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## The effect of a media-based intervention on the aggressive behavior of middle childhood boys.

Alan Kanner  
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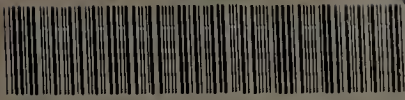
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THE EFFECT OF A MEDIA-BASED INTERVENTION  
ON THE AGGRESSIVE BEHAVIOR OF MIDDLE  
CHILDHOOD BOYS

A Dissertation Presented

by

ALAN KANNER

Submitted to the Graduate School of the  
University of Massachusetts in partial fulfillment  
of the requirements for the degree of

DOCTOR OF EDUCATION

February 1989

Education

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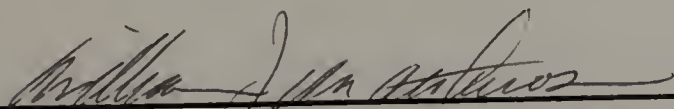
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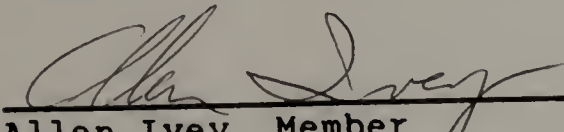
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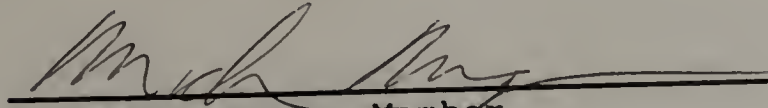
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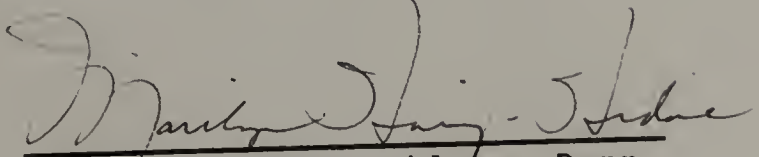
ALAN KANNER

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## DEDICATION

To Dr. Martin Luther King Jr.:

To the Memory, to the Man, and to the Spirit.

"Our nation was born in genocide when it embraced the doctrine that the original American, the Indian, was an inferior race. Even before there were large numbers of Negroes on our shores, the scar of racial hatred had already disfigured colonial society. From the sixteenth century forward, blood flowed in battles over racial supremacy... Moreover, we elevated that tragic experience into a noble crusade. Indeed, even today we have not permitted ourselves to reject or feel remorse for this shameful episode. Our literature, our films, our drama, our folklore all exalt it. Our children are still taught to respect the violence which reduced a red-skinned people of an earlier culture into a few fragmented groups herded into impoverished reservations." (Martin Luther King Jr., in Sugg, 1970, p. 60).

## ABSTRACT

### THE EFFECT OF A MEDIA-BASED INTERVENTION ON THE AGGRESSIVE BEHAVIOR OF MIDDLE CHILDHOOD BOYS

FEBRUARY 1989

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The objective of this experiment was to reduce the peer nomination aggression scores of middle childhood boys by using a media-based intervention. Aggressive behavior during middle childhood was viewed as a pernicious problem because substantial research evidence has indicated a relationship between aggression in middle childhood boys with subsequent delinquent, violent, and criminal behavior. The current experiment was designed to address this problem and essentially replicated a prior experiment reported by Huesmann, Klein, Eron, Brice, and Fischer, 1983.

In the current experiment, Stage I (pretest) involved a classroom administration of the Peer Rating Measure of Aggression - revised (PRMA-r) to identify the aggressive subjects. Stages II involved group discussion and essay

writing about the harmful effects of media violence (experimental condition) or the harmful effects of eating too much junk food (control condition). Stage III involved videotaping each individual presentation and group observation of the entire set of presentations. Stage IV (posttest) involved a re-administration of the (PRMA-r) as the dependent variable.

The sample included 62, 3rd and 4th grade boys drawn from 3 public elementary schools, stratified by SES, in the Worcester, Massachusetts. Using an analysis of covariance procedure (ANCOVA), the results indicated a non-significant finding for the main effect of experimental treatment, a non-significant finding for the interaction between school (SES) and experimental treatment, and a finding which approached significance at the  $p < .07$  level for the interaction between grade and experimental treatment.

A noteworthy subsidiary finding ( $N = 93$ ) indicated that peer-teacher and peer-principal intercorrelations for ranking aggression were of greater magnitude and reliability than the teacher-principal intercorrelations.

Despite the non-significant findings, several arguments were presented, given the seriousness of the problem and the overall parsimony of the experimental method, which supported further experimentation with the methodology.

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## CHAPTER I

### STATEMENT OF THE PROBLEM

"The mass media are presumed suffused with cruelty, and they in turn claim that the masses have a propensity for gore." (Toch, 1969, p. 1).

#### Introduction

Ours is a violent society. Clearly, we are not the only violent society. Nor perhaps are we the most violent society. Yet, violence thrives in our society in truly insidious ways. According to the Uniform Crime Reports, 1984, one murder occurs every 28 minutes; one aggravated assault occurs every 46 seconds; and one violent crime occurs every 25 seconds. Furthermore, in 1984, approximately 1,000 violent crimes (murders, rapes, aggravated assaults, and robberies) were committed by boys younger than 10 years old; for the 10 through 12 year old category, the number increases to 5,000; and for boys up to 17 years old inclusively, the number jumps to 60,000 violent crimes (Federal Bureau Of Investigation, 1985). A profoundly insidious aspect of violence in our society is the way in television and filmed media glamorize violence for the avowed purpose of attracting American audiences. While the effects of glamorized violence may result in serious social consequences at all

stages of an individual's development, the issue for children is particularly serious and complicated. Two meta-analyses (Andison, 1977; Hearold, 1979) involving hundreds of studies and more than 130,000 subjects on the effects of filmed violence on children found that exposure to filmed violence resulted in increased subsequent aggressive behavior. Parke and Slaby (1983) have written that "a causal link between TV violence and aggressive behavior now seems obvious" (p. 595). Several other reviewers have cogently argued the same position (Bogart, 1972, 1980; Comstock, Chaffee, Katzman, McCombs, and Roberts, 1978; Dorr and Kovaric, 1980; Leibert, Sprafkin, and Davidson, 1982; Murray and Kippax, 1979; Rubinstein, 1980). A fortiori, there is greater concern about the effects of filmed violence specifically on middle childhood children. That is, a large body of sound scientific research has indicated a clear relationship between aggressive behavior during middle childhood and subsequent delinquency and criminality during adolescence and adulthood (Ensminger, Kellam, and Rubin, 1983, Eron, Walder, and Lefkowitz, 1971; Farrington, 1978; Huesmann, Eron, Lefkowitz, and Walder, 1984; Lefkowitz, Eron, Walder, and Huesmann, 1977; Magnusson, Stattin, and Duner, 1983; Robins, 1974; West, 1982; West and Farrington, 1977; Wolfgang, 1983). In many of these studies aggressive behavior during middle

childhood, particularly between the ages of 8 and 10 years old, emerges conspicuously as a precursor to later delinquency and criminality. Finally, Dr. Jesse Steinfeld, the Surgeon General who sat as head of the largest publicly funded study of the effects of filmed violence on children's aggressive behavior, concluded more than fifteen years ago:

"While the committee [Advisory Committee] report is carefully phrased and qualified in language acceptable to social scientists, it is clear to me that the causal relationship between televised violence and anti-social behavior is sufficient to warrant appropriate and immediate remedial action. The data on social phenomena such as television and violence and/or aggressive behavior will never be clear enough for all social scientists to agree on the formulation of a succinct statement of causality. But there comes a time when the data are sufficient to justify action. That time has come."

(Murray and Kippax, 1979, p. 271).

### Choosing Middle Childhood

Compared to the stages of infancy, early childhood, and adolescence, middle childhood has often been conspicuously neglected in several theoretical

formulations of child development (Brooks, 1984; Collins, 1984b). Popularized by the Freudian misnomer of "latency", middle childhood has too often been dismissed by scholars as static and uneventful (Collins, 1984a; 1984b; Selman, 1976). A more careful examination of middle childhood (Brooks, 1984; Erikson, 1963, 1968; Harter, 1982; Hartup, 1984; Maccoby 1984; Piaget, 1955; Piaget and Inhelder, 1969; Sullivan, 1953; White, 1959, 1960) has indicated that middle childhood constitutes a dynamic and critical stage of child development.

The onset of middle childhood (ages 6-12) is marked by the child's entrance into public (or private) school (Collins, 1984b). In a sense, public school entry marks the very first time the child formally emerges from the insularity of the parental enclosure, and becomes observable to the community in a new and different way. Formerly, many of the child's "public" involvements have occurred typically when the child has been escorted by parents on errands, activities, trips to the park, museum, or shopping, and on gatherings with friends or extended family members. Clearly many things have changed with the advent of the modern family (mothers in the workplace and two-income families, etc.) and young children do spend more time away from parent(s) in daycare, nursery school, and babysitter arrangements. Nevertheless, these arrangements could hardly be

considered as "public exposure" in the same way as entrance into a formal elementary school system.

Once the child enters into the school system, the idiosyncratic scheme of evaluation advanced by the child's family of origin is left behind. As Harry Stack Sullivan (1953) has astutely observed, it "is the first developmental stage in which the limitations and the peculiarities of the home as a socializing influence begin to be open to remedy" (p. 227). As such, a broader range of diagnostic and remediation services are made more available to the child of middle childhood. With regard to the problem of aggressive behavior, there are several distinct advantages afforded by the increased range of diagnostic and remediation opportunities. First, early intervention during middle childhood can be effective at disrupting (a) the specific habit of aggressive behavior; (b) the process of being labeled as a dysfunctional child and the many inherent negative consequences of that label; (c) the dysfunctional family patterns of interaction which tend to rigidify around the aggressive child; and (d) the negative reinforcement cycle of social interaction which typically encourages continued aggressive behavior.

## Using Aggression in Middle Childhood as a Predictor of Subsequent Behavior

The connection between early aggressive behavior and subsequent delinquent, criminal, and violent behavior has been documented in both national and international studies. A brief overview of some of the relevant studies is presented below.

### U.S. Studies

Ensminger, Kellam, and Rubin, (1983), using an initial sample of 1242, six year old, South Side (Chicago) children, reported that, "males who were aggressive in first grade had an increased risk of delinquency ten years later, regardless of family type" (p. 91). A conclusion drawn by Robins (1974) in his study of St. Louis youth was that "if one wishes to choose the most likely candidate for a later diagnosis of sociopathic personality from among children appearing in a child guidance clinic, the best choice appears to be the boy referred for theft or aggression" (p. 157). Furthermore, Robins has written that "the most common onset for sociopathic men is 8 to 10 years old" (p. 155). In Los Angeles, a Doane and Goldstein (1983) study revealed that, "individuals with antisocial features are likely to have been actively aggressive as teenagers,

either inside or outside the home" (pp. 385-386). Evidence has indicated that the situation may be worsening. When Wolfgang (1983) compared two male Philadelphia cohorts, one born in 1945 with another born in 1958, he found that the offenders from the more recent cohort committed offenses more frequently and began doing so at an earlier age (though the proportion of males getting into trouble was about the same). These same offenders also continued their criminal careers for a longer period of time, and their acts tended to be more violent (Wolfgang, 1983, pp. 15-16).

#### Foreign Studies

On an international, level the results are even more compelling. Using a sample of London subjects, West and Farrington (1977) found "a clear indisputable association between official delinquency and aggressiveness" (p. 89). Furthermore, "aggressive behavior noticeable at an early age tends to persist into later life and to lead to other forms of antisocial conduct even when it does not lead to an official delinquency record" (West and Farrington, 1977, p. 158). "Of all the features investigated in this book, unusually aggressive attitudes and behavior appeared to be the most prominent and important distinguishing characteristics of the delinquent group" (p. 107). In a later publication, West (1982) reported

that in a sample of 32 adult male violent offenders, every one of the 32 males had been previously identified as an aggressive child. At the age of 14, nearly 20 of the 32 violent offenders had been ranked in the most aggressive category on the basis of teacher ratings. At ages 8-10, approximately 11 of the 32 had already been ranked in the most aggressive category. Referring to the same sample of boys, Farrington (1978) has written, "aggressiveness at 8-10 was genuinely predictive of violent delinquency. In other words, teachers' ratings of aggressive behaviour in class can predict future violent crime" (p. 82). In a Stockholm study, Magnusson, Stattin, and Duner (1983) concluded, "early aggressiveness is a vitally important predictor of later criminality. We may speak of the highly aggressive pupils as a potential criminal risk group" (p. 292). In addition, the twenty boys who were convicted at the earliest ages, between 10 and 12 years of age, tended to become the most persistent offenders (Magnusson et al., 1983).

#### Using Antisociality in Middle Childhood as a Predictor of Subsequent Behavior

All of the national and foreign studies referred to above specifically used the term, "aggressive behavior" when investigating the possible precursors to subsequent

violent behavior and criminality. In studies which relied on the more global term, "antisociality" and in which there were considerably larger sample sizes, the same pattern prevailed - early onset of antisocial behavior and later elaboration into delinquent, criminal, and violent behavior (U.S. studies: Conger and Miller, 1966; Glueck and Glueck, 1959, 1968; McCord, McCord, and Zola, 1959; Mitchell and Rosa, 1981; Wolfgang, 1983. Foreign studies: Farrington, 1983; Guttridge, Gabrielli, Mednick, and Van Dusen, 1983; Janson, 1983; Olweus, 1977, 1979, 1982, 1984).

#### The Significance of this Research

The significance of aggressive behavior in terms of its impact on the functioning and well-being of the individual as well as of society can be indicated in several ways.

#### Aggressive Behavior and Society

Even discounting its impact on subsequent adolescent and adult development, aggressive behavior specifically during middle childhood has had very serious consequences on the well-being of our society. It has already been reported that more than 1,000 violent crimes were committed in 1984 by boys younger than 10 years old and 5,000 violent crimes were committed by boys between the

ages of 10 and 12 years old (Federal Bureau Of Investigation, 1985). In conjunction with its impact on the subsequent development of delinquent and criminal behavior (as documented above in Ensminger, Kellam, and Rubin, 1983, Eron, Walder, and Lefkowitz, 1971; Farrington, 1978; Huesmann, Eron, Lefkowitz, and Walder, 1984; Lefkowitz, Eron, Walder, and Huesmann, 1977; Magnusson, Stattin, and Duner, 1983; Robins, 1974; West, 1982; West and Farrington, 1977; Wolfgang, 1983), aggressive behavior during middle childhood constitutes a problem of profound proportions. A convenient and concise way to view the actual costs to our society of the extraordinary high levels of delinquent and criminal activity to which we have grown accustomed is to measure the problem in terms of financial costs. It has been reported that approximately twenty-five years ago, the U.S. Attorney General and the U.S. Children's Bureau estimated the total cost of delinquent and criminal activity to be more than twenty billion dollars a year (Scudder and Beam, 1961). Given that the twenty billion dollar estimation was for the year the early 1960's, estimates for the cost of delinquent and criminal activity in the United States today would be, no doubt, staggering!

Another way of examining the costs to our society of aggressive behavior is in terms of its impact on the

quality of life. Although measuring the costs to our society on the basis of quality of life is considerably more imprecise than on the basis of financial burden, the former measure may actually generate a more meaningful understanding of the scope of the problem. The issue of quality of life can be assessed both formally and informally. On an informal basis, several changes in the social fabric of our lives appear to be evident during the past approximate thirty years. One of the most significant changes appears to be related to the level of safety people experience as they move about in our society. It is apparent that adults who reflect back onto the communities and neighborhoods of their childhood will recognize that increasingly larger geographical areas within their communities have become over time more or less sectioned off as crime districts and as a result, have become off-limits to virtually all persons who can afford to avoid them. Another way to examine some of the changes which have occurred during the past thirty years is to note that in many communities, nighttime itself has been virtually re-defined in sociological terms as the domain of the criminal. Many people have come to perceive walking around on the streets at nighttime as an open invitation to criminal attack. This basic change can be recognized in the popularity of the community-based campaigns to "Take Back the Night" which

have been directed toward regaining the safety of the streets and neighborhoods. It is also interesting and worthwhile to consider the phenomenon of hitchhiking which, during this author's youth in the 1950's and 1960's, laid bare the geographical, sociological, and cultural diversity and vastness of the American landscape for those who wanted to explore and immerse themselves in it. At that time (aside from the violence associated with the racial tensions of specific areas in the country), there appeared to be less a sense of threat, risk, and vulnerability associated with any random contact with the unknown other. By 1980, the American society appeared to be much more closed, stratified, and unsafe. Instead of the former neutrality or perhaps even kindness being ascribed to the unknown other, the assumption in the 1980's evolved into the expectation that merely the sight alone of an unknown other was adequate warning that an assault would be forthcoming. As such, the whole meaning of hitchhiking became transformed. Two and three decades ago, hitchhiking could be viewed as a manifestation of the openness, integrity, virginity, and goodwill of the American landscape and society; by the 1980's, hitchhiking became widely recognized as being tantamount to engaging in wanton, self-destructive, and life-threatening behavior not only for females but for males as well. On a more

formal basis, many of the above considerations have been supported by the research investigations conducted by Gerbner, Gross, Signorielli, Morgan, and Jackson-Beeck (1979) and Gerbner, Gross, Morgan, and Signorielli (1980), who reported that large percentages of people in selected metropolitan centers believed that the world, their cities, and their neighborhoods, are unsafe, frightening and dangerous.

### Aggressive Behavior and the Individual

In terms of its harmful impact on individual development, there have been a variety of specific social, emotional, cognitive, and behavioral deficits which have been commonly associated with aggressive behavior. Some of the more significant emotional deficits commonly associated with aggressive behavior include low self-esteem, low self-confidence, feelings of rejection, self-dislike, fearfulness, and lack of security. Cognitive deficits have included receptive and expressive language impairments, distractibility, difficulties in sustaining attention, and overall inattention. Behavioral deficits commonly associated with aggressive behavior have included hyperactivity, impulsivity, and a tendency toward isolative behaviors. Perhaps, most importantly of all, the aggressive child typically exhibits an array of significant social

deficits. Some of the more serious limitations occur in the inadequacy of their peer relationships (e.g., peer group entry behaviors, Dodge, Schlundt, Schocken, and Delugach, 1983) and the inadequacy of their social skills (e.g., difficulties sending and receiving messages, inability to focus on topic, and difficulties sharing own interests, Hartup, 1984). In combination, these inadequacies impede and disrupt the formation of longer term, durable friendships and relationships. A consequence of these impairments is that the aggressive child's sense of security and safety in the world is further threatened. Another form of consequence is that a pattern frequently develops in which society's need to manage the disruptiveness created by the aggressive behavior gradually assumes priority over society's commitment to and interest in educating and developing the potential of the aggressive child. Soon, many opportunities to explore, learn, and develop are denied on the basis of the need to control and manage the aggressive behavior. As these patterns continue, the aggressive child becomes less and less competent in social domains and his social and emotional maturity become further stagnated. As the social/emotional stagnation and the sense of incompetence become engrained, the aggressive child falls victim to an

increasingly frustrated self, thereby intensifying his capacity for disruption and upheaval.

Based on the extent of the many harmful consequences of childhood aggression on society and on individual development, it is obvious that all attempts to reduce childhood aggression are extremely valuable to the individual and to society.

### The Issues Which this Investigation Attempts to Resolve

There are three specific research questions which will be addressed in this experiment. All three research questions share the same focus of evaluating a media-based intervention designed to reduce the aggressive behavior of middle childhood boys in a public elementary school setting. Since the entire experimental design is very similar to an experiment conducted by Huesmann, Eron, Klein, Brice, and Fischer (1983), this investigation can be viewed as an attempt to replicate the results of the previous experiment. The results of the Huesmann et al. (1983) experiment indicated that a media-based intervention can result in a significantly smaller increase in male aggressive behavior for a combined sample of boys, ages 9 and 11, as measured by a peer nominated aggression scores. The first research question addresses the basic issue of whether a

media-based intervention can be effective in reducing peer-nominated middle childhood aggression.

The second research question to be investigated involves the role of socioeconomic factors in the remediation of aggressive behavior by using a media-based technique. Socioeconomic status (SES) has been recognized a key contextual variable which "organizes a relatively stable cluster of life conditions, behavior settings and psychological properties of parents and families" (Radke-Yarrow, Zahn-Waxler, and Chapman, 1983, p. 499). Elsewhere, SES has been referred to "as a summary indicator for a constellation of social, cultural, and economic variables" (Collins, 1984a, p. 412). There has been a long tradition in the research on childhood aggression and delinquency which has indicated an association of aggressive and violent behavior with low socioeconomic status (Clark and Wenninger, 1969; Cohen, 1970; Empey and Lubeck, 1971; Erickson and Empey, 1969; Havighurst, 1966; Miller, 1970; Van Dusen, Mednick, Gabrielli, and Hutchings, 1983; Janson, 1983; Vaz, 1967; Woodson, 1980). Although childhood aggressive behavior occurs at all rungs of the socioeconomic ladder, formal and informal evidence continues to support the position that lower SES boys are more prone to aggressive behavior. In addition, many people believe that, in general, lower SES boys are more refractory to

remediation attempts. It is this latter issue which is addressed in the second research question.

The third research question addresses whether a media-based intervention is more effective in reducing peer-nominated aggression in a sample of younger boys (nine years of age) compared with an older group of boys (ten years of age). It has been a recognized feature of childhood development that male aggressive behavior increases during the span from 6 to 10 years of age (Eron and Huesmann, 1986; Eron, Huesmann, Brice, Fischer, and Mermelstein, 1983; Huesmann and Eron, 1986). Despite the fact that on the average there is only a one year age difference between the 3rd and 4th grade groups, the results of this experimental analysis may prove helpful in determining whether any "sensitive" or critical period exists with regard to the the remediation of aggressive behavior.

Before stating the three research hypotheses, it is useful to briefly describe some of the more important advantages of the media-based intervention used in the current study. One of the most distinct advantages of the intervention was its parsimonious nature. That is, the intervention required only minimal resources in terms of the number of staff, the financial requirements, the length of time necessary to complete the intervention and to establish the nature of the effect, and the overall

organizational structure necessary to conduct the experiment. The parsimony of this experimental intervention is particularly heartening compared to alternative methods of intervention (see Chapter III) and to the scope and costs associated with the most common alternate system of intervention (i.e., the juvenile criminal justice system).

#### Hypothesis I

The experimental treatment will have a significantly larger impact on the experimental subjects compared to the control subjects.

#### Hypothesis II

The experimental treatment will have a significantly larger impact on the high and middle SES subjects respectively, compared to the low SES subjects.

#### Hypothesis III

The experimental treatment will have a significantly larger impact on the 4th grade subjects compared to the 3rd grade subjects.

## Limitations of the Current Study

### Limitations of the Sample

This sample of middle childhood boys was carefully selected so as to be as representative as possible of mainstream American society. The public school system of Worcester, Massachusetts serves a local population with an appreciable diversity and complexity of socioeconomic, cultural, racial, educational, and commercial influences so as to mirror many other communities both within and outside of the New England geographical area. That Worcester, Massachusetts is neither a rural nor major metropolitan area sets certain limits with regard to the generalizability of the findings, especially to those specific areas; however, it is believed that these limitations are outweighed by the fact that the results of the Worcester sample permits a generalizability to a very large, urban population and experience base evident throughout the American society. According to Collins (1984a), nearly half of the children of middle childhood live in metropolitan areas of at least 100,000 persons.

Another aspect of limitation is related to the fact that the experiment occurs entirely within the parameters of the public school life of the middle childhood boys. While their public school activity offers a very favorable and likely representative context from which to

sample their aggressive behavior, it is possible that for some boys their school behavior is discrepant with their behavior as manifested in their family and immediate neighborhood environments. Both of these latter environments have often been implicated in the acquisition and maintenance of childhood aggressive behavior.

Since much of the experimental focus of this study has been directed toward revealing the mainstream of American socioeconomic experience with regard to the issue of middle childhood aggressive behavior, it is useful to elaborate briefly on this issue with regard to the current sample. While this sample is regarded as adequately representative in terms of socioeconomic considerations, its small sample size constitutes a significant limitation with regard to the interpretation of the experimental effect. Furthermore, it is apparent that there are many different kinds of middle class experience within the city of Worcester, as the author's six years of residence in the city as well as his continuous friendships with several Worcester natives has indicated. The impact of the multitude of middle class experiences was most apparent in terms of the selection of the specific middle class school to be used in the sample. Fortunately, the prospect of experimenter bias in the actual selection of the middle class school was

obviated when the Assistant of the Superintendent, by whom the experiment needed to be approved, unilaterally designated the three schools to be used in the study. While there is no doubt that some form of selection bias had influenced the Assistant's choices, his bias is much less likely to be systematically blended with the hypotheses of the current experiment compared with the biases of the experimenter. In any case, it is important to bear in mind that there is a considerable degree of variety within the middle class experience in Worcester and much of the variation among the middle class groupings can be attributed to the many factors identified below in the conceptual limitations section.

#### Limitations in Conceptualization

Several significant factors implicated in the acquisition and maintenance of aggressive behavior have not been specifically incorporated into the operationalization of the construct of aggression. Among these exclusions was any specific role for the influence of family dynamics, despite the acknowledgement that family interactions have been frequently implicated in the acquisition and maintenance of aggressive behavior (Patterson, 1982). Also, the role of family dynamics has been implicated in the remediation of aggressive behavior by Minuchin, Montalvo, Guerney, Rosman, and Schumer

(1967) who found that the lack of success in treatment of extremely aggressive boys was specifically associated with the combination of familial and economic instabilities. Second, the influence of the cultural context for aggressive behavior was not specifically integrated into the operationalization of aggression. However, it is clear that the meaning people attribute to aggressive behavior can be dependent on its cultural context. For example, the meaning and value attached to aggressive behavior are very different in Irish communities compared with Scandinavian communities. Third, there is an important role which many biological and physiological processes play in the acquisition and maintenance of aggressive behavior during middle childhood. However, these considerations have not been addressed in the current study. In particular, the role of the hormone testosterone has often been the focus of research regarding the physiological substrates of aggressive behavior. Recent research (Olweus, 1983) on aggressive behavior continues to demonstrate the potential independent effects which are attributable to testosterone. Also, few persons who are acquainted the work of Money and Ehrhardt (1972; Ehrhardt and Money, 1967) on the adrenogenital syndrome would be inclined to dismiss the influential role ascribed to testosterone in both the physical and behavioral characteristics of the

human body. Although family dynamics, cultural influences, and biological and physiological processes are all influential in the development of childhood aggression, it is presumed that these factors have been randomized across the groups in the current experimental design. In addition, it is important to recognize that the experimental operationalization of any term, there is a certain amount of richness and complexity which is sacrificed for manipulating the term into a workable and observable construct. Aggression is no exception.

## CHAPTER II

### CONCEPTUALIZATIONS OF AGGRESSION

"We could say that theory builders are the map makers while practioners are the travelers along the roads. It is obvious that maps cannot tell us the precise conditions of the roads, the nearest potholes and frost heaves, where a bridge is out or the sharpness of a turn. They can only give an overall view of our direction." (Frank, M. in Cooper and Wanerman, 1984, p. 394).

#### Theoretical Considerations

Many different theoretical orientations have been invoked to account for aggressive behavior. In the following review, any attempt to address the breadth or the complexity of the many pertinent issues related to the diverse theoretical orientations to the study of aggression is beyond the scope of the current investigation. Also, there is no presumption that the following review constitutes any significant improvement over alternative reviews of the theoretical approaches to aggression. Instead, this review ought to be regarded more as a representation of the larger theoretical distinctions rather than as a detailed investigation of the critical theoretical issues. Not only are there several different theoretical conceptualizations of

aggression, there are also several ways to conceptualize the various theoretical approaches to aggression. The organization of the following review merely reflects a selective and constructive process on the part of the current author. For example, it is common in many discussions of aggressive behavior to distinguish between a cognitive-behavioral theoretical orientation and a developmental orientation. However, in the present review, the differences between these two orientations are minimized in favor of emphasizing the similarities; therefore, they are forged together into a singular orientation.

The main criteria for the following organizational framework as well as the selection of the specific theories has been the likelihood that a particular theory will to continue to have a significant influence on both our thinking about childhood aggressive behavior as well as on its empirical research. In a comprehensive review of the development of aggression behavior, Parke and Slaby (1983) have identified four modern theoretical orientations which have influenced the course of empirical research: ethological approach, drive theory, social learning theory, and a social-cognitive orientation. In addition, a psychoanalytic orientation was dismissed by Parke and Slaby (1983), despite its significant historical impact on the field of aggressive

behavior, because they believe it had few modern proponents, while a developing ecological orientation was adumbrated. For current purposes, the theoretical field has been conceptualized into four areas: drive theory, social learning theory, developmental theory, object relations theory, and a modern system/ecological approach. Because of the research orientation of the current investigation, a greater degree of emphasis will be placed on the operationalization of the construct of aggression than on the various theoretical orientations to the study of aggression.

### Drive Theory

Drive theory has comprised an extraordinary long history of influence on the study of aggressive behavior, beginning with the early studies of Dollard and his associates (Dollard, Doob, Miller, Mowrer, and Sears, 1939) and surviving with significant adaptations to the current day (Berkowitz, 1962, 1964, 1969, 1974b, 1982, 1983). In its original formulation, the role of internal physiological-emotional drive constituted virtually the entire explanation for the occurrence of aggression. As striking as it may seem today, the original position demarcated a law-like relationship between frustration and aggression - that aggression presumes frustration and that frustration inevitably results in some form of

aggression. Qualifications (Miller, 1941) were quickly added to mollify the stringency of the original formulation such that the frustration no longer inevitably resulted in aggression; however, the tenet that aggression presumed frustration was maintained. A significant adaptation to the original formula has been developed and elaborated by Berkowitz (1962, 1969, 1974a 1982; Berkowitz and Geen, 1967; Berkowitz and Lepage, 1967) who has cogently argued that the key mediator of aggressive behavior is anger rather than frustration. In Berkowitz's view, aggressive behavior is mediated by the association of various instigators or external cues with the experience of anger. According to this view, aggressive behavior is viewed as "cue-evoked" by external stimuli. In some cases, because external stimuli have been directly associated with a previous anger and aggressive episode, these stimuli become capable of evoking subsequent episodes of aggression. In other cases, external stimuli have been or become associated with anger and the anger episodes may potentially result in aggressive behavior at a subsequent time. The former pattern is most pertinent to the maintenance of aggressive behavior, while the latter pattern is most pertinent to the acquisition of aggressive behavior. In some respects, Berkowitz's emphasis on the role of external factors in the acquisition and maintenance of

aggressive behavior paved the way for the advent of the social learning approach to the study of aggression.

### Social Learning Theory

Whereas in all versions of drive theory the emphasis is placed on the role of an internal emotional-physiological state as constituting a predisposition or preparedness for aggressive behavior, in social learning theory the emphasis is placed on the many ways in which situational factors shape, elicit, and reinforce aggressive behavioral responses. According to Bandura (1965, 1973, 1983; Bandura, Ross, and Ross, 1961, 1963a, 1963b; Bandura and Walters, 1959), the key learning paradigm for acquiring aggressive behavior involves a sequence beginning with observational learning leading to imitative behavior and being fortified by the contingencies of reinforcement. Some of the more significant sub-processes implicated in the social learning of aggression include: attentional, retentional, motor reproduction, and reinforcement. In fact, the study of childhood aggressive behavior constituted a critical research domain upon which Bandura advanced his social learning orientation as a major paradigm of behavioralist theory. In the preface to Aggression: A Social Learning Analysis (1973), Bandura stated that the aim of the book was "to provide impetus for new lines of research likely

to augment the explanatory power of social learning theory" (p.viii). To its credit, social learning theory has been responsible for a greater abundance of empirical research on childhood aggression than any other conceptual framework.

### Developmental Theory

Subsumed under the rubric of developmental theory are diverse areas of theoretical and empirical concentration which are often viewed as distinct fields of inquiry (Santostefano, 1980). Specific areas of developmental theory which are most relevant to this current investigation include: cognitive, cognitive-behavioral, social-cognitive, psychosexual, emotional, and social-emotional development. Binding these various areas of concentration together is the idea that behavior and experience result from the conjunction of internally determined parameters of developmental potential and the nature of the environment in which this potential unfolds. In addition, these various areas of developmental theory adhere to the ideas that: (a) there exists a sequence in childhood development and growth; (b) the sequence is essentially serial in order; (c) the child is expected to demonstrate competence on specific tasks or challenges within each stage of development; and (d) there are specific parameters within each stage of

development which act as "governors", facilitating certain kinds of experience while inhibiting others. Specific areas within developmental theory as well as specific developmental theorists adhere to the above ideas with varying degrees of conviction. On the one hand, Piaget's theories of cognitive development (Piaget, 1928/1969, 1929/1975, 1932/1965) reflect a more stringent interpretation of developmental theory in that growth is viewed primarily as an outcome of the child's internal structure (i.e., stage of cognitive development). On the other hand, theories of social development tend to reflect a less stringent adherence to the view that the course of development and growth is prescribed by internal structure. Instead, the social developmentalists (Hartup, 1984; Dodge, 1980, 1985, 1986; Dodge and Frame, 1982; Maccoby, 1983, 1984; Maccoby and Martin, 1983) emphasize the impact of the child's social milieu as well as the specific attributions made by the particular to her/his social environment as s/he advances through the various developmental stages. A question raised by Maccoby (1984) is the extent to which modern developmental theory can create a unified conceptual framework for incorporating both the more internally fixed, cognitive version of developmental theory with the more idiosyncratic, social-emotional version of developmental theory.

From the developmental perspective, aggressive behavior is viewed as being influenced by an array of contributing factors, including cognitive, cognitive-behavioral, social-cognitive, psychosexual, emotional, and social-emotional. Furthermore, aggressive behavior is typically construed as an outcome which results from the failure of the child to satisfactorily meet the social/emotional/cognitive challenge relative to his specific stage of development. Specifically with regard to psychosexual development during middle childhood, the major developmental ego-task has been identified in terms of the industry vs. inferiority challenge (Erikson, 1950/1963) which has been implicated in White's (1959, 1960) competence motivation and once again in Harter's (1983) effectance motivation. In terms of social and social-emotional development, the major developmental challenge of middle childhood has been the attainment of successful, mutual, and gratifying peer relationships (Bierman and Furman, 1984; Conger and Keane, 1981; Dodge, 1985; Dodge, Coie, and Brakke, 1982; Dodge and Frame, 1982; Dodge and Newman, 1981; Gresham and Nagle, 1980; Hartup, 1984; Hartup, Brady, and Newcomb, 1983; Oden and Asher, 1977) through the acquisition of a variety of necessary social skills involving perspective-taking (Iannotti, 1978, 1985; Kurdek, 1978a, 1978b; Shantz, 1983), role-taking (Selman

and Byrne, 1974), empathic understanding and communication (Feshbach, N.D., 1974, 1979, 1984; Feshbach, N.D., and Feshbach, S., 1982), and prosocial behavior (Radke-Yarrow, Zahn-Waxler, and Chapman, 1983). In terms of cognitive and social-cognitive development, the major tasks of middle childhood have been (a) the evolvment of a more mature and sophisticated pattern of reasoning, i.e., concrete operations (Piaget, 1929/1975, 1932/1965); (b) the shedding of an immature animistic reasoning (Piaget, 1928/1969, 1929/1975); and (c) specifically with regard to the current study, the evolvment of a more sophisticated processing of social reality by virtue of improved abilities in comprehension and inferential thought (Collins, 1973, 1975, 1978, 1983a, 1983b, 1984a; Collins, Berndt, and Hess, 1974; Collins and Getz, 1975; Collins, Sobol, and Westby, 1981; Collins, Wellman, Keniston, and Westby, 1978; Dorr, 1983, 1980; Fernie, 1981a, 1981b; Kanner, 1986).

### Object Relations Theory

In many respects, object relations theory is a modern corollary of psychoanalytic thought. In both of these theories, the earliest stages of development are viewed as having the most critical impact on all future development. One divergent area among these theories relates to the preeminence of a biological, instinctive

basis of behavior (Freud, 1933/1965, 1949/1969; Pribram and Gill, 1976) in the psychoanalytic tradition compared with an acceptance of the notion of drive but an emphasis on the child's and mother's management of early relational experience in object relations theory. In most versions of object relations theory, the critical stages of development generally occur all within the first three years of age (Mahler, 1968; Mahler, Pine, and Bergman, 1975) or in some cases within the first four or five years of age. One of the reasons that the central concepts of object relations theory are not more deliberately integrated into the current study is that objects relations theory is comparatively uninterested in the experience of the child during middle childhood. Furthermore, in object relations theory middle childhood is construed as being unassociated with the origins as well as the maintenance of aggressive behavior.

In a similar manner to the way Piaget's theory of cognitive development conceptualizes the evolvment of the child's intellectual capabilities, objects relations theory conceptualizes the child as being "capable of a different quality of relationship at specific stages of development" (St.Clair, 1986, p.16). In one of the more popular versions of object relations theory (Mahler, 1975) and in subsequent adaptations (Horner, 1979; Parens, 1979), development has been conceptualized as a

sequential process by which the infant advances through the stages of "normal autism", attachment, fusion/symbiosis, differentiation, separation/individuation, rapprochement, and identity. Failure at achieving any of these stages or developmental challenges is viewed as resulting in specific and distinguishable psychopathologies. The general viewpoint is that aggression emerges when there is failure or maladaptation on the part of the child or mother (more often) to successfully negotiate each of the prescribed stages of development. Mother's failure is typically construed in terms of overindulgence, rejection, deprivation, impingement, and inadequate holding and letting go (in a physical as well as symbolic sense). The child's failure is typically construed in terms of instincts, relentless narcissism, greediness, ambivalence, insecurity, and grandiosity. In most versions of object relations theory, frustration is viewed as an essential mediator of aggression while anger is commonly imputed but not regarded as an essential feature (Winnicott, 1939/1957, 1955/1975, 1958/1965). Despite its relative inattention to the developmental challenges specifically imposed by middle childhood, object relations theory has stimulated a very broad and significant impact on the field of child and adult psychology during the past decade.

## Systems Theory

Systems theory is the broadest-based of any of the theories under review, incorporating an enormous range of data and including many of the features of social learning and developmental theory. A distinctive aspect of systems theory is that the data are organized in a unique manner. That is, the individual or child is seen as simultaneously embedded in a variety of overlapping social contexts. Rather than investigating a child's cognitive development, in systems theory the realm of the investigation is the child's cognitive development-in-context (Bronfenbrenner and Crouter, 1983). It appears that there is always a wider and broader context which informs the target of investigation and which therefore needs to be taken into account. For example, rather than studying the aggressive child, one needs study the coercive family (Patterson, 1982).

In systems theory, process as opposed to structure reigns supreme. It is a dynamic theory in the sense that the various social contexts in which the individual maintains membership are constantly informing each other through bidirectional feedback loops. These processes are viewed as rule-governed in that social contexts and processes operate in connection with each other regardless of individual will or commitment (Salzinger, Antrobus, and Glick, 1980). The notions of "cause and

effect" and "predicate and consequence" are eliminated in favor of construing events as mutual causal processes (Hoffman, 1963; Jackson, 1969; Maruyama, 1968). In this regard, the whipping boy can be viewed as dependent on the bully as the bully is dependent on the whipping boy (Olweus, 1978). Furthermore, with regard to the deviation-amplifying aspects of mutual causal processes (Hoffman, 1963, 1981; Maruyama, 1968), one can recognize how the aggressive child's well-documented proclivity for perceiving hostility among peers when none actually exists (Dodge, 1980; Dodge and Frame, 1982; Dodge and Newman, 1981) constitutes a significant amplifying effect on the frequency and intensity of his aggressive behavior. While systems theory does account for ways in which novelty and change become introduced into social contexts (Hoffman, 1981; Keeney, 1983), these descriptions become rather cumbersome when applied to the acquisition of aggressive behavior by an individual child. On other hand, systems theory offers a much more compelling and lucid description of the manner in which aggressive behavior is maintained. In its most succinct formula, systems theory construes aggression as being maintained by an interconnecting pattern of relationships and contexts (Bateson, 1979).

## Defining and Operationalizing Aggression

### Introduction

Defining aggression can be a vexing endeavor. Simply by listing the different "kinds" of aggression reported in the literature, the complexity of the issue is made abundantly clear. A sampling of the literature would include: angry aggression (Buss, 1961); hostile and instrumental aggression (Buss, 1961; Feshbach, 1964, 1970; Rule, 1974); physical aggression (Buss, 1966; Rule and Percival, 1971); retaliatory aggression (Shantz and Voydanoff, 1973); expressive aggression (Feshbach, 1964); impulsive aggression (Berkowitz, 1974); active/passive, direct/indirect, physical/verbal aggression (Buss, 1971); intentional and accidental aggression (Feshbach, 1964, 1974); impulsive and interpersonal aggression (Fraczek, 1979); intrinsic aggression (Feshbach, 1979; Reykowski, 1979); personally- and socially-motivated aggression (Rule, 1974); stylized and spontaneous aggression (Mackal, 1979); irritable aggression (Knutson, 1973). And yet, this is not an exhaustive list.

In considering the various definitions of aggression, one of the first significant problems to be addressed is that in our society there are both "good" and "bad" aggression. Most often, when people in our society are discussing aggression, they tend to highlight

the hostile and destructive elements of "bad" aggression. However, it is important to bear in mind that in our society, those who engage in "good" aggression are typically greeted with adulation and lavish praise. This dual standard regarding aggression no doubt results in considerable confusion. For many children, it may simply be too difficult to clarify specifically what society expects of them. Very few researchers (e.g., S.Feshbach, 1974, 1979; Zillmann, 1979) have actually attended to the kinds of dilemmas imposed on our children by the existence of both "good" and "bad" aggression. Feshbach (1974) has astutely observed that in our society the child's task is not merely to learn how to behave non-aggressively but to behave in an aggressively appropriate manner. Furthermore, since society seeks to produce "the appropriately aggressive child" (Feshbach, 1979), the burden of the child is to discern and to incorporate society's "aggressive ideal" (Feshbach, 1974).

While it is useful to raise the important distinction between "good" and "bad" aggression, the focus of the current study is "bad" aggression. Bad aggression is the kind of aggression which results in the imposition of bodily injury. After all, the primary concern with aggression has always been man's propensity to inflict bodily damage (Zillmann, 1979; see also

Feshbach, 1964; Rule, 1974). It is precisely this defining feature that forms the central core of the definition of aggression to which virtually all authors adhere (Hinde, 1974).

#### Common Types Of Definition

The literature has indicated that there have been essentially four different types of definitions of aggression (Hartup and deWit, 1974; Parke and Slaby, 1983). First, topographical definitions have focused primarily on the characteristic motor patterns involved in the actual aggressive behavior. Therefore, identifying homologous examples of aggressive behavior in widely-different cultures and species has often been the domain of topographical definitions. One of the more serious limitations of the topographical orientation has been its inability to conceptualize aggression solely in terms of the characteristic motor patterns of the aggressive behavior. (Hartup and deWit, 1974). Second, outcome or consequential definitions (Buss, 1971) have focused on the nature of the injury sustained as a result of aggressive behavior. A major shortcoming of outcome definitions has been the concentration on assessing the effects of the aggressive behavior at the expense of actually assessing the "behavior" of the aggressor (Kaufmann, 1970). Third, antecedent definitions have

focused primarily on the constitution of the aggressor prior to the commission of the aggressive act. The most popular of these putative precursor states have been the roles of frustration (Dollard et al., 1939), anger (Berkowitz, 1962), arousal (Zillmann, 1979) and, most especially, intentionality (Bandura, 1973; Baron, 1977; Berkowitz, 1974a; S. Feshbach, 1970; Kagan, 1974). Significant objections have been leveled at each of these four reputed precursor states of aggression.

The social judgment approach has encompassed a combination of many factors in defining aggression. Many of these constituent factors have already been alluded to: precursor states, the consequences of the aggressive act, intensity and form of the response, and intentionality (Parke and Slaby, 1983). Depending upon the specific context, combinations and relationships among the various identified factors will generally constitute the bulk of the given social judgement definition. For some persons the social judgement approach can be quite disconcerting because behaviors labeled as aggressive in one situation may be judged as non-aggressive in a different situation. Zillmann (1979) has criticized social judgement definitions of aggression as amounting "to saying that aggression is what people say is aggression" (p. 37). Within the social judgement approach, specific cultural, community, and personal

standards and values combine to play a critical role in the actual labeling of aggressive behavior.

### Social Contextual Approach

The social contextual approach provides a new and additional orientation to the definition of aggression. The proposed social contextual definition of aggression is:

the imposition of behavior or threat which is not sanctioned by the social context and results or can result in personal, bodily injury.

In addition to the core concept of injurious impact, the social contextual approach can be further delimited by considering five interrelated issues: aggression as an interactional concept, aggression against people vs. against people and objects, aggression as non-sanctioned behavior, a context for aggression, and intentional vs. accidental aggression.

Aggression as an Interactional Concept. Aggression is inherently interactional. It requires both an aggressor and a victim. Because the concept of aggression is inherently interactional, its defining characteristics can never reside solely within the aggressor (as in antecedent orientations), nor solely within the victim (as in outcome or consequential

orientations). Some kind of conjoining of the two factors will always need to be forged.

Aggression against People or against People and Objects. In early definitions of aggression, the established pattern was to incorporate injurious (destructive) acts committed against objects along with injurious acts committed against people (Bandura, 1973; Buss, 1961; Dollard et al., 1939; Feshbach, 1970). More recently, the trend has been to restrict the definition of aggression to injurious acts committed against people (Baron, 1977; Parke and Slaby, 1983; Slaby and Roedell, 1982; Zillmann, 1979).

In the social contextual orientation, the adherence is to the more recent tradition. The rationale is that the term aggression aptly applies only to the category of injuries committed against another person whereas there are alternate descriptors which more appropriately to two other commonly recognized categories of injurious behavior. Firstly, with regard to injurious acts committed against property, the label which most appropriately captures the substance of this kind of activity is destructiveness not aggression (Zillmann, 1979). Secondly, with regard to injurious acts committed against society or against prevailing social codes (e.g., burglary, fraud, forgery, and theft,), the label which best describes this kind of activity is antisociality or

criminality rather than aggression. (Because injury to self is at variance with some of our most fundamental assumptions about social reality, self-injurious acts constitute unique, atypical instances of injurious behaviors. Nevertheless, these self-injurious acts - such as, drug abuse, suicide, and alcoholism - are better labeled as self-destructive, masochistic, or antisocial acts rather than as aggressive acts.)

Aggression as Non-Sanctioned Behavior. A distinguishing feature of aggression is that it reflects an infringement on the rights of others. Re-affirming the preceeding distinction that that the term aggression be reserved for describing injurious acts committed against another person, it is people, not property nor social codes, who possesses rights. Given that in aggressive behavior the rights of others are infringed upon, aggression can be viewed as representing non-sanctioned behavior. One surprising aspect of this distinction is that the non-sanctioned nature of aggressive behavior has appeared only infrequently in the literature (see Zillmann, 1979, as a notable exception).

A Context for Aggression. The concept of context has had its earliest origins in general systems theory and has been subsequently adapted to social psychology (Bateson, 1972a, 1972b, 1972c; Ruesch and Bateson, 1968;

Watzlawick, Beavin, and Jackson, 1967). Bateson (1979) has stated that context is a "crucial" concept without which words and actions have no meaning (p. 16). Furthermore, context fixes meaning (Bateson, 1979, p. 17). As a term, context steadfastly resists definition, as Bateson (1979) himself has indicated.

Summary: A Social Contextual Approach. Having completed an elaboration of aggression from a social contextual orientation, it is now possible to try to specify areas in which the social contextual approach may be distinguished from the more familiar social judgment approach. In the social judgment approach, the term "judgment" implies a critical role for persons who perform the task of discriminating between aggressive and not aggressive events. With the term context, it is immediately apparent that the role of the person becomes more diffuse and less critical compared to a social judgment approach. Whereas in the social judgment approach there appears to be an inclination toward exaggerating the role of person-as-determiner at the expense of the influence of situational or ecological factors, in the social contextual approach the determination of the aggressive behavior is not identified so much by the "judgment" of the individual

person(s) as by the behavior's embeddedness in the processes and factors which emit shape and meaning to the overall event.

Given the scope of the responsibility assigned to the "determiner", the social judgmental approach tends to become encumbered by having to resolve matters of status among the evaluators whenever conflicting judgments occur. Thus, contentious issues related to the competence, prestige, and authority of the evaluators may often be raised. The concept of context harbors none of these problems. Rather, it is the impact of an array of interrelationships among the component features which tends to override individual personalities and idiosyncracies. Even if one were to replace the label "social judgment" with, for example, "social decision" or "social determination", the result is not satisfactory. Compared to the concept of context, these and other possible alternatives suffer from a lack of richness and dynamism. And it is the dynamism and richness created by a complex network of interrelationships which offers the best accounting for aggressive behavior.

Curiously, in the proposed definition of aggression there is no specific designation for the concept of intentionality. Many other authors, however, view intent as an essential feature in defining aggression. One of the major reasons for the widespread support of intent as

a key construct appears to be that acts of accidental aggression are precluded from consideration as genuine acts of aggression. The consensus appears to have been that "accidental" aggression ought not be viewed as genuine aggression because the "aggressor" is neither goal-directed nor motivated to injure.

Under careful scrutiny, it appears that restricting aggressive behavior to an intentional component is unsatisfactory for several reasons. Some considerations are that: (a) in actuality, people do behave aggressively (injuriously to other persons) without intending to do so; (b) that some of the most flagrantly aggressive persons are those who, in their own minds, often do not really intend to injure other people. These people may be so lacking in regard for others' rights, needs, and desires that they characteristically behave in an injurious manner with little or no awareness of it - nor with any conscious intention to injure any other person. It is suggested that a more critical determination is made by regarding whether a particular act is negligent or non-sanctioned rather than whether it is "intended". In the social contextual approach, accidental acts of aggression are regarded as aggressive acts whenever these acts involve negligent or non-sanctioned behaviors. Conversely, some acts of an intentional, bodily-injuring nature (e.g., military and

athletic contests, dentistry, and surgery), precisely because they are sanctioned, are best labeled as non-aggressive.

## C H A P T E R    I I I

### REVIEW OF THE RELEVANT LITERATURE

"Advertisers spend billions of dollars a year on United States television. They believe correctly, that brief, 30-sec exposures of their product, repeated over and over, will significantly modify the viewing public's behavior in regard to those products. It is interesting to note that while television companies contend that their commercials can influence their audiences, they are not so eager to agree that their drama sequences can also affect their viewers' conduct... Viewers learn from watching television and what they learn depends on what they watch (Radke-Yarrow, Zahn-Waxler, and Chapman, 1983, p. 345).

#### Introduction

For the purposes of reducing aggressive behavior in general as well as reducing the aggressive behavioral consequences of exposure to filmed violence in particular, four different intervention models can be distinguished. The four intervention models are: critical viewing, empathy training, social skills training (cognitive-behavioral interventions), and directive approaches.

## Critical Viewing Interventions

The critical viewing model has focused on coaching children to develop more sophisticated understandings of the ways in which the film industry and technicians construct media portrayals of violence. The main focus of the critical viewing interventions has been on (a) challenging the children's attitudes about the "realness" of filmed violence; (b) helping children to become better informed about the artificiality of filmed violence; (c) instructing children about specific film techniques used by the film industry to simulate violence, daring, strength, power, and bravado; (d) challenging the "messages" inherent in filmed violence about the effectiveness of violence as a method for managing social interactions and for resolving interpersonal conflicts. The rationale of the critical viewing approach is readily apparent. By demonstrating to children that portrayed violence is fabricated by using clever editing procedures, false "sets", and stunt actors and actresses, it is assumed that the typical "message" of the portrayed violence - namely, that violence works and that aggressive behavior enhances self-esteem and the esteem of others - would be significantly undermined.

An additional outcome of critical viewing interventions, though not often explicitly identified within the critical viewing paradigm, is that these

interventions may interfere with children's conscious and unconscious internalizations of aggressive models and their identifications with the violent characters.

Experimental results have indicated that the degree of identification with violent characters may be a critical factor in the relationship of the exposure to filmed violence and subsequent aggressive behavior (Eron, Walder, and Lefkowitz, 1971; Fernie, 1981a, 1981b; Huesmann, Eron, Klein, Brice, and Fischer, 1983; Lefkowitz, Eron, Walder, and Huesmann, 1977; Maccoby and Wilson, 1957).

Despite its logical appeal, critical viewing interventions have indicated only a limited effectiveness in reducing children's aggressive behaviors under experimental conditions (Anderson, J., 1983). While studies report that children of middle childhood generally learn the critical viewing tasks, the ensuing changes in either attitude or behavior in relationship to televised violence have been minimal (Anderson, J., 1983; Dorr, Graves, and Phelps, 1980; Singer, Zuckerman, and Singer, 1980). Recently, Huesmann et al. (1983) used three different critical viewing interventions in an attempt to influence children's (middle childhood) attitudes about televised violence and to reduce their aggressive behavior; nevertheless, they were unable to achieve any appreciable changes in attitude or in

reducing aggressive behavior. When one considers that children have demonstrated increased levels of aggressive behavior after exposure to blatantly non-real film content such as cartoons characters (Ellis and Sekyra, 1972; Mussen and Rutherford, 1961), it seems likely that coaching children about the artificiality and non-realness of media portrayals of violence will not be sufficient to reduce their aggressive behavior.

### Empathy Training

Empathy has often been considered as a central factor in the disinhibition of aggressive behavior (Shantz, 1983). While empathy may be legitimately considered a social skill in some contexts (and therefore relevant to the discussion in the following section), it will be considered under its own heading because of the considerable amount of experimental research which empathy training has generated and because of its distinctly affective components which distinguishes it from other social skill training areas. On an informal level, the notion that empathy and aggressive behavior relate inversely to each other would have obvious support. On the one hand, empathy tends to reflect a concern, caring, and regard for another; while on the other hand, aggression tends to reflect a disregard. Early experimental results tended to corroborate this

putative relationship for middle childhood boys (Feshbach, N.D. and Feshbach, S., 1969).

In experimental studies, the construct of empathy has been commonly approached from two different perspectives (Feshbach, N.D., 1974, 1979; Feshbach, N.D. and Feshbach, S., 1982; Radke-Yarrow, Zahn-Waxler, and Chapman, 1983; Stotland, Mathews, Sherman, Hansson, and Richardson, 1979). In one version, the cognitive aspects of empathy are emphasized and the focus is on the recognition of another's feeling state. In the other version, the affective aspects are emphasized and the focused is on the degree to which the person can experience the emotional state of another.

One of the most comprehensive programs of empathy training for children of middle childhood has been conducted at the Empathy Training Project in Los Angeles (Feshbach, N.D., 1974, 1979, 1984). Some of the distinct advancements of the Project compared with previous experimental investigation with empathy training related to the operationalization of the construct of empathy. In their operationalization, three specific dimensions were attributed to empathic behavior: (a) cognitive - discriminating the affective state of another; (b) social - assuming the perspective and role of another; and (c) emotional - experiencing the emotional state of another. In addition, the thoroughness of the Project was

augmented by the elaborate regimen of interventions which were incorporated into the treatment, including: didactics, videotape, story telling, written exercises, educational games, and role-playing techniques. This comprehensive "empathy" intervention yielded mixed results (Feshbach, 1982). Feshbach reported that the empathy-trained boys did no better at reducing their aggressive behavior than the boys in a problem-solving group; however, both of these groups were reported to perform significantly better at reducing their aggressive behavior than the control group boys. Nevertheless, only the empathy-trained boys significantly increased their prosocial behaviors (e.g., cooperation, helping, and generosity).

Two additional comments are pertinent in evaluating these results. First, many of the characteristics of the subjects used in this study have often been recognized as some of the most obdurate to influence as far as experimental investigation is concerned. These boys lived in a high-crime district in Los Angeles; they were approximately 80% minority; and based on teacher ratings, they were high-ranking in aggressive behavior. Second, it is important to bear in mind that the instructional training never focused specifically on discouraging aggressive behavior (Feshbach, N.D., 1984); rather the

goals were to increase empathic behavior as operationalized along cognitive, social, and emotional dimensions.

### Social Skills Approaches

Although differences may appear in terms of specific goals, social skills training interventions and cognitive-behavioral interventions have typically shared the common overriding goal of improving the social adjustment of socially-disadvantaged children (Asher, 1985; Ladd, 1985). Both of these intervention strategies are essentially derived from a theoretical framework in which social competence is viewed as a primary developmental challenge, particularly with regard to children of middle childhood (Dodge, 1986; Hops and Finch, 1986; Meichenbaum, Butler, and Gruson, 1981; Renshaw and Asher, 1982). Some of the specific target areas of social skills interventions have included: problem-solving approaches and perspective-taking and role-taking approaches.

### Perspective-Taking and Role-Taking Approaches

Although the results of early studies by Chandler (1971) and Staub (1971) suggested that the acquisition of role-taking and perspective-taking skills may be influential in reducing children's aggressive and

antisocial behaviors, more recently, extensive reviews of perspective-taking and role-taking studies (Kurdek, 1978a; Shantz, 1975, 1983) have indicated a rather insignificant impact for these training models on the reduction of children's aggressive behavior. For example, after extensive training of thirty middle childhood boys in perspective-taking skills by way of role-taking and role-switching exercises, Iannotti (1978) found no significant effects on empathic or aggressive outcome measures. In addition, Kurdek (1978b) reported that in a sample of approximately one hundred children, the boys who were identified as good perspective takers on a variety of teachers ratings were also found to be highly disruptive and prone to fighting. As Shantz (1983) has indicated, there appears to be in children no simple relationship between aggressive behavior and perspective taking abilities.

### Problem-Solving Approaches

A prevalent theme in the literature has been the supposition that boys predisposed toward aggressive behaviors are deficient in the ability to generate alternative, non-aggressive, problem-solving solutions as a means of resolving interpersonal conflict. In their review of relevant problem-solving studies, Urbain and Kendall (1980) noted a number of methodological

limitations of several of the studies and that there was not adequate experimental data to draw conclusions regarding the efficacy of problem-solving interventions in the treatment of childhood interpersonal conflicts. Diverging from the more popular viewpoint, Rubin and Krasnor (1986) reported that deficits in problem-solving skills during early childhood (prior to five years of age) were not necessarily indicative of later social maladjustment; however, the authors maintained that similar problems during middle childhood were likely to have a much more detrimental impact on the child's overall social adjustment.

In the current research, two issues appear to be particularly relevant: (a) whether there are differences among aggressive and non-aggressive middle childhood boys with regard to their evaluations of aggressive problem-solving strategies; and (b) whether aggressive middle childhood boys suffer from a limited number of available problem-solving strategies compared with non-aggressive boys. On the basis of self-report rating scale, Deluty (1981, 1983, 1985) found that aggressive boys consistently evaluated aggressive solutions in more positive terms than non-aggressive boys. Under different experimental conditions, Richard and Dodge (1982) found no significant differences among aggressive and non-aggressive boys in their evaluations of aggressive

problem-solving strategies. Both groups of boys evaluated the non-aggressive resolutions as more favorable than the aggressive resolutions. Because of the many differences in experimental design and conditions, it is not possible at this time to draw clear conclusions regarding the manner in which aggressive problem-solving strategies are evaluated by aggressive boys; however, the issue remains a significant one.

With regard to whether aggressive middle childhood boys suffer from a limited number of available problem-solving strategies compared with non-aggressive boys, Deluty (1981, 1985) found that there were no significant differences among the boys on the total number of available problem-solving strategies but that the aggressive boys differed significantly from the non-aggressive boys in that the former practiced many more aggressive strategies and many less assertive strategies. Lochman and Lampron (1986) also found aggressive boys to be deficient in their number of assertive problem-solving strategies. In a complementary but more detailed finding, Richard and Dodge (1982) reported that aggressive boys were distinguished from non-aggressive boys by their being limited to merely an initial, non-aggressive, problem-solving strategy rather than their inability to generate any non-aggressive solutions. This result also blends with Dodge's

consistent finding (Dodge, 1980; Dodge and Frame, 1982; Dodge and Newman, 1981) that compared to non-aggressive boys, aggressive boys significantly more often perceived hostile intent in others. Their overattribution of hostile intent has been most conspicuous in ambiguous situations (Dodge, 1980) and when action is directed at them (Dodge and Frame, 1982). Thus, aggressive boys may distinguish themselves from non-aggressive boys not because they are always behaving aggressively but because they behave aggressively significantly more often in complex and ambiguous situations in which they are directly involved as participants as opposed to observers. Their aggressive behavior under these circumstances may be precipitated by their small number of "pre-made" non-aggressive strategies, their limited ability to extemporaneously create new non-aggressive strategies due to their difficulties in processing complex and ambiguous stimuli (Dodge, 1986), and by the impact of emotional deficits which further reinforce their overattribution of hostile intent on the part of others.

Overall, one of the most disconcerting aspects of the experimental findings using social skills training interventions (similar to the findings of the critical viewing interventions) has been the inability of the training interventions to result in behavioral

generalizations beyond the acquisition of the specifically targeted behavior (Hartup, 1984; Richard and Dodge, 1982). In this regard, LaGreca and Santogrossi (1980) reported that coaching children to improve their sharing and cooperative behavior did not have an impact on the children's level of acceptance from their peers. Similarly, while coaching children to behave more effectively in a child play setting produced significant positive effects in a school play setting, these improvements did not generalize to school work settings (Oden and Asher, 1977). In addition, a training technique employed by Gresham and Nagle (1980) proved effective in the targeted play setting but did not generalize to the children's school work setting whether a coaching or modeling technique was used. Bierman and Furman (1984) attempted to broaden the scope of the experimental effect by intervening in both the individual and peer group contexts. Their results indicated that only for the children in the combined condition (peer group involvement with individual social skills coaching) could the improvements derived from the social skills training be generalized to their social adjustment with peers.

One of the reasons for the limited generalizability of many of the social skills interventions may be, as suggested by Bierman and Furman (1984), that the domain

of social skills is composed of several dimensions which are distinct facets of social adjustment, particularly with regard to experimental remediation. Conger and Keane (1981) believe that social skills "is a rather inexplicit term used to describe a rather wide range of behavior, varying in kind and complexity" (p. 478). Another reason may be that social skills interventions, for the most part, do not specifically address the role of emotional factors in the acquisition and maintenance of aggressive behavior.

### Directive Approaches

The term "directive approaches" constitutes an ad hoc category specifically designated for the purpose of developing an efficient and impactful strategy for reducing childhood aggressive behavior. Included within this category are two distinct areas of concentration: the use of a media-based intervention methodology and the adoption of a clear, articulated moral stance with regard to the "wrongness", "harmfulness", and "badness" of aggressive behavior. Before describing the relevant experimental data, a brief overview of the rationale for incorporating of these elements into the "directive approach" is in order.

Using a filmed-based intervention for the purpose of reducing children's aggressive behaviors is recommended

for several reasons. First, middle childhood boys are very familiar with viewing television and films. It is well-documented that during middle childhood ages, children watch more television than at any other stage of development (Collins, 1984a; Comstock, Chaffee, Katzman, McCombs, and Roberts, 1978; Liebert, Sprafkin, and Davidson, 1982; Murray and Kippax, 1979, Schramm, Lyle, and Parker, 1961), frequently spending more time watching television than attending school, and their viewing levels have been reported to reach as much as 42 hours per week (Murray, 1972, p. 353) in one case and an incredulous 88 hours per week (Stein and Friedrich, 1975, p. 186) in another case. Second, during middle childhood, children's learning and comprehension are uniquely adapted to the special qualities of film presentation. In this regard, the construct of perceptual salience is particularly relevant (Huston and Wright, 1983). Some of the components which are viewed as constituents of perceptual salience include: rapid pace, physical motion, unusual and unexpected perceptual events (incongruity and contrast) and intense auditory stimulation (Huston and Wright, 1983, p. 38). Until ten years of age (human dialogue replaces it), perceptually salient visual and auditory forms are the primary captivators of children's attention (Huston and Wright, 1983). Third, children enjoy watching television and

movies. As a result, they are likely to be much less resistant to and much more cooperative with becoming involved with media-based interventions. Children's immediate cooperation constitutes a significant advantage when the intervention is brief in duration and the goal is to change stable patterns of behavior, such as aggression (Huesmann, Eron, Lefkowitz, and Walder, 1984; Olweus, 1979). Taken together, these three attributes of a media-based interventions can offer an optimistic outlook regarding their potential impact on influencing children's attitudes and behavior. Furthermore, media-based interventions have been demonstrated to be very effective in promoting various prosocial behaviors. Significant increases in the ability of aggressive boys to demonstrate self-control were obtained in a residential school setting (Elias, 1979) as well as in public school settings (Friedrich and Stein, 1975). In addition, media-based interventions have resulted in significant increases in helping behaviors after exposure to a constructive-coping film (Collins and Getz, 1975) as well after exposure to a specific "helping" scene in an excerpted "Lassie" program videotape (Poulos, Rubinstein, and Liebert, 1975; Sprafkin, Liebert, and Poulos, 1975).

With regard to the necessity of articulating a clear moral stance when the goal is to reduce aggressive behavior, it is hypothesized that one of the reasons that

a reduction in aggressive behavior did not frequently materialize in several of the experiments under review was because the aggressive boys were not specifically directed and guided toward the goal of reducing aggressive behavior. Since there is appreciable experimental data which indicates that aggressive boys engage in interactions with a comparatively small number of non-aggressive strategies, and a comparatively large number of aggressive problem-solving strategies and that they experience significant processing difficulties in managing ambiguous and complex situations, particularly when they are directly involved, it seems likely that these aggressive boys are going to require considerable external support and structure in order to help them find and develop alternative response patterns. Taking a clear moral stance against the use of aggressive behavior can help provide them with the re-structuring these boys desperately need. Interestingly, issues related to moral aspects of aggressive behavior have only been infrequently incorporated into experimental interventions as well as into public school education (Hartup, 1984; Lockwood, 1978), despite the fact that children are often keenly aware of moral issues and are typically capable of making sophisticated moral judgments (Turiel, 1978).

An intervention program which closely resembles the criteria of a "directive approach" as outlined above is

the Anger Control Program developed by John Lochman and associates (Lochman, Burch, Curry, and Lampron, 1984; Lochman and Curry, 1986; Lochman, Lampron, Burch, and Curry, 1985; Lochman, Nelson, and Sims, 1981). In the Anger Control Program, small groups of subjects observe modeling videotapes, create their own videotapes and perform several other non-videotape tasks. Typically, the Anger Control Program consists a 6-week program of 12 sessions occurring twice weekly for 40 minutes each, although in one instance (Lochman and Curry, 1986) the Program was extended to 18 sessions. The treatment is conceptualized as a sequence involving three specific steps: (a) inhibiting the subject's immediate, initial aggressive reaction; (b) relabeling the perceived threatening stimuli in a non-threatening manner; and (c) generating an alternate problem-solving or coping response. During the first half of the 12 sessions, most of the exercises involved role-play, team building, behavioral modeling, problem identification in specific stories and role plays, the generation of alternative solutions to presented problems, and the evaluation of the positive and negative consequences of cartoon sequences and role-play activities. In the remaining half of the 12 sessions, the subjects observe modeling tapes and make their own videotapes of scenarios which depict various strategies for resolving conflictual and

threatening situations. The results of this series of experiments indicated that the experimental subjects significantly reduced their disruptive/aggressive behaviors within the classroom (based on pre- and post-measures compiled by teachers) as well as within the home (based on pre- and post-measures compiled by parents) compared to the control subjects.

Three additional comments are noteworthy. First, in these experiments, a consistent finding was that the boys who had initially the poorest ratings on problem-solving skills and the highest ratings on aggression (in the classroom and at home) were the subjects who demonstrated the most improvement. Second, the effects of the anger control intervention were noted to generalize beyond the specific target of reducing disruptive/aggressive classroom behavior and extended to reductions in aggressive behavior at home (rated by parents) and to improvements in self-esteem (rated by self-report measure). Third, in the Lochman and Curry (1986) experiment, the authors added to the anger control intervention (AC) a self-instructional training program (SIT) which involved teaching subjects to internalize overt and covert self-statements of adaptive problem-solving strategies and to perform several academic-like tasks focusing on problem identification and resolution. The authors reported that the anger

control program alone proved to be more effective at reducing disruptive-aggressive behavior for middle childhood boys compared with the combined AC and SIT interventions. According to the authors, "Apparently, the exclusive initial emphasis within the AC-SIT groups on reducing cognitive impulsivity on impersonal, academic-like tasks blunted the intervention's overall focus on interpersonal disruptiveness" (Lochman and Curry, 1986, p. 163).

Another example of a "directive approach" intervention has been reported by Huesmann et al. (1983). Since the current experimental study was designed to essentially replicate the Huesmann et al. study, a more detailed description of the Huesmann study as well as the ways in which its "replication" diverges from the original experiment are discussed in the following chapter.

## C H A P T E R    I V

### METHODOLOGICAL CONSIDERATIONS

"While the committee [Advisory Committee] report is carefully phrased and qualified in language acceptable to social scientists, it is clear to me that the causal relationship between televised violence and anti-social behavior is sufficient to warrant appropriate and immediate remedial action. The data on social phenomena such as television and violence and/or aggressive behavior will never be clear enough for all social scientists to agree on the formulation of a succinct statement of causality. But there comes a time when the data are sufficient to justify action. That time has come." (Jesse Steinfeld, Surgeon General, at the Senate Subcommittee Hearings on Communications, 1972, in Murray & Kippax, 1979, p. 271).

#### Introduction

The current experimental approach is a true experiment (Campbell and Stanley, 1963; Cook and Campbell, 1979) involving an experimental and a control group in a pre- and posttest design. This study attempts to replicate the findings reported by Huesmann, Eron, Klein, Brice, and Fischer (1983). In the Huesmann et al. experiment, the authors reported that in a sample of 132, 3rd and 5th grade, Oak Park, Illinois (Chicago suburb) students (drawn from the authors' ongoing longitudinal study involving a larger sample of children) the

experimental subjects demonstrated a significantly smaller increase ( $p < .008$ ) in peer nominated aggression when comparing all experimental subjects (3rd and 5th grade students combined) to all the control subjects. Briefly, the intervention procedure involved a two-stage treatment focusing on the harmful effects of exposure to televised violence (experimental condition) or on why everyone should have a hobby (control condition). Four months after the two-stage intervention was completed, a peer nomination instrument was re-administered to assess the experimental effect. It was the authors' contention that aggressive behavior generally increases for children between 9 and 11 years of age and that the experimental effect was created by the disruptions in children's identifications with violent television characters. According to the authors, "violence viewing itself was not significantly reduced but became uncoorelated with aggression, whereas identification with TV characters became more strongly coorelated with aggression" (Huesmann, et al., 1983, p. 909). Further detail regarding the Huesmann et al. experimental procedures will be apparent from a description of the current experimental design, which will be discussed under the following headings: subjects, materials and procedures.

It is also to be noted that the current experiment did not include any specific measure for determining the

subjects' exposure to media violence. Therefore, the role of media violence as an influential factor on the subjects' aggressive behavior was assumed. However, this assumption was based on a review of the relevant experimental studies (Kanner, 1986) concerning the aggressive behavior of middle childhood boys, especially with regard to the role of media violence. A conclusion of the review was that exposure to media violence tends enhance aggressive behavior of middle childhood boys, particularly for boys who are already predisposed to aggressive and violent behavior. A further assumption derived from this conclusion (Kanner, 1986) was that since it appeared that exposure to media violence can increase the aggressive behavior of middle childhood boys, exposure to alternate media "messages" may result in reductions in their aggressive behaviors.

### Subjects

#### Subject Characteristics

The subjects in this experiment were 3rd and 4th grade students drawn from three different elementary schools, stratified by socioeconomic status (SES), in the Worcester public school system. All 3rd and 4th grade students in each of the 3 schools were incorporated into the experiment, except for the students in one 3rd grade classroom in the high socioeconomic status school (HSES).

The students in this one 3rd grade class were excluded from the experiment at the principal's request reportedly because the class was being taught by a substitute teacher. In all, there were 13 classrooms: 4 classes drawn from the middle and high socioeconomic status schools (MSES and HSES, respectively) and 5 classes drawn from the low socioeconomic status school (LSES). In the LSES school, the additional 5th class was a split classroom composed of both 3rd and 4th grade students. Having available the additional LSES class was viewed as a fortunate occurrence since it was anticipated that students from the LSES school might have very high attrition rates.

On the average, 20 students per classroom (a total of approximately 260 students) participated as nominators on both the pre- and posttest administrations of the aggression measure. The subset of higher scoring boys per classroom (based on the results of the scores of the Peer-Rating Measure of Aggression), constituted the initial working sample of 77 aggressive boys. From this grouping, the final sample (matched by school and grade) of 62 aggressive boys for whom both pre- and posttest scores were available was obtained.

## The Worcester School System

The City of Worcester was selected as the site of this experiment because it is viewed as highly representative of many urban communities across the United States. Worcester (pop. 160,000) has several advantageous features which make it a good site for conducting experimental research in psychology. It is essentially an urban, working-middle-class city with a rich cultural diversity and a significant population (by national standards) of Irish, Italian, Greek, Jewish, French, and Asian citizens. The Black population of Worcester constitutes a smaller percentage compared to the national average for urban areas while the Latino population was a somewhat higher percentage compared to the national average for urban areas. Geographically, Worcester is located at the hub of New England.

During the year in which the experiment was conducted (1986-87), the primary school system in Worcester, Massachusetts was composed of 40 elementary schools, 6 of which were classified as community schools. The most prominent distinguishing features of the community schools were: (a) that academic sessions and organized recreational activities were conducted throughout the entire year, including the summer; and (b) that an extensive parental education program was conducted during the evening hours throughout nine months of the year.

Based on its structure and programming, it was evident that the community schools evinced a serious commitment to their neighborhood communities and in many respects, functioned simultaneously as community centers. Of the three schools participating in this experiment, only the LSES school was a community school.

### SES and the Schools

Comparing the three schools in the sample, it was immediately apparent that there were considerable organizational and qualitative differences between the LSES community school and the MSES and HSES non-community schools. (The qualitative differences will be discussed in the final chapter.) The MSES and HSES schools were administered by one secretary and one principal. In the LSES school, there were at least five secretaries and several administrators assisting the principal. Obviously, the LSES school had a much more complex institutional structure compared with the other two schools. It also had the largest population of all 40 elementary schools in the system, serving 690 students. The second largest school (by population) was also a community school and enrolled 570 students. For the two remaining schools in the sample, the HSES school enrolled 459 students while the MSES school enrolled 344 students. In racial terms, the LSES school had 52 (7.5%) Black

students, 392 (56.8%) Latino students and 6 (0.9%) Asian students; the MSES school had 3 (0.9%) Black students, 9 (2.6%) Latino students and 0 Asian students; the HSES school had 9 (2%) Black students, 14 (3.1%) Latino students and 3 (0.7%) Asian students (Newton, 1986).

Given that approximately 30 of the 40 elementary schools could be considered middle-class schools, a potentially perplexing issue facing the experimenter was to devise a basis on which to select the MSES school (and to a lesser degree, devising a basis for selecting the two other schools). As with many other large urban cities, Worcester is actually composed of several neighborhood enclaves differentiated from each other on the basis of specific cultural traditions, ethnic customs, economic characteristics, and historical events. Because of these factors, it was clear that there are several very different kinds of middle-class experiences and middle-class schools in Worcester. The issue of the selection of the three schools was taken away directly from the experimenter, when, in the course of contemplating the experimenter's request for permission to conduct the experiment in the Worcester school system, the Assistant to the Superintendent simply designated the three schools by administrative edit.

## Materials

### Assessment Measures and Children's Aggression

In studies of childhood aggression, the most popular measures used to report aggressive behavior have been: self, parent, teacher, peer, and direct observations (Pekarik, Prinz, Liebert and Weintraub, 1976). Not surprisingly, the results of self-report and parent-report measures have often been skewed in the direction of underreporting (Eron, Walder, and Lefkowitz, 1971; Ledingham, Younger, Schwartzman and Bergeron, 1982; Milavsky, Kessler, Stipp and Rubens, 1982; Pekarik, Prinz, Liebert and Weintraub, 1976). After a preliminary, exploratory attempt to develop self- and parent-reporting measures, Milavsky et al. (1982) rejected each of these measures (because of validity problems) in favor of a peer-report measure. Furthermore, interrater agreement between peer and teacher has been found to be clearly higher than between self with either teacher or peer (Ledingham et al., 1982). Some of the problems commonly associated with direct observational methods have been related to issues involving the reliability of the coding and the obtrusiveness of the observers (Milavsky et al., 1982). Teacher ratings, although generally considered superior to self, parent, and direct observational methods, have

been viewed at times as suspect because of their vulnerability to the personal like and dislike of particular students. In some instances of assessing children's behaviors, teacher ratings have coorelated only weakly with peer ratings (Humphrey, 1982). Although teacher ratings have been shown to effectively discriminate between problematic and non-problematic students, questions have also been raised regarding the effectiveness of teacher ratings in differentiating between students on the basis of the specific problems involved (Green, Beck, Forehand and Vosk, 1980). With regard to assessing children's aggressive behavior, studies have consistently documented the superiority of peer assessment measures.

#### Advantages of Peer Assessment

One of the reasons that peer assessment of aggressive behavior has been advantageous is that aggressive behavior is inherently interactional. Based on the discussion of the definition and the operationalization of aggression in Chapter Two, it is evident from the current perspective that there can be no aggression without a victim. From this perspective, peers (the most frequent victims of children's aggressive and threatening behaviors) can be seen as occupying a critical position in the assessment of children's aggressive behaviors. In

addition, peers are clearly in the best position for deciphering "mode-identifying signals" (Bateson, 1972c). That is, it is frequently difficult for an outside observer to determine whether in a particular "horse-playing" interaction, the boys are genuinely playing or whether they are fighting. Often, it is the boys themselves who are acutely sensitive to the specific nature of their interaction and to the relevant signals and cues they need in order to determine whether they should interact responsively in a playful or in an aggressive manner. Because of their position as "inside observers," peers also can contribute in a unique way on the basis of providing naturalistic observations regarding low-frequency but psychologically significant events (Asher and Hymel, 1981, p. 143). As Ledingham, Younger, Schwartzman, and Bergeron (1982) have astutely observed, "if children's social behavior is specific to its context, predictions to a particular class of behaviors might be best accomplished by using as an observer the relevant other in the situation of interest" (p. 371). Peer measures have also been successfully validated against parent ratings (Winder and Rau, 1962), teacher ratings (Wiggins and Winder, 1961) and against overt behavior (Winder and Wiggins, 1964). From a more technical perspective, peer measures are desirable because information from large numbers of children can be

obtained efficiently and because peer measures can be used with children as young as early middle childhood. In sum, Pekarik, Prinz, Liebert, and Weintraub (1976) have noted that, "peer evaluations are obtained in the rich, nontest context of the child's real-life environment and are based on observations made over extended periods of time by multiple observers with whom the child has different personal relationships, and who consequently view him from varying perspectives" (p. 83).

#### The Peer-Rating Measure of Aggression

In the current study, the instrument used for the assessment of aggressive behavior was originally developed as the Peer-Rating Measure of Aggression (Walder, Abelson, Eron, Banta and Laulicht, 1961). This assessment instrument was selected because of the extensive research and validation studies which have been conducted regarding its application. Comprehensive discussions of the development and the validation of the Peer-Rating Measure of Aggression have already been documented (Banta and Walder, 1961; Eron et al., 1971; Walder et al., 1961).

Regarding the development of the Peer-Rating Measure of Aggression, 1000 items (questions) descriptive of aggressive behavior were originally considered and subsequently narrowed to 271 items. These items were

reviewed and judged by 6 experts for relevancy and subsequently reduced to 155 items (at least 4 experts agreed to each of these items). After eliminating duplication and overlap, the 106 remaining items were randomly divided in half (Form A and Form B) and rigorously tested in approximately 40 classrooms involving 974 children (Eron et al., 1971, p. 175). Resulting from these preliminary studies was the "aggression index," composed of 20 scorable items and readministered to a new sample of 158 children in the following year. In this final aggression index, each of the 10 key aggressive items reflected interpersonal aggression. As changes were made in the selection of the specific items in the assessment instrument, corresponding changes also occurred in the researchers' definition of aggression (Eron et al., 1971). Both the notions of "intention" and "aggression against objects" were eventually removed and the final definition was "an act which injures or irritates another person" (Eron et al., 1971, p. 183). "

The Peer-Rating Measure of Aggression (PRMA) has been validated against teacher judgments, against parent reports regarding punishment and instigation to aggression in the home, against antisocial and criminal behavior as reported in local newspaper, against corresponding results in a retest study using the same

Peer-Rating Measure with a sample of 567 children in a different state from the original validation site (Semler, Eron, Meyerson, and Williams, 1967) and against the results in a laboratory setting of 3rd grade children whose aggressive behavior was measured by a modified Buss-type shocking apparatus (Williams, Meyerson, Eron, and Semler, 1967). Based on these extensive validation studies, it seems difficult not to concur with the conclusion of Milavsky et al. (1982) who reported that, "we believe it [The Peer-Rating Measure of Aggression] to be the most valid and reliable measure of all those available to us" (p. 48).

#### Adjustments to the Peer-Rating Measure of Aggression

In the current study, the 10 validated items which were found to be the key predictors of aggressive behavior were retained exactly as originally developed, primarily because of validity considerations but also because of replication considerations. To these ten items were added ten more items reflecting prosocial forms of behavioral interaction. (This revised Peer-Rating Measure of Aggression can be found in Appendix A. The ten original aggression items are #'s 4, 6, 7, 9, 10, 12, 13, 15, 18, and 20). In the original finalized form of the PRMA (appended in Appendix B), the additional ten items consisted of 3 items focusing on

success in aggression, 2 items focusing on aggression anxiety, 3 items focusing on activity, and 2 items focusing on popularity. Thus, 15 items were aggression-related and 5 items which were unrelated to aggression. In the current study, 10 specifically prosocial items were incorporated into the index in an attempt to counteract the formation of an "aggressive response set" in which peers may be likely to continue to identify as aggressive those peers who were identified as aggressive on the initial items. In addition, the prosocial items were included to: (a) minimize concerns about potential retribution from peers frequently nominated on the aggressive question items; (b) minimize anxiety and/or guilt about "informing" on peers; and (c) to obscure the precise nature of the objective of the questionnaire.

Revising the original Peer-Rating Measure of Aggression has not been uncommon. During the course of the 6 waves of data collection in their cohort study, Milavsky et al. (1982) made several changes in their re-construction of the original ten key aggression items - deleting some items, adding others, and re-constructing the specific language of some of the aggression items. During Waves IV, V, and VI, it appeared that Milavsky et al. (1982) used only four aggression items, and yet believed that the validity of the index was maintained.

A relevant question in planning the administration of the PRMA was whether to use both girls and boys as nominators or to restrict the nomination process to boys. In evaluating this issue, the considerable classroom disruption which would likely accompany the dislodgement of the girls from the boys during the administration process was not an insignificant concern. More importantly, the critical issue in deciding to use both girls and boys as nominators was that, although boys and girls may draw on somewhat different criteria in making their nominations, the "inclusion of nominations and ratings by opposite-sex peers does not greatly alter the distribution of children's sociometric scores compared to the distribution of scores based on same-sex peers only" (Asher and Hymel, 1981, p. 131).

### Other Materials

One of the very useful experimental tools used by Eron et al. (1971) in conjunction with administering the PRMA was the scoring booklet given to each of the classroom students. This booklet consisted of a pre-determined number of pages, color-coded in a fixed sequence, and having the first and last name of each student in the classroom on each and every page. The classroom student names were listed in separate boy and girl columns. In addition, the "name", "no girl" and

"no boy" (see Appendix D regarding administration guidelines for the rationale) was added to each column. In the current experiment, there were 25 pages in the each booklet using 5 different colors in a fixed ordered sequence. Following the approach used by Eron et al. (1971), students answered each question by drawing a line through the first and last names of the appropriate student names. The first page of the booklet was used for answering the question, "Who are you?" thereby the author of each booklet could be easily identified. The second page was used as a practice page to help the students gain familiarity working with the booklet. The following 20 pages were for answering the 20 questions comprising the revised PRMA and there were 3 extra blank pages.

Additional materials included small folded-paper booklets for the subjects to write brief essays during the first experimental and control intervention (Stage 2) and a portable video unit with a 26-inch television monitor which was used to videotape the final stage of the experimental and control intervention (Stage 3).

### The Procedure

#### Overview

A brief overview of the procedures involved in the experiment is as follows. The entire experiment can be

viewed as occurring in 4 stages. Stage I (pretest) involved the initial classroom administration of the revised PRMA; Stage II involved the aggressive subjects writing essays in small groups (experimental and control); Stage III involved videotaping the aggressive subjects in their same small groups (experimental and control), and Stage IV (posttest) involved the re-administration of the revised PRMA. At each stage all participating students were given a small prize in order to encourage their continued participation and cooperation.

#### Obtaining the Sample

After meeting with and gaining the permission of the three school principals to conduct the experiment within each school, the initial phase of the experiment involved securing parental permission for all the students in each of the 3rd and 4th grade classrooms. A copy of the initial parental permission form for all classroom students is appended (Appendix C). In general, parents were very amenable to granting their permission. The parental refusal and no-response rates were basically similar in all three schools. The combined refusal and no-response rate for any individual classroom was never more than 20%, with the no-response rate typically constituting the larger proportion. Parental responses

tended to return more slowly from the LSES school, therefore greater latitude in time allotment was granted in this school in order to facilitate the number of returns. Although the LSES school generally had the lowest percentage of returned forms, the difference was marginal. Obtaining desirable levels of parental permission required about three weeks and approximately one or two re-issues of the parental permission form. These permission forms were taken home to the parent(s) by each student. Once the requisite levels of parental permission were obtained, the revised Peer-Rating Measure of Aggression (PRMA-r) was administered to the boys and girls in the classroom by the experimenter. The small number of students whose parent declined permission or did not sign a permission form, remained in the respective classrooms either observing the administration or performing assigned academic work. The PRMA-r was introduced to the students in the same manner for all 13 classrooms (see Appendix D for the administration guidelines).

A goal of the experiment was to obtain for purposes of statistical analysis a minimum of 5 subjects per cell (condition by grade by school). Given the likelihood of subject losses due to attrition (e.g., subjects moving out of school district when the posttest was to be conducted 5 months later and in a new academic year, as

well as absences on key days when the experiment was being conducted), it was decided that having 6 to 7 subjects per cell at Stages II and III would likely be necessary in order to achieve the goal of 5 subjects per cell at Stage IV (5 months later). Thus, permission from the parents of approximately the 15 highest scoring aggressive students across grade level (i.e., approximately 7 boys from each classroom x 2 since there were generally two sections of each grade level in each of the schools) for each of the three schools was earnestly sought after. Once the 15 top scoring boys per grade were identified, a new parental permission form was sent home with each of the boys (see Appendix E). This second parental permission form stipulated that permission was being sought for their son's involvement in a instructional curriculum on the effects of television programming.

#### Random Assignment with Matching

Once the requisite number of parental permissions were received, the subjects were randomly assigned to the treatment and control conditions on a per grade per school basis. As an illustration of the procedure, the 15 highest scoring boys from the combined fourth-grade classrooms in the MSES school were first pooled together and then drawn randomly from this pool and assigned to

either the treatment or control groups. The random drawing of the names of the aggressive boys to the treatment and control groups was governed by the following rules. First, regarding blood relatives (e.g, twins, cousins) and boys living within the same household (e.g, half-brothers, foster brothers), after an initial random assignment was made for one of these pairs of boys, the other boy was automatically assigned to the opposite group (3 or 4 instances). Second, if a random draw resulted in a skewed group such that all or nearly all of the treatment or control subjects came from one of the classrooms only, the draw was rejected and another draw was performed (instances cases). Third, if a random draw resulted in large discrepancies such that several of the extremely high scoring aggressive boys were assigned to either the experimental or the control group and a correspondingly large number of low scoring aggressive boys were assigned to the alternate group, the draw was rejected and another draw was performed (several instances).

### The Experimental and Control Conditions

As in the original experiment, each Stage II and Stage III intervention was approximately 75 minutes in length. All characteristics of the intervention procedures were basically the same in the experimental

and control conditions except that in the experimental group, the focus of the discussions was on the harmful effects of filmed (television and movie) violence and in the control group, the focus was on the harmful effects of eating junk food. For each of the conditions, Stage II involved the experimenter encouraging and coaching the subjects to write essays in their individual booklets regarding their ideas about the harmful effects of either media violence or junk food. The coaching or prompting guide used for facilitating the essay writing of the experimental and control subjects is appended (Appendix F). In the experimental condition, (following the procedures outlined by Huesmann et al., 1983), the coaching was organized under three specific categories: (a) how much television is not like real life; (b) why it is bad to imitate television violence; and (c) why it is bad for a kid to watch too much television. In the current experiment, the parallel topics were created for the control subjects were: (a) how junk food interferes with healthy growth; (b) why it is bad to eat too much junk food; and (c) what is bad about TV commercials which advertise junk food. In the experimenter's coaching guide (Appendix F), there were several examples of suggestions supporting each of the three categories. During Stage II (and Stage III), the experimenter used whatever suggestion items which seemed to have the

greatest receptivity with the subjects in any given group. With less innovative groups, more of the suggestion items were offered (always in verbal format) to the subjects; with more innovative groups, generally only a few suggestion items were offered. The full range of suggestion items is included under each category in Appendix F. To illustrate, a sample suggestion for each of the three categories, beginning with the experimental condition was as follows: (a) You forget that daredevil acts are simply created by trick photography; (b) You might think that it is O.K. to play with dangerous weapons; (c) You begin to think that practically everyone else might want to attack you some time. Control suggestions by category were: (a) Too much sugar and junk food makes your body nervous, fidgety and "on edge"; (b) Get more sicknesses more often; (c) You think that junk food cannot be too bad for you since all the people on TV are eating it.

It can be argued that utilizing a "media-sensitive" intervention in the control condition could contaminate the possible effects of the media-based intervention in the experimental intervention because both control and experimental subjects could become more sophisticated and critical viewers of media. However, this argument did not appear persuasive because (a) the experimental results of "critical viewing" studies have generally not

been successful in reducing children's aggressive behaviors (as noted, pp. 49-51); (b) of the assumption that direct, moral injunctions were likely necessary to mitigate aggression in aggressive boys.

As in the original experiment, every attempt was made to encourage group support, to share ideas, and to foster camaraderie in developing the most sagacious reasoning possible regarding the specific harmful effects. Regardless of condition, the resulting essays ranged from a minimum of 1 or 2 written words to a maximum of 5 or 6 sentences per category. Actual samples of the essays are listed below. Each of the six samples were authored by some of the very highest scoring aggressive subjects on both the pretest and posttest administrations of the PRMA-r.

1. LSES, 3rd grade, control, category (c):  
It makes you want to eat candy. don't be fold. don't biy junk for you. they couch you to biy candy. they want you to biy candy. to much sweets. do not eat candy.
2. LSES, 4rd grade, experimental, category (c):  
To nuch TV might injuire yuor eyes. You begin to believe that anyone who looks like tha bad guys on TV is probably going to hurt you. When you watch so much shooting and hurting, you might think that the other people out there will want to hurt you all the time.
3. MSES, 3rd grade, control, category (a):  
If you eat to much junk food you might get fillings and cavities and your Mom and Dad have to pay for it. And that mony might be trip mony.

4. MSES, 4rd grade, experimental, category (b):  
You can get killed and hurt. don't pretend your  
blind or drunk. don't thretin people.
5. HSES, 3rd grade, experimental, category (a):  
When people get shot it is realy fake.
6. HSES, 4rd grade, control, category (b):  
it makes you sick it recks your gums you get lazy  
it makes nerous it give you head ach it makes you  
hiper it gives you somack achs

For each of the conditions, Stage III involved videotaping each subject for approximately 5 minutes while he read his essay to the experimenter who, in turn, directed questions and offered comments in an interview format style. Videotape format was viewed as a critical conveyance for influencing middle childhood subjects' attitudes and behaviors. Some of the reasons for emphasizing the role of videotape format have already been presented in Chapter III (i.e., that the enjoyment and familiarity of middle childhood children with filmed presentations enhances their cooperation and reduces their resistance; and that children's learning styles of middle childhood are very well adapted to the formats of filmed presentation). In addition, videotaping format was viewed as critical because it may be uniquely suited to influencing the psychological processes of children's internalizations and identifications. It is easily manageable for children to adopt and internalize information ("messages") when portrayed in filmed presentations because these "messages" or "scripts", or

"complete experiences" are communicated in an intact and reified manner through a sophisticated multisensory (audio, visual, imagerial) delivery system. In terms of identification, previous research performed by Eron and associates (Eron et al., 1971; Huesmann et al., 1983; Lefkowitz et al., 1977) has indicated that the degree to which boys have identified with violent television characters has been a critical variable in the relationship between exposure to television violence and subsequent aggressive behavior. Based on the findings of Eron and associates as well as on other research results (Fernie, 1981a , 1981b; Maccoby and Wilson, 1957; Singer, Zuckerman, and Singer, 1980) on the relationship of identification with television characters and learning from television, it was assumed in the current experiment that the blatant criticisms and indictments against television violence would interfere and disrupt children's identifications with violent television characters.

During Stage III, whenever a prepared essay was sparing or whenever the subject experienced obvious difficulty with the reading of the essay to the group, the experimenter raised questions or made statements to the subject based on the the suggestion items in the coaching guide (Appendix F) to facilitate a more spontaneous interaction focusing on any or all of the

three essay themes. Typically, the majority of the videotaping time involved the experimenter interviewing the subjects in this more extemporaneous manner rather than the subject simply reciting his essay. In each case, the "interviewer's" goal was to structure the questioning so as to encourage each subject to articulate negative statements about media violence and about junk food, respectively. While the subject was being interviewed, the other members of his group could observe their peer directly or on the videotape monitor (26" color television). Also, the subject could observe himself on the monitor while being interviewed. As a means of fostering personal investment in the group, group members took turns operating the videocamera and using special effects such as zooming in and out on the subjects while the individual interviews were conducted. When each of the individual interviews was completed, the videotape was rewound, and the group observed the entire sequence of the individual presentations. Finally, approximately five months after the completion of both experimental and control interventions (in November, 1987), the PRMA-r (Stage IV) was re-administered.

#### A Missing Procedure

A noteworthy and conscious omission in this replication attempt was that the original subjects were

told by Huesmann et al. (1983) that their videotape was going to be observed by many other children in the Chicago area who had been "fooled by television or harmed by television violence or got into trouble because of imitating it" (p. 905). It appeared that the authors believed that this superordinate goal was very influential in their attempts to influence changes in their subjects' behaviors. For example, the goal of helping other children in need appeared to be used repeatedly in the experiment as a rallying point for stimulating the subjects' personal investment in the experimental procedures and for stimulating their belief that their efforts had important consequences. This deception was not adopted in the current replication attempt because it was anticipated that both the University research ethics committee as well as local public school administrators would be disinclined to approve the experiment if this procedure were included. Rather, in the current experiment, there was merely one suggestion that their videotape may be used to inform other Worcester school children (which was a possibility, given the experimenter's continued research interests) but the suggestion was never repeated to the group nor was there any emphasis on it as a rallying point.

Additional noteworthy differences related primarily to the procedures associated with the pretest and

posttest administrations of the peer rating measure. First, because the Huesmann et al. (1983) sample (3rd and 5th grade subjects) was drawn from a larger ongoing longitudinal study, the subjects's pretest aggression scores were actually obtained while the subjects were in the 2nd and 4th grades. Second, the Huesmann et al. (1983) posttest was administered while the subjects remained in the same grade as when the interventions were conducted; therefore, the subjects did not overlap the summer vacation (as did the subjects in the current experiment). Finally, the statistical results reported in Huesmann et al. (1983) did not indicate comparative findings for the interaction of grade by condition; therefore, it was not possible to determine whether there were any meaningful differences between the experimental intervention on the 3rd grade subjects compared to the 5th grade subjects.

## CHAPTER V

### RESULTS

"There is violence because we have daily honored violence."  
(Arthur Miller, in Sugg, 1970, p. 77).

#### Introduction

##### The Statistical Procedure

According to Huesmann, Eron, Klein, Brice, and Fischer (1983; see also Campbell and Stanley, 1963), the preferred statistical procedure for this experiment is an analysis of covariance (ANCOVA). An analysis of covariance analyzes the differences between experimental groups after taking into account the initial differences on a pretest measure (Kerlinger, 1973). Since this study is aimed at determining the degree of change in aggression scores rather than simply a final aggression score, correcting for the statistical impact of a subject's initial pretest is extremely important in order "to adjust treatment effects for any differences between the treatment groups that existed before the start of the experiment (Keppel, 1982, p. 483).

##### The Derivation of a Subject's Aggression Score

The aggression score of each male was derived from the total raw number of classmate nominations on the 10

aggression questions. This raw number score was then divided by the total number of possible nominations for a particular student. The total number of possible nominations equaled 10 (the 10 aggression questions) x the number of students nominators present at the administration of the Peer-Rating Measure of Aggression - revised (PRMA-r) minus the student himself (provided he were present at the administration) since self-nominations were specifically prohibited. The resulting score was essentially a percentage score: the actual number of nominations divided by the potential number of nominations. In theory, the range of the aggression scores was from 0 to 100%. A 100% score would have meant that the student was nominated every time an aggression item was presented (10 times in total) by every one of the students in the classroom. The actual range of the aggression scores for the 62 subjects was from 0 to 90%.

There were two scoring patterns which tended to emerge in each of the 13 classrooms. First, there appeared to be a clustering effect in which the scores of 2 or 3 subjects would often times cluster together within a 2% to 6% range of each other, forming a "step". The scores in this "step" would form a natural boundary between itself and the next, similarly constituted "step" or cluster of scores. Because of these scoring patterns,

natural occurring, informal divisions appeared to emerge between the more aggressive, the aggressive, and the moderately aggressive subjects. As an illustration of this "step-clustering" pattern were the pretest scores (experimental and controls combined) for the subjects in one of the 4th grade, MSES classrooms: 85%, 83%; 77%, 73%, 71%; 56% and 53%. Whenever the step-clustering phenomenon occurred, the "clustered" students were assigned to either the aggressive or non-aggressive category as a group depending upon the actual placement of these scores relative to the other scores in the classroom. Thus, divisions between aggressive subjects and non-aggressive students were never drawn within a "step", only between "steps".

The second discernible scoring pattern was evident in the schools in which the classroom student populations remained nearly exactly the same (MSES) and (HSES) as the students moved from one grade into the next grade. In the classrooms of these schools, scoring patterns emerged in which the overall aggressions scores tended to move as a group either in an upward or downward direction when comparing the pretest and posttest results of the PRMA-r. As an example, the downward movement in classroom scores was evident in the comparison of the pretest scores (listed in the previous paragraph) for the MSES, 4th grade, subjects with their posttest scores (although the

relative positions of these six subjects were not exactly maintained), which were: 79%, 77%; 59%, 43%; 27%, 21% and 16%. An illustration of the upward pattern of movement in the classroom scores was reflected in the pretest and posttest results for one of the 3rd grade, HSES classrooms. On the pretest measure, the scores of the five top scoring aggressive boys were: 38%, 28%, 26%, 24% and 22%. On the posttest measure, the scores of the same five boys were (once again, their relative positions were not exactly maintained): 61%, 53%, 51% and 50%; and 17%.

Because of the importance of contextual variables on the functioning of peer nomination (e.g., the apparent tendency for peers to overattribute aggression scores in classrooms when the generalized disruption is high and to underattribute aggression scores in classrooms when the generalized disruption was low) as well as on the interpersonal dynamics of classroom interaction as a whole (e.g., the organization, intensity, rigidity, triangulation, and detouring of the interpersonal peer and teacher conflicts), it appeared that classroom itself can contribute differentially to an individual's score depending upon his classroom membership. Therefore, each student's score was "corrected" by dividing it by the mean classroom aggression score (sum of all aggression nominations divided by number of boys in the classroom).

This final "corrected" score was used in the statistical computations. However, in order to determine whether the "uncorrected" (without adjusting the individual scores by dividing by the classroom mean) scores would yield any statistically significant results, an additional ANCOVA was computed and the findings showed no significant or approaching significance results for any main effect or interaction.

### Main Analysis

#### Peer Nominated Aggression and the Experimental Treatment

Table 1 presents the results of the main analysis for the three experimental hypotheses. In each case, the test of significance was determined by the F ratio with the level of significance set at  $p < .05$ . Hypothesis I stated that the experimental condition will have a significantly larger impact on the experimental subjects compared to the control subjects. Inspection of TABLE 1 revealed that there was no main effect for the experimental condition of intervening with a media-based program designed to reduce aggressive behavior. Specifically, for condition ( $F = .42$ ,  $df = 1$ , n.s.), the result was not significant. Therefore, Hypothesis I was rejected. Also, the magnitude of the statistical result was insubstantial, thus there was no suggestion that the

TABLE 1

## Analysis of Covariance (ANCOVA): Summary Statistics

Source	SS	df	MS	F	p <
Covariate (pretest)	1.10	1	1.10	48.88	.001
school	.31	2	.16	6.93	.01
grade	.03	1	.03	1.32	n.s.
condition	.01	1	.01	.42	n.s.
school x grade	.00	2	.00	.02	n.s.
school x condition	.03	2	.02	.71	n.s.
grade x condition	.08	1	.08	3.47	n.s.
school x grade x condition	.02	2	.01	.34	n.s.
Error	1.11	49	.02		

effect of the experimental treatment supported the general direction of Hypothesis I.

The results of the ANCOVA: Summary Statistics analysis further indicated that an effect which approached significance was obtained at the  $p < .07$  level for the interaction between condition and grade. However, since the interaction between experimental condition and grade is the focus of Hypothesis III, the specific results will be examined under Hypothesis III.

## The Interaction between Experimental Treatment and School

Regarding the relationship between peer nominated aggression and school, inspection of TABLE 1 indicated that there was a significant main effect for school ( $F = 6.93$ ,  $df = 2$ ,  $p < .01$ ). Hypothesis II stated that the experimental condition will have a significantly larger impact on the high and middle SES subjects respectively, compared to the low SES subjects. The relevant statistical results are found in TABLE 1. Specifically, for the interaction between school and condition ( $F = .71$ ,  $df = 2$ , n.s.), the result was not significant. Therefore, Hypothesis II was rejected.

Because of the finding of a main effect for school, Fischer's least significant difference (Winer, 1971) post hoc comparisons were computed in order to examine in greater detail the nature of the effect. Inspection of TABLE 2 indicated that the means for peer nominated aggression for the MSES subjects decreased on the posttest scores, while the means for peer nominated aggression for the LSES and HSES subjects indicated increases. The difference between the mean aggression scores for the subjects in the MSES school and the subjects in the HSES school was significant at the  $p < .03$  level. The difference between the mean aggression scores (posttest adjusted for pretest) for the subjects in the MSES school compared with the subjects in the LSES school

TABLE 2

## Post Hoc Analysis:

## Means on Peer Nomination Scores by School

School	n	Pretest	Posttest	Posttest Adjusted for Pretest
Low SES (S.D.)	18	.388 (.252)	.500 (.200)	.509
Middle SES (S.D.)	25	.412 (.257)	.346 (.210)	.340
High SES (S.D.)	19	.412 (.217)	.450 (.210)	.445

was significant at the  $p < .001$  level. There was no significant difference between the mean aggression scores of the LSES subjects and the HSES subjects.

The Interaction between Experimental Treatment and Grade

Regarding the relationship between peer nominated aggression and grade, inspection of TABLE 1 indicated that there was no significant main effect for grade ( $F = 1.32$ ,  $df = 1$ , n.s.). For the interaction between grade and condition ( $F = 3.47$ ,  $df = 1/49$ ), it has been noted that the results obtained from the ANCOVA: Summary Statistics analysis indicated that an effect for this interaction approached significance at the  $P < .07$  level,

signifying that the treatment effects for the 3rd grade subjects were different from the effects for the 4th grade subjects. Hypothesis III stated that the experimental condition will have a significantly larger impact on the 4th grade subjects compared to the 3rd grade subjects. Since the effect for the interaction between grade and condition did not reach the  $p < .05$  level of significance, Hypothesis III was rejected. However, because of the magnitude of the effect supporting the direction of the hypothesis, within-grade ANCOVAs were computed in order to examine in greater detail the nature of the effect. Inspection of TABLE 3 revealed that when the within-grade ANCOVAs were computed, no significant differences between the experimental and control groups emerged on the means for the peer-nomination aggression scores for the 3rd grade subjects ( $F = 0.50$ ,  $df = 1/49$ , n.s.). However, on the peer-nominated aggression score means for the 4th grade subjects, the differences between the experimental and control subjects approached statistical significance ( $F = 3.50$ ,  $df = 1/49$ ,  $p < .07$ ), indicating considerable, although not significant, support for the hypothesis that the experimental intervention resulted in a larger impact on the 4th grade subjects compared to the 3rd grade subjects.

TABLE 3

## Within-Grade ANCOVA

Means on Peer Nomination Scores  
by Grade and Condition

Grade	Condition	n	Pretest	Posttest	Posttest Adjusted for Pretest
3	Experimental (S.D.)	15	.341 (.206)	.441 (.221)	.480
	Control (S.D.)	16	.310 (.189)	.374 (.222)	.432
-----					
4	Experimental (S.D.)	17	.467 (.294)	.397 (.223)	.358
	Control (S.D.)	14	.495 (.234)	.514 (.189)	.457

Subsidiary Analysis

In order to compare the ratings for aggression of the teachers and principals with the peer aggression ratings, the examiner obtained teacher and principal rankings on a scale from 1 to 10 at the time of the pretest administration of the PRMA-r. Each teacher and principal was given a written definition of aggression as defined in this study and asked to rank in sequential order the boys in each classroom on a scale from 1 to 10 with the most aggressive boy being assigned #1 and the 10th most

aggressive boy being assigned #10. Originally, 93 students were identified as high ranking in aggression on the basis of the results of the pretest peer nominations. From this original grouping of 93, 74 subjects completed Stages II and III, while 62 of these completed Stage IV. However, for purposes of comparing the rankings of peers, teachers and principals, the larger sample (the original 93 students) could be used. In order to assess the respective rankings of the principals, teachers, and peers, the Spearman rank correlations were computed. The results of these computations are presented in TABLE 4. An inspection of TABLE 4 indicated that in terms of achieving statistical significance, the results were similar: the peer-teacher and peer-principal intercorrelations achieved levels of significance at the  $p < .05$  level or better approximately 32% of the time compared with 33% of the time for the teacher-principal intercorrelations. Furthermore, in only one case out of a maximum of 22 cases, a negative correlation between peer-teacher and peer-principal rankings was obtained compared with 3 cases out of a maximum of 9 cases of teacher-principal intercorrelations. Also the data indicated that in only one case out of 22 (the same negative intercorrelation already cited above) there was a peer intercorrelation below .32, whereas with the

TABLE 4

Spearman Rank Order Correlations  
for Peer, Teacher, and Principal Rankings  
on Aggressiveness by Class

Class	n	Peer-Teacher	Peer-Principal	Teacher-principal
1	6	.37	-(a)	-
2	6	-.09	-	-
3	6	.81*	-	-
4	9	.78**	-	-
5	7	.96***	.58	.54
6	8	.42	.34	-.24
7	9	.32	.70*	.65*
8	5	.87*	.89*	.97**
9	9	.30	.45	-.12
10	9	.72*	.38	.02
11	6	.32	.58	-.03
12	7	.61	.75*	.96***
13	6	.46	.70	.54

(a) No rankings were obtained from the HSES principal, despite two attempts. Although the principal stated that she had intended to provide her rankings, she also indicated that, since she had been the principal in the school for only one year, she questioned her ability to accurately assess the aggressive behavior of many of the boys, some of whom she stated she would be unable to recognize by name.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $P < .001$ .

teacher-principal intercorrelations, there were 4 cases (a .02 intercorrelation in addition to the 3 negative intercorrelations) below the .32 out of a maximum of 9 cases. The comparative absence of negative intercorrelations as well as the solid level of intercorrelation in nearly every case suggest that peer rankings evince a reliability and consistency not apparent in the teacher-principal intercorrelations. These results regarding the PRMA-r are impressive given that in this study all 13 teachers and two of the principals (at the MSES and LSES schools; the HSES principal did not provide rankings and had served in her position for only one year, as already noted) had worked within their current, respective school sites for a minimum of three years. Therefore, the teachers and the two principals were likely to be well-acquainted with the subjects from the beginnings of their (the subjects') academic careers. In addition, these teachers and principals were well-experienced and seasoned in their positions and as a group averaged more than 15 years of academic service. The PRMA-r results are also impressive given the parsimonious nature of the assessment procedure compared to the length of time that the teachers and principals had been involved with the subjects. That is, the PRMA-r procedure involved the experimenter entering a classroom with absolutely no previous contact and

administering a 30-minute assessment instrument. By this simple procedure, it was possible to identify aggressive students with a degree of accuracy equal to, and in many instances, better than the teachers and principals were capable of performing.

### A Summary of the Statistical Results

In summarizing the results, there was no statistical main effect for condition or for grade. There was a main effect for school ( $p < .01$ ). A Fischer's least significant difference post hoc comparison was performed and the result indicated that the posttest peer nominated aggression scores of the MSES subjects were significantly smaller than the scores for either the LSES subjects ( $p < .001$ ) or for the HSES subjects ( $p < .03$ ). The posttest peer nominated aggression scores of the LSES and HSES subjects were not significantly different from each other. The only meaningful effect for interaction occurred with regard to the interaction between condition and grade which approached significance at the  $p < .07$  level. In order to further evaluate the direction of this meaningful effect, a within-grade ANCOVA was performed and the results indicated that the posttest peer nominated aggression scores of the 4th grade subjects were smaller, although not significantly, compared to the scores of the 3rd grade subjects. The

difference in scores between the 4th grade and 3rd grade subjects approached significance at the  $p < .07$  level.

## CHAPTER VI

### DISCUSSION

"Then shall we simply allow our children to listen to any story anyone happens to make up, and so receive into their minds ideas very often the very opposite of those we shall think they ought to have when they are grown up?" (Plato, The Republic, in Comstock, Chaffee, Katzman, McCombs, and Roberts, 1978, p. 173).

### Summary of the Study

The purpose of this study was to design and analyze an intervention strategy for reducing the aggressive behavior of middle childhood boys. Following the guidelines of an experimental intervention conducted by Huesmann, Eron, Klein, Brice and Fischer (1983) in which a significant effect on the reduction of aggressive behavior for middle childhood boys was reported, the current experiment was essentially an attempt to replicate their experimental results. In addition to the main goal of reducing the aggressive behavior, the current study sought to examine the effects of SES and age respectively on experimental attempts designed to reduce aggressive behavior. Aggressive behavior during middle childhood was viewed as a pernicious problem

fraught with serious consequences to the individual and to society. Extensive national and international research evidence has indicated a correlation between aggressive behavior in middle childhood boys and subsequent delinquent, criminal, and violent behavior in later development.

In terms of conceptualization, aggression was viewed as a multi-determined behavior (Averill, 1982; Eron, 1982; Feshbach, S., 1964) reinforced and sustained by numerous influential factors, including: familial, societal, cultural, physiological, peer/interpersonal, developmental, and intrapsychic phenomena. In particular, the impact of filmed portrayals of aggression and violence was viewed as a contributing in an influential way to the maintenance and, to a lesser degree, to the acquisition of aggressive behavior during middle childhood. In this regard, children of middle childhood were seen as especially vulnerable to the effects of filmed portrayals of violence because of the increasing amount of time devoted to watching television during this developmental stage (most dramatically, between the ages of 7 through 11). Experimental research (Huston and Wright, 1983; Rice, Huston and Wright, 1983) has also indicated that middle childhood children's vulnerability to media violence is enhanced by their heightened cognitive receptivity to the formats of filmed

presentations. Finally, experimental research (Collins, 1973; Collins, Berndt, and Hess, 1974; Newcomb and Collins, 1979) has also indicated that middle childhood children's vulnerability to filmed violence is promoted by cognitive developmental factors which have resulted in distinct limitations in children's understanding and comprehension of film narratives at least through the first eight years of development. One of the most serious problems is that children are exposed incessantly to the fundamental message of filmed violence that "Aggression works!" One of the ways to appreciate the critical role assigned to the impact of media violence on the maintenance of children's aggressive behavior is to consider that media violence may perform a synthesizing function, similar to the influence of family interaction, in facilitating in children specific kinds of interpretations and cognitive constructions about their social reality.

Because of the intricate and multifarious network of influences impinging upon the development of aggressive behavior, aggression was viewed as emanating from a context of overlapping, independent and interdependent, reinforcing patterns of experience. Because of the importance of this complete array of factors in understanding aggression, the concept of aggression was defined as the imposition of behavior or threat which is

not sanctioned by the social context and results or can result in personal, bodily injury. Noteworthy about this definition is the specific emphasis on human bodily injury (either directly or clearly implicated by threat). Also noteworthy is that, unlike several other conceptualizations of aggression, the concept of intentionality was not considered as an essential characteristic of aggressive behavior.

Because the current study has been directed on aggressive behavior during middle childhood and, in particular, the impact of media violence on the development of aggressive behavior, the literature review section focused on two groupings of experimental studies. One grouping was studies which have demonstrated an effect on reducing children's aggressive behaviors. The second grouping was studies which were viewed as having the potential to be utilized in interventions designed for reducing aggressive behavior, particularly if the role of media violence was directly or indirectly implicated in the study. One of the common features of the critical viewing, empathy training and social skills approaches was the notion that these intervention methodologies could be used to reduce aggressive behavior because the acquisition of their targeted goals was viewed as being inconsistent with conditions critical to the functioning of aggressive behavior. A prominent

finding of these studies was that even though the specific targeted goals (e.g., the acquisition of a specified knowledge, the development of specific, enhanced social skills, the attainment of appropriate emotional experiences, and the learning of new interpersonal behaviors and competencies) were often achieved, the acquisition of these goals rarely translated or generalized to non-targeted areas, such as a reduction in aggressive behavior. In part, because of the limited generalizability of these studies, it appeared that a more powerful intervention technique, specifically addressing the need to mitigate aggressive behavior, would be required in order to favorably impact aggressive behavior.

Two features were identified as a methods for strengthening the impact of interventions designed to reduce aggressive behavior. First, the intervention would be strengthened by including a specific moral indictment against aggression (e.g, that aggression is wrong, that it hurts people, that it is bad). In this regard, in order to avoid mitigating the concreteness, simplicity, and succinctness of the moral injunction against aggression, efforts to demarcate specific qualifying conditions under which aggression was morally justifiable were disavowed. In addition, the need for including a moral indictment was based on suppositions

about aggressive boys, i.e., their impulsiveness and their difficulties with compliance and limit setting. Therefore, it was speculated that aggressive middle childhood boys would benefit from a specific, simple, comprehensible "rule" (i.e., that aggression is bad) and that the simplicity of the rule would facilitate its internalization. Second, a media-based intervention methodology was identified as a means to potentiate the impact of interventions designed to reduce aggressive behavior. Media-based learning is advantageous for middle childhood children because it is familiar, it tends to captivate their attention, and it tends to generate only marginal resistance in them. Also, because media-based interventions involve multimodal stimulation and processing (visual, auditory, and cognitive), the depth and completeness of children's receptivity to media presentations may create a more enduring form of learning compared with didactic or academic-type learning.

In terms of the overall experimental orientation, careful attention was placed on obtaining a representative sample of middle childhood boys who typified the "average" American experience. Therefore, drawing a sample from a college community was specifically ruled out as these communities generally reflect atypical populations. Because a majority of middle childhood children live in urban environments

(Collins, 1984a), an urban, rather than rural, sample was selected. Further reflecting the goal of obtaining a sample which was representative of the broader American experience, it was considered important that the sample be drawn from a community which had adequate levels of economic, racial, and cultural diversity. In terms of the actual experimental methodology, the experiment's parsimony was viewed as one of its most distinct assets. All four stages of the experiment were conducted by one experimenter. Each pre- and posttest classroom administration of the PRMA-r required only about 35 minutes. The maximum amount of school time lost for any subject participating in the experiment was less than 5 hours. The brevity of the time commitment required by the subjects was a definite asset in securing permission of public school administrators to conduct the experiment since these administrators are often challenged and conflicted about permitting, during the school day, student participation in non-academic involvements.

### Discussion of the Results

#### Limitations

The most significant limitation in the current investigation was the small sample size ( $N = 62$ ). (Seventy-four subjects completed Stages I through III, while 62 subjects completed all four stages of the

experiment.) The small sample size was particularly problematic with regard to the statistical analysis of the effect of the interaction of SES and condition, since there were merely 18 LSES subjects, 25 MSES subjects, and 19 HSES subjects. While the sample size was larger for the main effect of condition (33 experimental and 29 control subjects, respectively) and for the interaction between age and condition (31 third grade and fourth grade subjects, respectively), the sample size in each of these cases was obviously quite small.

Second, the fact that 8 LSES subjects, in comparison to 3 HSES subjects and only 1 MSES subject, were lost at the final stage (Stage IV) of the experiment raises questions about whether there were any special characteristics about these LSES aggressive boys that, had their posttest scores been obtained, the final scoring results would have been skewed in an important way. While there was no evidence of any systematic bias in the attrition of these 8 boys in terms of their pretest scores and in their behaviors during the Stage II and Stage III phases of the experiment, the possibility can not be entirely ruled out.

## The Relationship between Peer Nominated Aggression and the Experimental Treatment

The purpose of this experiment was to demonstrate a significant effect for the media-based intervention in reducing peer nominated aggressive behavior. Even though the original experimenters were able to demonstrate a significant effect for their intervention procedure (upon which the current intervention was based), the current experimental purpose was still viewed as a bold expectation given the parsimony of the intervention and the refractory nature of childhood aggressive behavior. In considering the absence of a significant effect in the current study compared with the  $p < .008$  finding in the original study, it is useful to note that the current intervention did not incorporate the pretense that the subjects' group films were going to be viewed by other similar-aged, "uninformed" students in the Chicago area. It appeared that the original authors (Huesmann, et al., 1983) believed the pretense about the importance of making the film for other students was a significant feature of the experimental procedure and, as such, the subjects were regularly reminded of it. Therefore, some portion of the absence of a significant finding for the main effect of experimental condition may be attributed to this procedural omission. Another factor which may have influenced the absence of a significant main effect

for condition was the obvious difference in the subjects' receptivity to the experimental condition compared to the control condition across all three schools. The noteworthy difference was that the experimental subjects appeared to be thwarted and, at times, confused by the message that "aggression is bad/wrong". For some of the experimental subjects, the idea that aggression was bad appeared to be so foreign and enigmatic that the subjects seemed to remain essentially aloof from genuine direct involvement during both of the treatment sessions. It appeared that for these experimental subjects the "message" of the experimental treatment (that aggression is bad) was fundamentally "too different" for their conceptual schemes and therefore not adequately comprehensible. On the other hand, the message that "junk food is bad" was generally very familiar to the control subjects and, as such, they were able to have more fun with the idea, to be more inventive, to laugh more, and to experience a greater sense of satisfaction with their effort because they were able to generate more comprehensive "essays" on their own.

In summary, two factors may have been influential in the absence of a statistical main effect for the experimental treatment. First, some experimental subjects appeared to substantially miss the message of the experimental condition, therefore their posttest

aggressive scores were likely unaffected by the experimental treatment. Second, the enjoyment and satisfaction which was apparent in many of the control subjects as a result of their treatment, may have contributed to a reduction in their posttest aggression scores, thereby counteracting the effect of those experimental subjects who actually reduced their aggression scores.

### The Relationship between Peer Nominated Aggression and School

The most surprising result from a statistical perspective was the significant main effect for school, regardless of condition. However, there was no significant effect for the interaction between condition and school, therefore Hypotheses II, as stated in Chapter V, was rejected. The occurrence of a main effect for school necessitated further examination of the relationship of peer nominated aggression and school (SES) in the current study.

The significantly different effect for school alone occurred as a result of the distinctive scoring pattern for the MSES subjects. The MSES school scores were significantly different from each of the other two schools while the scores from the LSES and HSES schools were not significantly different from each other. This

is a very interesting finding since, if there were to be a distinction based on the effect of school alone, the expectation would have been that the LSES subjects would have constituted the discrepant group. The reasons for anticipating a discrepant LSES school were: (a) a correlation between low SES and childhood aggressive behavior has been frequently documented, and has been a particularly well-established finding in the early literature on childhood aggressive behavior; (b) the LSES school reflected a different, much more complex organizational and service structure than the other two schools which, in turn, were organizationally much more similar to each other. Conversely, because there was no "discrepant" LSES group nor any significant difference between the LSES and HSES subjects, these results argue against the operation of any linear SES bias on the current method of intervening to mitigate aggressive behavior.

While there is no obvious, compelling explanation for the effect of school regardless of condition, in view of the qualitative impressions evoked as a result of conducting the experiment in each of the three schools, some insight into the mechanisms of this effect may be ascertained. Although qualitative impressions constitute a "soft" form of scientific explanation, the fact that each of these schools began eliciting a radically

different impression in the experimenter within 30 minutes of contact is not an incidental matter. Based on the impressions gleaned from conducting this experiment in these three schools, there appeared to be a distinctive difference among the three schools in terms of the role and conduct of the principal. While it would seem obvious that the role of the principal per se could not account in any linear way for the statistical main effect for school, the role and conduct of the principal may both impact and reflect distinctive features of the specific cultural, socioeconomic context in which the MSES school is embedded. Highlighted in this regard are likely to be neighborhood and community values related to the workings of authority, structure, responsibility, accountability, and predictability. Based on impressionistic evidence, it appeared that for authority to work effectively in the schools, it needed to be informed, present and available, conscientious, firm, and approachable (in terms of human sensitivity). The significance of the issue of authority appeared to be manifested not only in a technical and operational sense but also, importantly, in a symbolic sense as a reflection of the students' sense of the overall control, management, and organizational integrity which permeated their daily lives while in the school. The impressions on which these opinions are based were obtained not only

from observing the behavior of the principal, but more so, from the extensive amount of time spent in the main offices of each of the respective schools. It is from this vantage point that many observations could be made about the schools' administrative functionings, the staff interpersonal relationships, the management of authority, the kinds of student problems which were prevalent and the ways in which these problems were typically managed.

In the simplest terms, the impression of the LSES principal was that he was extremely busy and overburdened by his position. As a result, it appeared that he was generally not available to the students and to the staff. While he was observed to become directly involved when a student problem crossed his path, the sense was that he genuinely needed to be elsewhere - that there was genuinely a more important task somewhere else requiring his attention. With the HSES principal, the impression was that she was more interested in being elsewhere. While it appeared that she enjoyed the students, there tended to be associated with her the notion of a "managed distance" or a remoteness, which was considerably different from the "harried" or "busy distance" associated with the LSES principal. In the MSES school, the principal functioned in a very different manner. He appeared to be actively involved in all the functionings of the daily school lives of the students. He was

constantly visible to the students. There was the sense that no activity could occur in the building without his knowledge. In addition, he infused his position with a zest that contributed an invigorating quality to school life. It appeared that he loved his job. He was observed to be genuinely warm and friendly with the students as well as very firm, succinct, and fierce, depending upon circumstance. He also appeared to be able to switch from one to the other of these positions as the situation warranted.

It is not to be overlooked that there were considerable differences in the number of students in each of the schools (LSES school: 690 students, MSES school: 344 students, and HSES school: 459 students) which may have contributed to the effect for school alone. In addition, there were large differences in the length of time each principal had been at their respective positions (MSES school: 17 years, LSES school: 10 years, and HSES school: 1 year). However, it is well-known that length of service or seniority does not necessarily breed success or effectivity. In fact, often times, seniority breeds abuse. Based on these qualitative impressions, it appeared that the manner in which the elementary school principal conceived of and was able to conduct her/his role and responsibilities may have contributed in a substantial way to the "discrepant"

functioning of the MSES school. Without impinging the validity of the dependent measure (PRMA-r) as a measure of aggressive behavior, the resulting effect for school, regardless of condition, and the above explanations offered for this effect, suggest that what the current dependent measure may assess best of all is school-based aggressive behavior.

As an interpretation of the main effect for school, the role of the principal has been emphasized because of the impression that it is the principal who operates at the hub of number of critical, interdependent, and intersecting variables factors which significantly impact the lives of the elementary school students. First, the principal plays an important role in terms of the effective management and organization of school life. In this regard, the most important function of the elementary principal is to assure that the elementary school environment is maximally organized so that learning can occur. Therefore, interferences caused by generalized disruptiveness, inconsistencies in management, unpredictableness in behavior, an inadequately structured learning environment, and by a lack of accountability and responsibility will all negatively impact student capabilities to be open, attentive, and receptive to being educated (to being "led out" from their stolidity). However, when these

potential interferences are well-controlled and managed, elementary school students are likely to be more available for learning. Second, the principal occupies a pivotal role practically as well as symbolically in the manner in which authority functions and is respected within the school. Third, the principal is likely to be a representative, both in a genuine as well as symbolic sense, of many of the prevailing neighborhood and community values (such as, integrity, responsibility, accountability, and self-respect) which are important to the educational and interpersonal functioning of the elementary school students. Taken together, these three factors, which a principal both impacts as well as reflects, substantially influence the daily behaviors of the students and can contribute substantially to helping students become more "available" to structured learning programs designed to influence their behaviors.

Paradoxically, despite the main effect for school, the interpretation of the main effect for school does not implicate exclusively SES factors. Because the overall empirical results did not follow any sequential order in SES terms (e.g., LSES, MSES, and HSES), and because there was no significant difference between the scores of the LSES and HSES subjects, together these results argue convincingly against any interpretation strictly along SES dimensions. It is important to note that the absence

of a statistical difference between the scores of the LSES and HSES subjects occurred despite very large differences in the organizational structure and functioning between the two schools. For example, each year a common occurrence at the LSES school is that more than 1/3 of the student body changes (through departures and admissions) during the first 3 months of the school year after the school year begins in September! Furthermore, the absence of a statistical difference indicated that SES factors by themselves, were outweighed by other more influential factors. More specifically, the finding of a main effect for school in this study highlighted the role of contextual factors which appeared to be more important in the mediation of aggressive behavior than any specific characteristic, including SES.

#### The Relationship between Experimental Condition and Grade

In terms of the original purpose of this study, the most important experimental finding was the effect of the interaction between condition and grade (age) which approached significance at the  $p < .07$  level. This experimental result is consistent with other research findings reported by Huesmann and Eron (1986a, 1986b) describing a "sensitive" period for aggressive behavior. The notion of a "sensitive period" for the acquisition of specific characteristics, aptitudes, or competencies is

not new to developmental theory. It has been readily apparent in Piaget's cognitive theory, in Kohlberg's theory of moral development, and most noteworthy, in areas focusing on the biological substrates of behavior. As a proponent of this biologically-based construct, Mitchell (1981) has argued that certain characteristics or behaviors can be "influenced by environmental factors to a greater extent at one stage of development than at any other later stage" (p. 4). In a similar vein, Bloom (1964) has argued that "variations in the environment have the greatest quantitative effect on a characteristic at its [the characteristic's] most rapid period of change" (p. vii). While the notion of a "sensitive" period with respect to the impact of media violence on aggressive behavior has received only limited formal support at this date (essentially through the work of Eron and associates), there are several interesting experimental findings which suggest that such a period occurs between the ages of 8 through 12 (Eron and Huesmann, 1986).

More specifically, Eron and Huesmann (1986) have asserted that "the third grade may be the center of an especially sensitive period when the factors are just right for TV violence to have an effect" (p. 291). Elsewhere Eron, Huesmann, Brice, Fischer and Mermelstein (1983) have specified the ages of 8/9 years old as a

(1983) have specified the ages of 8/9 years old as a period of heightened vulnerability to the influences of media violence on behavior.

Additional converging experimental data suggests that children's heightened sensitivity or vulnerability to the impact of media violence at this age period may be due, in part, to their considerable cognitive processing limitations. When processing filmed narratives, 8 year old children, unlike 11 year old children, were found by Collins and associates to be significantly limited in their ability to understand implied information (Collins, Berndt, and Hess, 1974; also Dorr, 1980), to predict subsequent events on the basis of prior events (Collins, 1981; Collins, Wellman, Keniston, and Westby, 1978), to draw appropriate inferences when provided with all the necessary premises (Collins et al., 1978), and to evaluate aggressive behavior on the basis of motives as well as consequences (Collins et al., 1974). Collins (1978) has also identified as a distinctive developmental period the ages of nine and ten years old as a time when children begin to grasp the implied relationships between events in film narratives. In terms of actual aggressive behavior within an experimental context, Shantz and Voydanoff (1973) reported that 9 and 12 year old boys were significantly less aggressive compared to 7 year old boys when encountering accidental provocations and also

when responding to verbal as opposed to physical attacks. Based on these results, the nine year old juncture begins to emerge as a remarkably fertile period (perhaps a "most rapid period of change" in Bloom's terminology) both as a peak or terminal point with regard to the vulnerability to aggressive behavior and media violence as well as a nascent and propitious point of entry for mitigating aggressive behavior.

Another converging factor relates to children's television viewing habits. Based on their own experimental data, Eron and associates have found that the children's television viewing and television violence viewing begin to indicate sharp declines in the amount of per day exposure to television at approximately the 9 year old juncture. However, more extensive research evidence has indicated that at about 11 years old, children's viewing of television (and along with it, their exposure to television violence) begins to substantially decline after rising consistently for the preceeding 4 years (Comstock, et al., 1978). The experimental data reported by Collins clearly suggests that, given the substantial improvements in children's understandings of televised dramatic narrative, it is likely that high levels of exposure to television violence may have a very different impact on children at 10 and 11 years old compared to 7 through 9 years old. It is also

possible that their improved processing abilities at ages 10 and 11 are implicated in the sharp declines in their viewing habits.

In terms of the current study, the notion of a "sensitive period" for the mitigation of childhood aggressive behavior may shed light on the statistical result obtained for the interaction between condition and grade. During the time period of this experiment (from May 1987 to November, 1987), the 3rd grade subjects were likely to be, at minimum, 9 years old, while the 4th grade subjects were likely to be, at minimum, 10 years old. Therefore, it is apparent that the 4th grade subjects passed what may be a critical 10 year old stage of development and it is suggested here that, despite the "fertility" of the 9 year old period, the 10 and 11 year old period (when significant improvements in children's cognitive processing abilities have begun to have an effect) warrants further experimentation with regard to the remediation of childhood aggressive behavior. The relevant statistical result, which approached significance, of the current study offers preliminary support for considering the 10 through 11 year old stage of development as an advantageous period for using media-based interventions to mitigate childhood aggressive behavior.

## The Subsidiary Analysis

In terms of the subsidiary analysis, the noteworthy finding was that the peer/teacher and peer/principal intercorrelations for identifying the aggressive boys were more consistently reliable than the rankings obtained from the teacher/principal intercorrelations. A discussion of the results of the Spearman rank order correlations has already occurred in Chapter V and for current purposes it is necessary to report only that the results of the PRMA-r have demonstrated its efficiency and reliability as a measure of children's aggressive behavior. According to data extracted from reliability studies by Walder et al. (1961), the range of the correlations for the test-retest reliability of six of the 10 aggression items used in the PRMA-r was between .70 and .92, with most items averaging above .80 (p. 541). The reliability study of Walder et al. (1961) was performed two weeks after an initial administration and in the same and different contexts.

## Suggestions for Future Research

It is important to state that the overall absence of statistically significant results for the main analysis ought not to sound the death knell for this experimental intervention. It is important to recall that the goal of the experiment was to reduce aggressive behavior after

exposing the aggressive boys to only a 2 1/2 hour period of experimental treatment. Based on the impression that for some of the experimental subjects this intervention was "too different", perhaps the most reasonable suggestion for future research would involve adding two additional treatments to the Stage III phase in order to mollify the "newness" of the experimental message. Another useful suggestion would be to add, using the same Stage III methodology, two sessions for subject-created videotapes which displayed peer models of non-aggressive, problem-solving strategies.

Overall, intervening in a school-based environment to reduce aggressive behavior remains a bold, yet eminently reasonable, methodology. Even though aggressive behavior is multidetermined, intervening within one domain or context of functioning can provide successful results (cf. Kanner, 1984) and can reverberate to other domains of functioning (e.g., family). In addition, childhood aggressive behavior constitutes a major disruption to the functioning of schools and classrooms. Because of aggressive boys, non-aggressive students are regularly denied benefits related to teacher involvement and enthusiasm since the behavior of the aggressive boys is very demanding on the teacher's time and energy. It is important to recognize that aggressive behavior in the schools is a school problem. Schools

and students suffer because of aggressive behavior; therefore, schools are justified in intervening to control aggressive behavior in order to protect the educational rights of the majority of students who attend school seeking to achieve their educational objectives. Since schools are delegated the responsibility of addressing the learning needs of all the students, schools have an obligation to steer students into morally intact and interpersonally competent roles of behavior. Because aggressive boys and their families are often resistant to use professional psychotherapy in order to control the aggressive behavior, the schools are in a unique position (since the aggressive boys are already within the schools) to provide the moral direction these aggressive boys need and too often will not receive anywhere else.

## A P P E N D I X    A

### The Peer-Rating Measure of Aggression - revised (PRMA-r)

1. Who tries very often to help the other kids?
2. Who wants to be first all the time?
3. Who is quiet most of the time?
4. Who says mean things?
5. Who laughs even when it is not funny?
6. Who does things that bothers others?
7. Who gives dirty looks or sticks out their tongue at other children?
8. Who always tries to be nice to other kids?
9. Who does not obey the teacher?
10. Who pushes and shoves children?
11. Who is the funniest?
12. Who is always getting into trouble?
13. Who starts fights over nothing?
14. Who always likes to make the teacher happy?
15. Who often says, "Give me that?"
16. Who does not like it when other children are sad?
17. Who has the most friends?
18. Who takes other children's things without asking?
19. Who is the teacher's pet?
20. Who makes up stories and lies to get other children into trouble?

## A P P E N D I X    B

### The Peer-Rating Measure of Aggression (PRMA)

1. Who would you like to sit next to you in class?
2. Who does not obey the teacher?
3. Who often says, "Give me that?"
4. Who are the children who fight well?
5. Who gives dirty looks or sticks out their tongue at other children?
6. Who is too busy to talk to other children?
7. Who is very quiet?
8. Who makes up stories and lies to get other children into trouble?
9. Who does things that bothers others?
10. Who starts fights over nothing?
11. Who pushes and shoves children?
12. Who is always getting into trouble?
13. Who gets what they want by fighting?
14. Who says mean things?
15. Who is alway in and out of things?
16. Who takes other children's things without asking?
17. Who says, "Excuse me," even when they have not done anything bad?
18. Who pesters until they get what they want?
19. Who will never fight even when picked on?
20. Who are all the children you would like to have for your best friends?

## A P P E N D I X    C

### Parental Permission Form for All Student Nominators

Dear Parent,

We at the University of Massachusetts in Amherst have been researching the effects of an instructional curriculum on the social behavior of young children. Within the next few weeks, with the cooperation of the school authorities, we will be visiting the school your child attends.

Your child's role in this study is to answer approximately twenty (20) questions related to the different social behaviors of the children in the classroom. The questionnaire requires less than one-half hour of class time and is given to all class members simultaneously. Previous research indicates that children generally enjoy answering the questions.

Since this is a research project, no records of individual children can be made available either to parents or to school authorities. However, the overall results will be made available to the principal and teachers, as well as to parents who may be interested in the outcome.

I hope that you will help us in this project by signing the attached slip and having your child return it to school TOMORROW. Because children react differently to questionnaires when their parents viewpoints are taken into consideration, we ask that you do not discuss this project with your child until the study is completed.

If you have any questions or concerns about this project, please call me at 792-1602.

Sincerely,

Alan Kanner, M.A.  
Project Director

-----  
Date \_\_\_\_\_

I, \_\_\_\_\_ grant permission for my child  
\_\_\_\_\_ to participate by answering  
the questionnaire in the study as described by  
Alan Kanner.

(N.B. The actual permission form and the detachable  
signature slip presented to the parents was formatted on  
one sheet of paper which was an important matter in  
facilitating their return of the form.)

## A P P E N D I X D

### PRMA-r Administration Guidelines

"This is a booklet for a game we are going to play together. It is not a test. So you don't have to worry about getting questions wrong. All I want you to do is to answer some questions after I tell you about the rules of the game. Open the booklet to the first colored page. What color is it? (Class response: yellow.) "That's right, it's a yellow page. Is everybody turned to the yellow page? Good!"

"I'm going to read you the first question that goes with the first yellow page but I don't want you to answer it just yet. The first question is: Who are you? Who are you?"

"Look at the yellow page and you will see two lists of names. Your name is in one of these two lists. The first list has the girls' names; the second list has the boys' names. On each list there is also a NAME called NO GIRL and NO BOY. In this game we are going to consider the names NO GIRL and NO BOY just like any other name. I'll explain more as we go on."

"Now look again for your name. Find your name and put your finger on your own name. Put your finger on your own name. Keep your finger on your own name and watch what I do at the blackboard. Here is my name. Alan Kanner. I'm going to draw a line through my name like this. Now draw a line through YOUR own name. Remember, you have a first name and a last name, so make sure that you draw a line through your whole name, your first name and your last name. Did everyone draw a line through their own first name and last name. Please raise your booklets so I can see. Thank you."

"Now turn back the yellow page like this. "The next page is orange. Is everyone looking at the orange page? Soon I will read you the question that goes with the orange page. LISTEN, from now on, do not draw a line through your own name. Remember, from now on it is against the rules of the game to draw a line through your own name."

"Now I will read you the orange question. Who are 4 children that are taller than you." Who are 4 children that are taller than you." Just answer with the first 4 students' name that you think of. Any 4 students' names are O.K. Remember if NO BOY or NO GIRL is taller than you draw a line through NO BOY or NO GIRL. Look at the names in BOTH lists and find 4 children who are taller than you. Draw a line through these names. If you can't think of 4 students who are taller than you, try to think

of atleast 2 students who are. Naturally if you think you are the tallest, then you would answer NO BOY and NO GIRL. Remember to find the names in both lists. Also remember that NO GIRL and NO BOY are names, so if no boy is taller than you, draw a line through NO BOY, and if NO GIRL is taller than you, draw a line through NO GIRL."

(If a child marks only one name in either of the lists, ask:) "Aren't there any other boys (girls) who always sit around you

"We'll play this game the same way from now on. I'll read you the question for each page. You find the names in both lists that you think are right for the question. First look at the names in the first list and draw a line through all the names that fit. Then look at the names in the second list and draw a line through all the names that fit. Here are the rules of the game. First rule, make a line through at least one name in each list (Remember if no boys or no girls fit the question, then draw a line through NO BOY or No GIRL.). Second rule, do not make a line through your own name. Third rule, look only at your own game. Never look at your neighbor's game. Fourth rule, if you feel you make a mistake and want to change a name that you drew a line through, then make a WAVY line through the line you want changed. Do not try to erase. (Let me show you.) Fifth rule, do not answer out loud. Everybody who follows the rules gets a prize. Remember, draw a line through at least one name in each list, don't draw a line through your own name, don't answer out loud, don't look at your neighbor's game."

"In the orange question, not everybody made lines through the same names. This is because the answer depends on how tall you are and which names you think of first. So what was the right answer for you was not the right answer for somebody else. One of the reasons you were given the orange question as a sample was so that you would recognize that many of the questions will have will have more than one name for the answer. On the other questions I will be asking you, different children will be drawing lines through different names because there are no answers that are the same for everybody. On each page you will have to decide FOR YOURSELF what names to draw a line through. When we are finished with the 20 questions, I will collect the booklets and I am not going to show them to anyone else." Let's try the first question and then we will see if you all get the idea of the game."

"Now turn the page so that the blue page is on top. I'll read you the question that goes with the blue page and you be sure to draw a line through the names in the TWO lists - all the names that fit the question."

## A P P E N D I X E

### Parental Permission Form for Subjects

Dear Parent,

We at the University of Massachusetts in Amherst have been researching the effects of an instructional curriculum on the social behavior of young children. Within the next few weeks, with the cooperation of the school authorities, we will be visiting the school your child attends.

Your child has been selected to participate in this instructional program. There are two (2) sessions in the program. Each of the sessions is about one hour long. The sessions will occur approximately one week apart from each other. On each of these two days, your child will meet in a small group with about four other students and myself.

The focus of the instructional program is on the effects of television programming. During the first session your child will write a brief essay about television programs. During the second and final session, your child will complete his essay, be videotaped reading his essay, and observe on videotape himself and other members of his group read their essays. Besides your child, the student members in his group, and myself (and possibly my assistant), no one else will observe the videotapes. Previous research indicates that children generally enjoy the training procedures.

Since this is a research project, no records of individual children can be made available either to parents or to school authorities. However, the overall results will be made available to the principal and teachers, as well as to parents who may be interested in the outcome.

I hope that you will help us in this project by signing the attached slip and having your child return it to school TOMORROW. Because children react differently to the instructional curriculum when their parents viewpoints are taken into consideration, we ask that you do not discuss this project with your child during the two-week period of administration.

If you have any questions or concerns about this project, please call me at 792-1602.

Sincerely,

Alan Kanner, M.A.  
Project Director

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Date \_\_\_\_\_

I, \_\_\_\_\_ grant permission for my child  
\_\_\_\_\_ to participate in the  
instructional procedures of the study as described by  
Alan Kanner.

(N.B. The actual permission form and the detachable signature slip presented to the parents was formatted on one sheet of paper which was an important matter in facilitating their return of the form.)

## A P P E N D I X F

### Coaching Guide for Experimental and Control Conditions

#### Experimental Condition

"Let me describe what we are going to do together. We are going to be meeting like this for 2 times only. Today and most likely the same day next week. On each of these times we are going to meet together for about an hour."

"We are meeting like this so that all of us can make a movie together. Today each of you are going to prepare what you are going to be saying in the movie. Next time I'm going to bring my camera and all of you are going to be in the movie and help make the movie. O.K.? Next time we make the movie. Today each of you prepares what you are going to say. Naturally, each of you is going to get a prize."

"One of the purposes of making the movie may be to help other Worcester school kids who have been "fooled by television or harmed by television violence or got into trouble because of imitating it. Of course you know better than to believe what you see on TV and you know that imitating what you see may be bad, but other children do not know this." Some of these other Worcester kids may be your same age, some may be younger and some may even be older."

We need to tell other kids:

1. HOW MUCH TELEVISION IS NOT LIKE REAL LIFE.
2. WHY IT IS BAD TO IMITATE TV VIOLENCE.
3. WHY IT IS BAD FOR A KID TO WATCH TOO MUCH TELEVISION.

How are we going to do this? That is where you kids come in. You kids are going to write up your own ideas describing why Television is Not like Real Life; why it is Bad to Imitate TV Violence; and why it is Bad to watch Too Much Television. It's that simple. I can help you by giving you some suggestions but You GUYS WILL CERTAINLY HAVE A LOT OF YOUR OWN IDEAS ABOUT WHY TELEVISION VIOLENCE IS BAD! THE MORE IDEAS YOU HAVE OF YOUR OWN THE BETTER THE MOVIE WILL COME OUT WHEN WE MAKE IT AT OUR NEXT MEETING.

#### A. HOW MUCH TELEVISION IS NOT LIKE REAL LIFE.

1. People who do the punching aren't really hitting anybody; the people who fall down or look like they are getting hit are not really getting hit. They fake their falls and punches just like wrestlers do.
2. All the car crashes are staged; they are fake. they are made to look that way just for the film.
3. The TV scenes we watch are not real; many of them are made with trick photography. The scenes are also made on stages not in real life.
4. Use Star Wars example of the size of the ship!
5. All the people in the movies are paid money to do what they are doing because they are actors.
6. Actors and tough guys act like they are much stronger than they really are.
7. Hero, Superheroes, and Supermen are fake; they are not real people.
8. You forget that daredevil acts are simply created by trick photography.

#### B. WHY IT IS BAD TO IMITATE TV VIOLENCE.

1. You might think that it is O.K to try to settle problems or differences you have with other people by threatening, pushing, hitting or even kniving the other person, like they do on TV.
2. You might think that you can get what you want from other people by threatening or punching them, just like on television.
3. You might forget that TV violence is performed by paid professional stunt men. And if you forget that, then you might try to copy their "superman and Superhero" acts, and you could really hurt yourself or someone else.
4. You might try to copy some of things heroes do on TV, forgetting that many of things they do on TV are really impossible to do. The only way they are possible is by using trick photography.
5. You might begin to think that threatening or hurting other people is a good thing to do.
6. When people on TV talk mean, nasty, tough, bossy, and threatening to other people, all the TV people know that they are only fooling because they are all acting in their roles.
7. Because when you drive a car, or a dirt bike, or a motor bike recklessly fast, like they do on television, you or someone else could get very seriously hurt.

8. You might forget that a knife or a gun is not a toy but is really a very dangerous weapon.
9. You might forget that playing with dangerous weapons frightens people.
10. You might think that it doesn't hurt that much when people get punched.
11. You forget that serious injuries to peoples' teeth, eyes, hearing can result from getting into fights.
12. You might begin to think when real people to get shot, knived, punched, or beaten up badly, that it is not such a serious thing.
13. You might forget that when you punch or hit someone, nobody likes getting hurt and someone could get seriously injured.
14. You might think that it is O.K to play with dangerous weapons.

#### C. WHY IT IS BAD FOR A KID TO WATCH TOO MUCH TELEVISION.

1. TV gives you the false idea that there are only good guys and bad guys. TV tries to make it very simple. But this is not at all true. Practically everyone has some good characteristics and some bad ones. TV shows it in terms of Good and Bad guys because it wants you to accept the idea that the bad guys should be shoot, beaten and hurt badly. Thus it tries to teach you to feel good when the Bad guys suffer. Because Bad guys are supposed to suffer.
2. You begin to believe that anyone who looks like the "Bad" guys on TV is probably going to try to hurt you.
3. TV encourages you to act tough, be a big shot and always be ready to defend yourself and to attack other, especially the Bad people.
4. When you watch so much shooting and hurting, you might think that other people out there will want to hurt you all the time. Then you begin to carry all kinds of weapons to protect yourself because you think other people may want to hurt you.
5. You begin to think that other people have bad or harmful intentions.
6. You begin to think that practically everyone else might want to attack you some time.
7. You begin to believe that killing or injuring other people is O.K. or justifiable in lots of circumstances.
8. You might begin to get the idea or accept the idea that it is O.K. to hurt, injure, wound, or shoot other people.
9. You begin to fear other people; you think that other people are your enemies.

10. You forget that people get seriously hurt by the hitting, punching because TV shows are not allowed to show you the bloodshed which would result from the kind of fight portrayed on TV.
11. Because you watch so much violence, when people actually get, punched, shoot, knived in real life, you begin to think that it is normal. So you begin to accept violence as a normal way of life.
12. You begin to think that violent acts are not so unusual or special.
13. With too much TV, you don't play with friends enough.
14. With too much TV, you don't live enough of the time in the real world with real people.
15. With too much TV, you don't develop your own ideas - you develop only the ideas that TV wants you to have.

### Control Condition

Let me describe what we are going to do together. We are going to be meeting like this for 2 times only. Today and most likely the same day next week. On each of these times we are going to meet together for about an hour.

We are meeting like this so that all of us can make a movie together. Today each of you are going to prepare what you are going to be saying in the movie. Next time I'm going to bring my camera and all of you are going to be in the movie and help make the movie. O.K.? Next time we make the movie. Today each of you prepares what you are going to say. Naturally, each of you is going to get a prize.

One of the purposes of making the movie may be to help other Worcester school kids who have been fooled by friends, TV or other people who encourage them to eat a lot of junk food. Of course you all know that eating junk food is bad for you, but other children do not know this. Some of these other Worcester kids may be your same age, some may be younger and some may even be older.

We need to tell other kids:

1. HOW JUNK FOOD INTERFERES WITH HEALTHY GROWTH?
2. WHY IS IT BAD TO EAT TOO MUCH JUNK FOOD?
3. WHAT IS BAD ABOUT TV COMMERCIALS WHICH ADVERTISE JUNK FOOD?

How are we going to do this? That is where you kids come in. You kids are going to write up your own ideas describing about the ways Junk Food Interferes with healthy growth; why it is Bad to eat too much junk food; and what is Bad about TV commercials which advertise junk food. It's that simple. I can help you by giving you some suggestions but You GUYS WILL CERTAINLY HAVE A LOT OF YOU OWN IDEAS! THE MORE IDEAS YOU HAVE OF YOUR OWN THE BETTER THE MOVIE WILL COME OUT WHEN WE MAKE IT AT OUR NEXT MEETING.

**A. HOW JUNK FOOD INTERFERES WITH HEALTHY GROWTH?**

1. You don't get the vitamins your body needs to grow strong and healthy bones, nerves, tissues and muscles.
2. You don't get the vitamins your brain needs so that it can help you to concentrate and focus your attention.
3. Too much sugar and junk food makes your body nervous, fidgety and "on edge".
4. When you fill up on low-quality junk food, you no longer have any appetite for higher-quality food which is rich in protein.
5. Junk food contributes to your body getting more diseases and have less strength to fight the diseases and sicknesses you do get.
6. Junk food makes your body look like it is much older than it actually is - showing more wrinkles and your skin looking more a wreck.

**B. WHY IS IT BAD TO EAT TOO MUCH JUNK FOOD?**

1. Get more sicknesses more often.
2. Your body requires more time to get over the sicknesses that you do get.
3. Rots you teeth.
4. Wrecks your nervous system.
5. Gives you poor endurance; you tire more easily.

**C. WHAT IS BAD ABOUT TV COMMERCIALS WHICH ADVERTISE JUNK FOOD?**

1. You get the idea that you need candy and soda in order to smile and to enjoy yourself.
2. You think that you need junk food in order to be happy and to have fun.
3. You think that you need junk food in order to watch TV, to go to school, to play with your friends.
4. You think that junk food might be good for you.

5. You think that junk food cannot be too bad for you since all the people on TV are eating it.
6. You forget that the reason that they are showing you people who are happy and smiling while they are eating candy, purple cereal and drinking soda and Kool-Aid is because they want you to buy these things so that they can make a profit with your money.

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