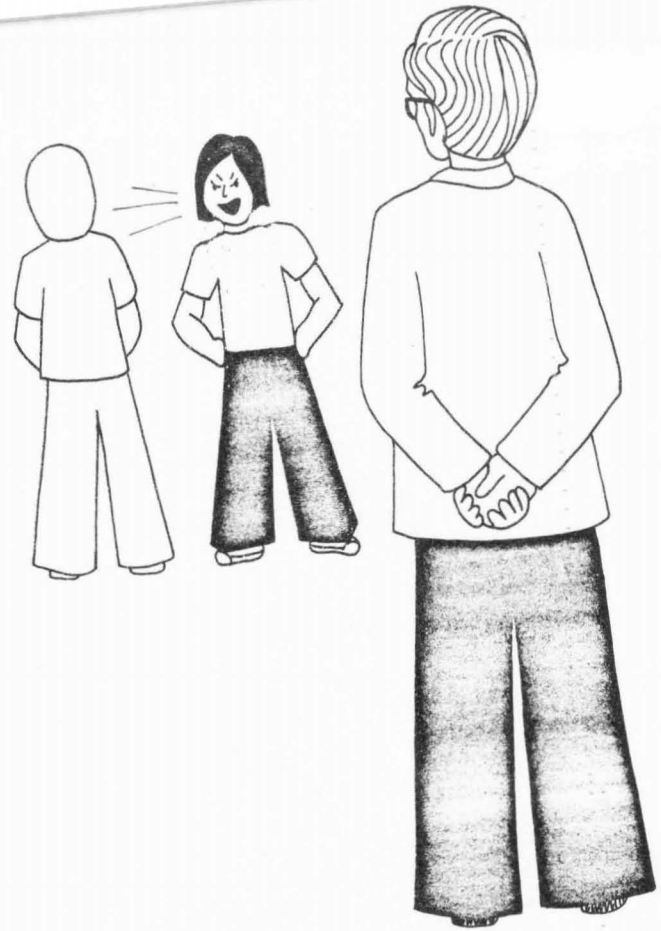


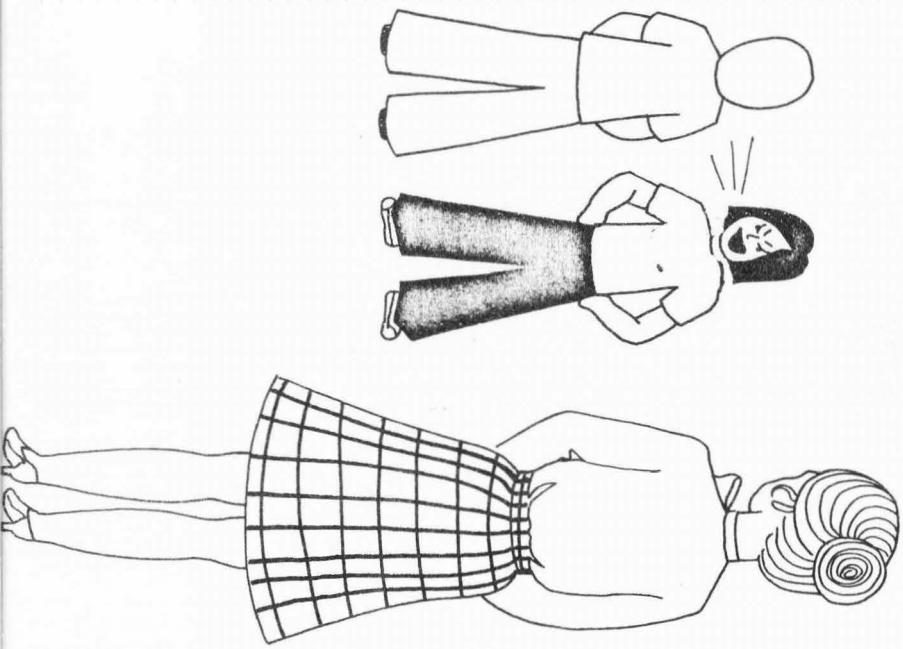












APPENDIX C

Pretest No. 3, Test-Retest Results

Fourth Grade Boys and Girls

% Identical Test-Retest Responses	N
100.0%	4
87.5	4
75.0	4
62.5	1
50.0	1
37.5	2
25.0	0
12.0	0
	16

$\bar{X}$ = 77%

Kindergarten Boys and Girls

100.0%	5
87.5	1
75.0	2
62.5	1
50.0	1
37.5	1
25.0	1
12.0	0
	12

$\bar{X}$ = 76%

APPENDIX D

Permission Letter

Dear Parents:

I am a graduate student at Utah State University in the Family and Human Development Department. I have been granted permission by the Idaho Falls elementary school administration, your child's principal, and your child's teacher to collect the required data I need to complete my research at Utah State University.

The purpose of this letter is to inform you of my plans and to confirm your permission for me to include your fourth grade child in my study.

I am studying how children perceive common human interactions and situations. I plan to call each fourth grade student attending your child's school out of his/her classroom for several minutes to show him/her 15 cartoon like pictures of children engaged in everyday activities. I will then ask each child several questions in an attempt to find out what they see in the pictures. There are no right or wrong answers. This is not a test of any kind. I am only interested in trying to understand fourth grade children and how they perceive their world.

Thank you for taking the time to read this letter. Without this paper signed and returned to me I will not feel free to include your child. Your cooperation will be appreciated.

Sincerely yours,

Kari B. Rohrbach

I have read the above information and give permission for my child to participate in this project.

_____

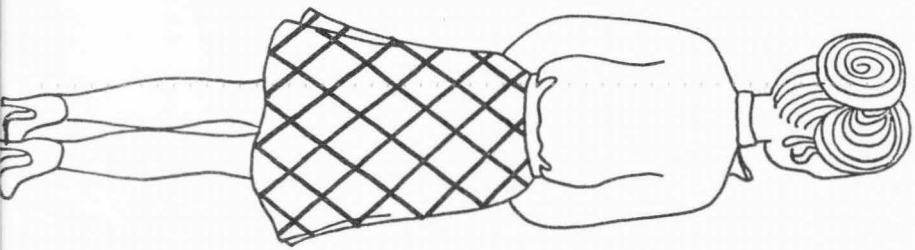
Parent Signature

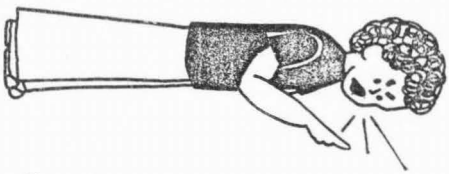
_____

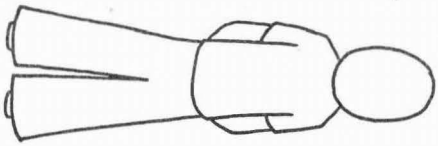
Child's Name

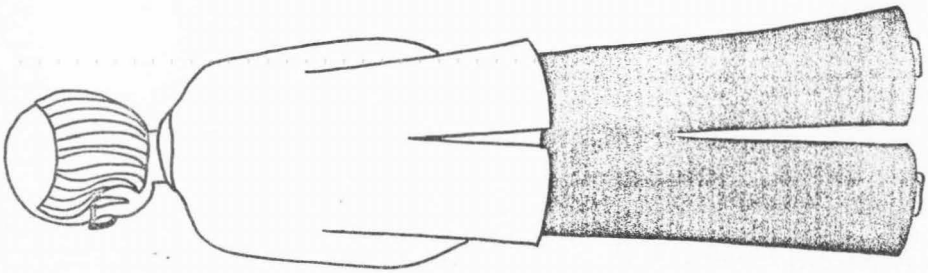
APPENDIX E

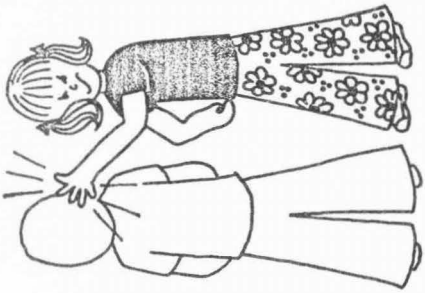
Test Pictures



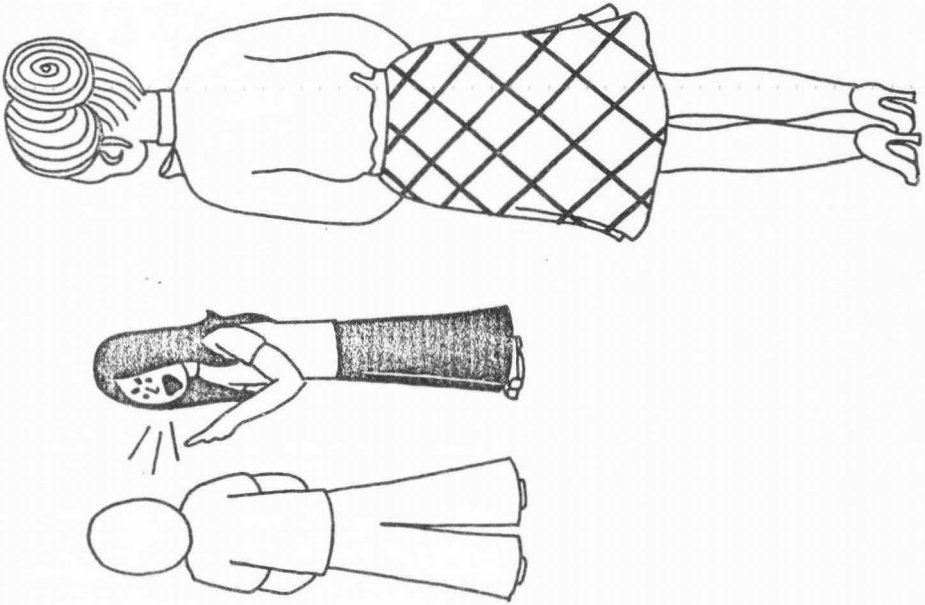


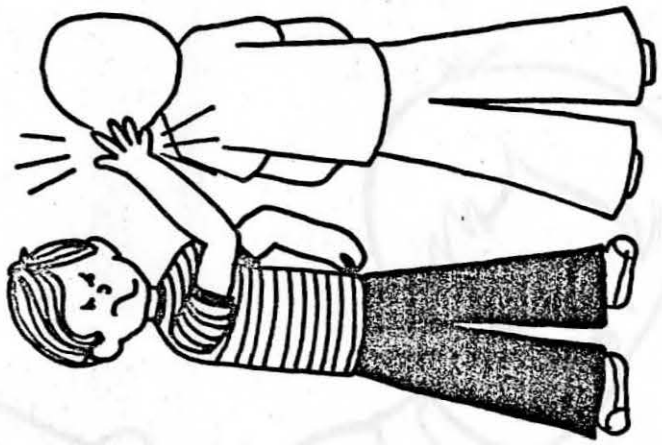


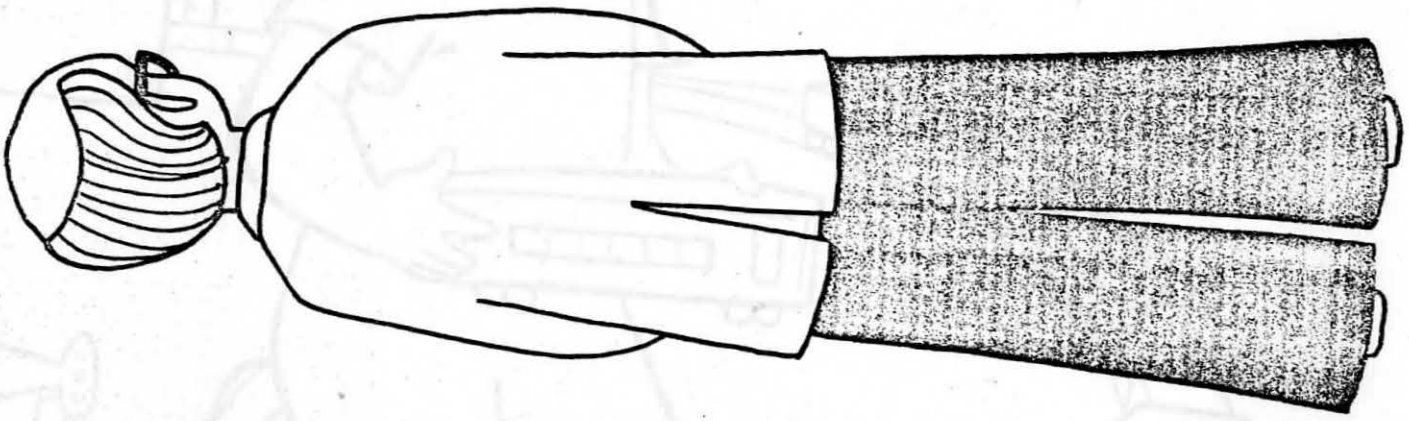


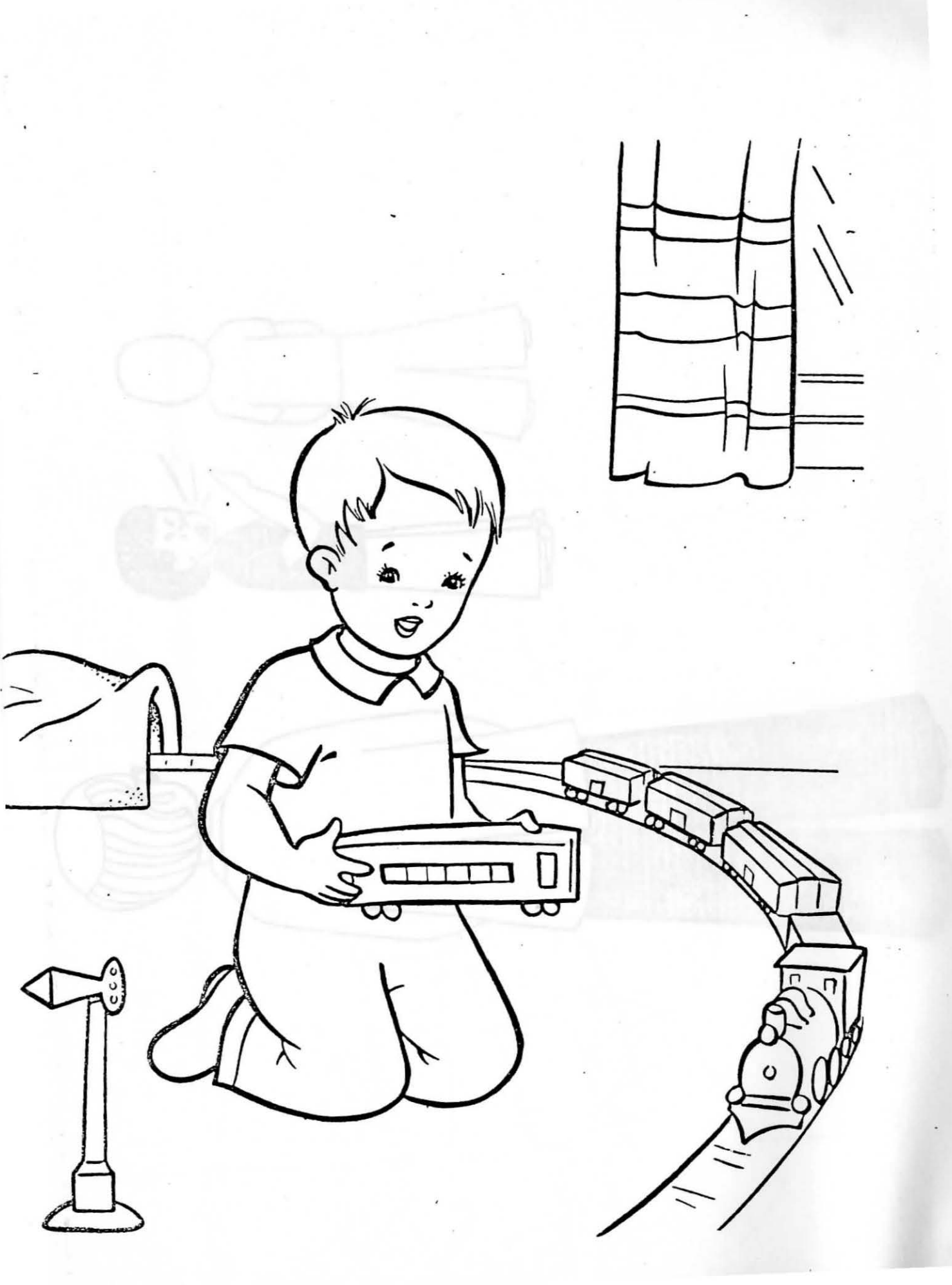


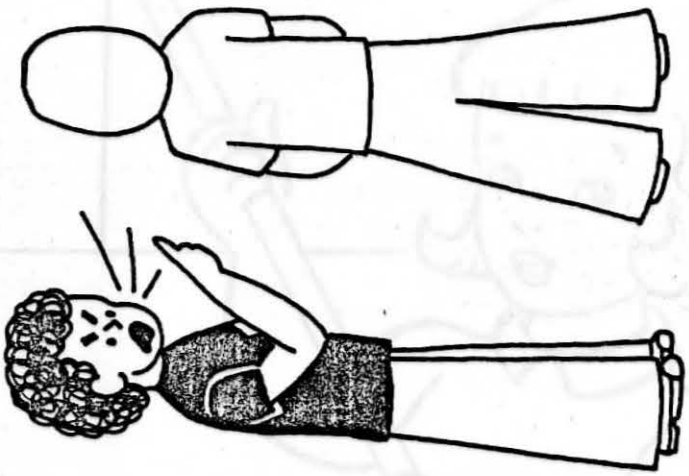

RICE

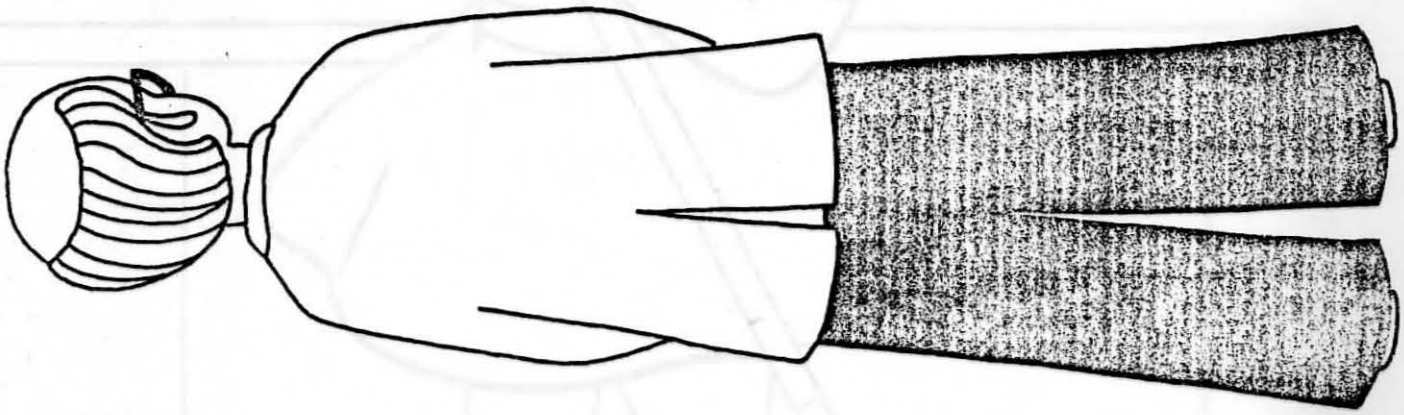


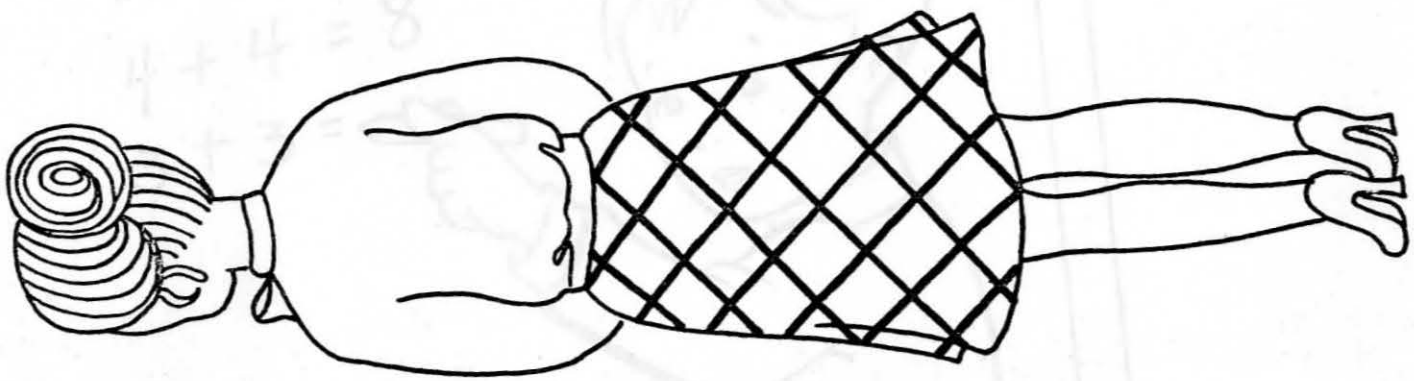


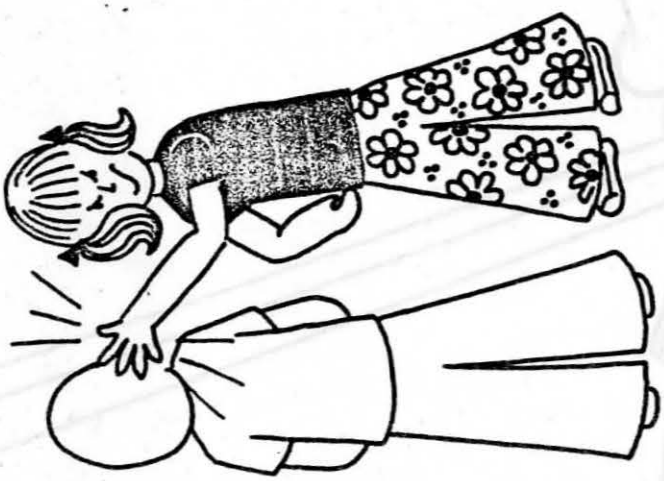


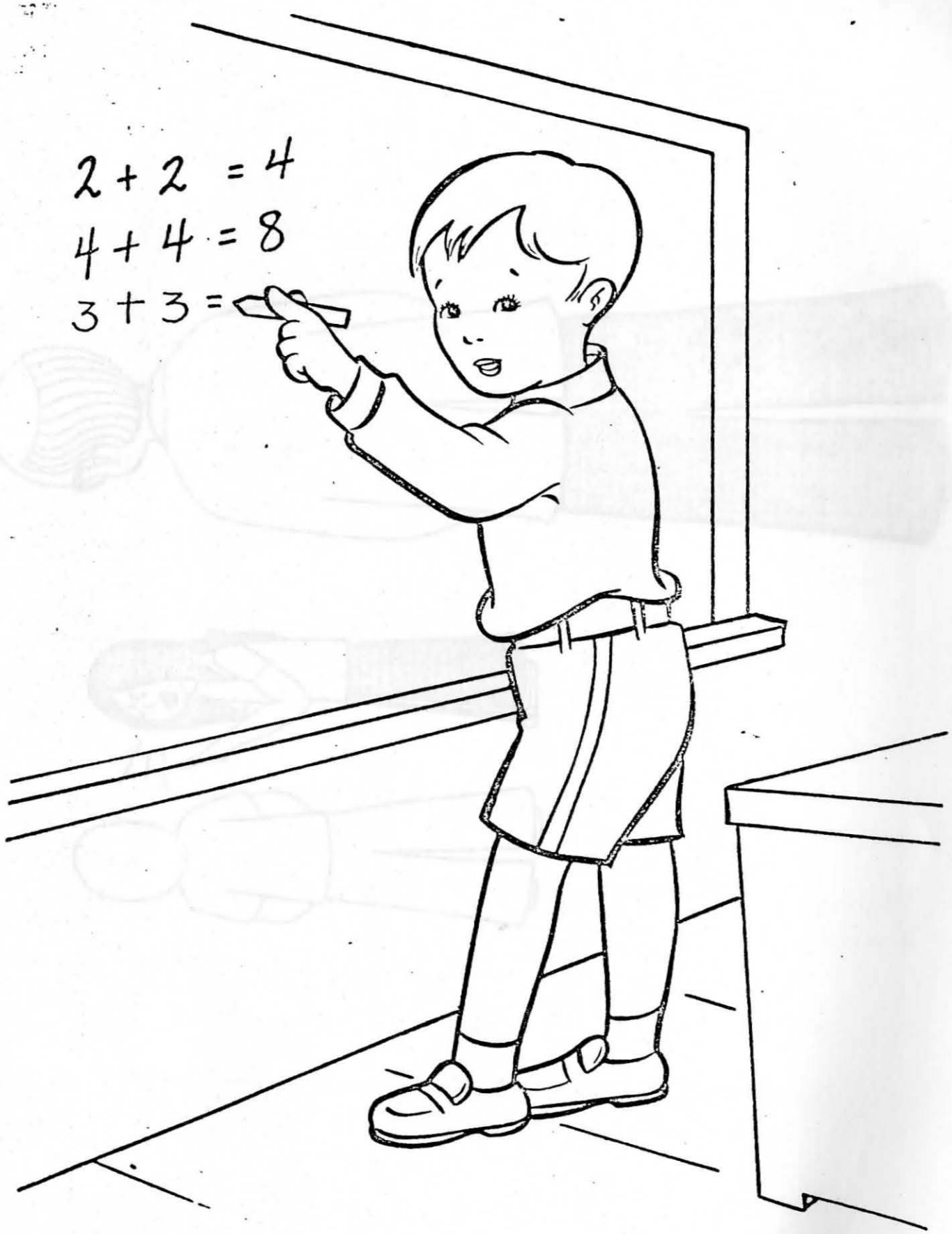








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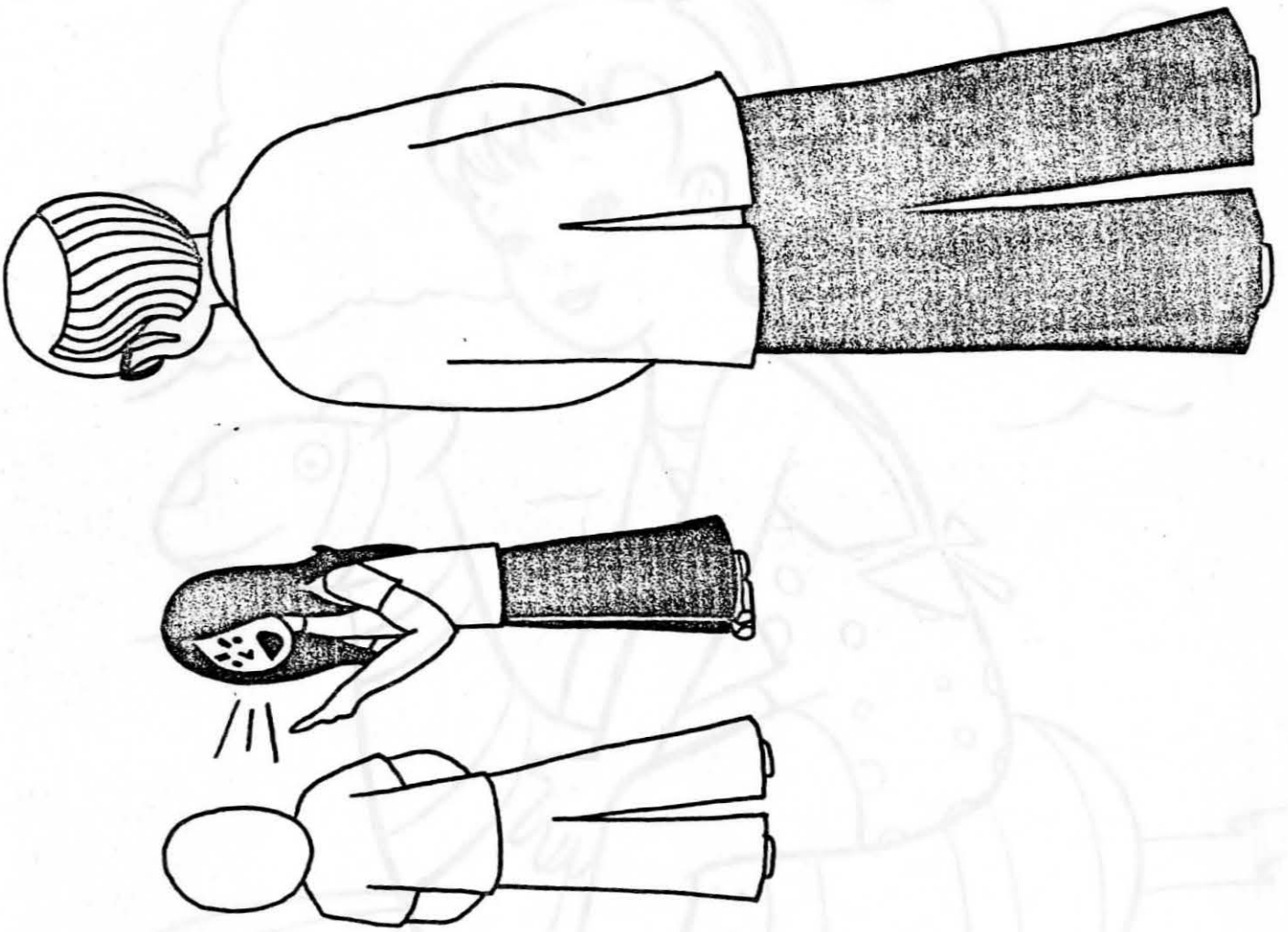
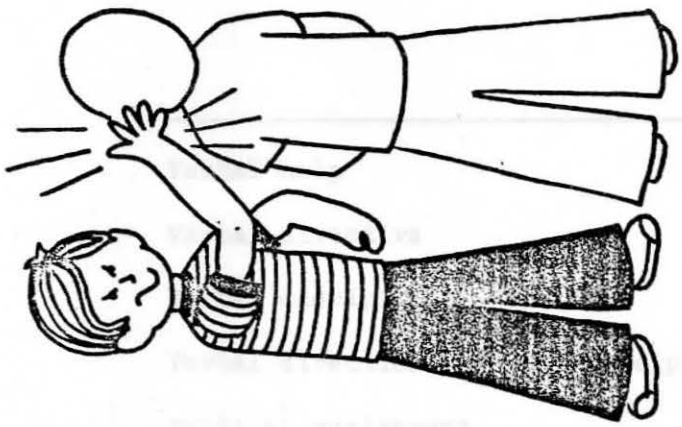
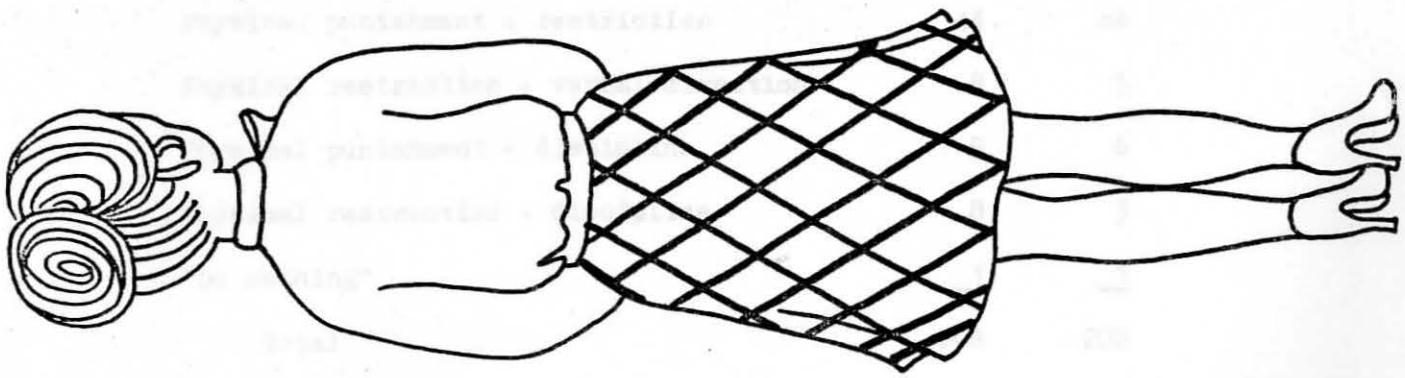
4 + 4 = 8
3 + 3 =







Appendix F

Test Results of Original Categories

Table 5

Children's Perceptions of Parental Responses to Boys and Girls Aggressing

Type of response perceived	Sex of aggressor	
	Boy	Girl
Verbal help	7	7
Verbal directive	62	59
Verbal discipline	18	25
Verbal direction + verbal discipline	1	3
Physical punishment	16	15
Physical restriction	34	40
Physical punishment + restriction	44	44
Physical restriction + verbal direction	8	5
Physical punishment + discipline	9	6
Physical restriction + discipline	8	3
"Do nothing"	1	1
Total	208	208
Degrees of freedom = 10 Chi square = 6.2978		N.S.

Table 6

Children's Perceptions of Fathers' and Mothers'

Responses to Aggressing Children

Type of response perceived	Sex of adult	
	Man	Woman
Verbal help	7	7
Verbal directive	56	65
Verbal discipline	16	27
Verbal direction + discipline	2	2
Physical punishment	14	17
Physical restriction	45	29
Physical punishment + restriction	46	42
Physical restriction + verbal direction	7	6
Physical punishment + verbal discipline	8	7
Physical restriction + verbal discipline	6	5
"Do nothing"	1	1
Total	208	208
Degrees of freedom = 10	Chi square 7.6495	N.S.

Table 7

Male and Female Subjects' Perceptions of Parental Responses to Children's Aggression

Type of response perceived	Sex of subject	
	Male	Female
Verbal help	0	14
Verbal directive	36	85
Verbal discipline	30	13
Verbal direction + verbal discipline	0	4
Physical punishment	14	17
Physical restriction	47	27
Physical punishment + restriction	55	33
Physical restriction + direction	9	4
Physical punishment + discipline	12	3
Physical restriction + discipline	5	6
"Do nothing"	0	2
Total	208	208

Degrees of freedom = 10 Chi square = 71.0931 P=.005

APPENDIX G

Description of Computer Analysis and Results

In order to accurately test four types of independent variables and possible variable interactions the following statistical model using STATPAC/ECTA from the U.S.U. statistical computer library was used:

$$e^{u+u_1(i)+u_2(j)+u_3(k)+u_4(l)+u_5(m)}$$

$$+u_{15}(im)+u_{25}(jm)+u_{35}(km)+u_{45}(lm)$$

$$+u_{125}(ijm)+u_{135}(ikm)+u_{145}(ilm)$$

The formula for calculating the chi square is

$$X^2 = 2E_f \text{ (observed)} \log.\left(\frac{\text{observed f}}{\text{expected f}}\right)$$

The objective of the model was to predict the response of the subject as either verbal help plus direction, verbal discipline, physical punishment or physical restriction. The factors used in predicting the subjects' responses were:

1. Sex of subject
   (1) male
   (2) female

2. Sex of adult in the picture
   (1) father
   (2) mother

3. Type of aggression depicted in the picture
   (1) physical
   (2) verbal

4. Sex of aggressor depicted in the picture
   (1) boy
   (2) girl

Chi square tests analyzed:

A. the interaction between variables 1 & 5, 2 & 5, 3 & 5, and 5 & 5. (The numbers 1,2,3 and 4 correspond with factors previously mentioned and numbered on page 92. Number 5 corresponds to the perceived adult responses.)

B. the interactions between variables 1,2,5; 1,3,5; and 1,4,5.

-1,2,5 meant that if boys and girls responded differently then the nature of the difference in the response may depend upon the sex of the adult in the picture.

H_o: interaction between 1,2,5 was rejected

chi square = 19.67 df = 35

-1,3,5 meant that if boys and girls responded differently then the nature of the difference in the perceived responses might depend upon the type of aggression depicted.

H_o: interaction between 1,3,5 was rejected

chi square = 24.57 df = 35

-1,4,5 meant that if boys and girls responded differently then the nature of the difference in the perceived responses might depend on the sex of the aggressor.

H_o : interaction between 1,4,5 was rejected

chi square = 21.60 df = 35

(The degrees of freedom for this model are obtained as the total number of cells minus the degrees of freedom in the model which is analogous to an analysis of variance model. That is, 1 df for the connection term, the number of levels minus 1 for each main effect, multiply df's for main effect together to get the df's for the interaction terms).

All variables were tested and only the interaction between the sex of subject and type of perceived response was found to be significant.

VITA

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Candidate for the Degree of

Master of Science

Thesis: Children's Perceptions of Parental Responses to Boys' and Girls' Aggressive Behavior

Major Field: Family and Human Development

Biographical Information:

Personal Data: Born at St. Peter, Minnesota, July 3, 1948, daughter of Dr. Robert T. and Nettie M. Benson; married Thomas L. Rohrbach Sept. 6, 1969.

Education: Attended elementary school in Ogden, Utah; graduated from Ogden High School in 1966; received the Bachelor of Science degree from Weber State College with a major in Sociology/Social Work Emphasis in 1970; completed requirements for the Master of Science degree in Family and Human Development at Utah State University in 1978.

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