THE EFFECTS OF EXPOSURE TO TELEVISION VIOLENCE ON ADOLESCENTS' VERBAL AGGRESSION

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By

C. Edward Wotring

This research examined the effects of television violence on the verbally aggressive behavior of adolescent boys from families of varying socioeconomic status. Three television treatments were compared: violent with consequences to the victim, violence without consequences to the victim, and nonviolence. Two levels of socioeconomic status were compared: lower and middle. Five indices of verbal aggression, along with one index of physical aggression, were developed and used as dependent measures in an attempt to determine the relationship between verbal and physical aggression. Subjects were 234 seventh, eighth, and ninth grade boys from three schools in middle and lower socioeconomic status neighborhoods.

Overall comparisons of exposure to television violence with and without consequences to each other and to nonviolent television exposure failed to show any differences in terms of either physical or verbal aggression of adolescent boys. Boys from families of lower socioeconomic status tended to demonstrate more intense verbal aggression than boys from families of middle socioeconomic status. Violence with consequences seems to raise inhibitions of lower socioeconomic status boys towards verbal and physical aggression similarily, which provides some support to the theoretic contention that similar inhibitions control both verbal and physical aggression. Of the five indices developed to measure verbal aggression, only the verbal aggression situation index seemed to reliably tap this dimension.

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CHAPTER I

RATIONALE AND HYPOTHESES

Introduction

This research deals with the relationship between verbal and physical aggression. The study has two purposes:

1. To examine the effects of exposure to physical aggression via television programming on the verbally aggressive behavior of adolescents.
2. To analyze the effects of family background in terms of:
   a) The intensity of verbally aggressive behavior produced by adolescents from families of varying socioeconomic status (SES).
   b) The possible interaction between socioeconomic status and exposure to televised physical aggression which may affect intensity of post-viewing verbal aggression.

Reasons for the study

The examination of the effects of adolescents' exposure to televised physical aggression has both practical and theoretical implications.

On the more practical side, there has been increasing number of studies concerned with the long- and short-term effects of exposure to televised physical aggression on children's and adolescents' attitudes, values, and behaviors; i.e., researchers have been interested in examination of television as a socialization agent. Research of this nature seems both relevant and important given the amount of

time children and adolescents spend watching television, and the amount of physical aggression presented to them on television.

Schramm, Lyle, and Parker (1961) found that the North American adolescent (grades 6 and 10) spends about one-sixth of his waking hours watching television. This is almost as much time as he spends in school, and more time than he spends doing any other activity except sleep and play. In a more recent study of viewing behaviors, Greenberg and Dominick (1969) found that low-income Black adolescents viewed television more than 6 hours a day, low-income White adolescents watched four and a half hours, and the middle-class White adolescents, less than four hours.

Concerning what is presented on television, several content analyses of television programming have been undertaken. Violence here will be used synonomously with physical aggression, and refers to "the overt expression of physical force compelling action against one's will on pain of being hurt or killed." (Gerbner, 1970, pg. 5.) The Christian Science Monitor (1968) reported that in 85 1/2 hours of prime time and Saturday programming, 84 killings took place. During the hours of 7:30 to 9 p.m., when about 27 million children from age 2 to 17 were watching, violent incidents occurred every 16 minutes, and a murder or killing took place every 35 minutes. Gerbner (1970) found that violence occurred in eight out of ten shows, and the frequency of violent acts was about eight per hour. In the entire week content analyzed, 134 people were injured as a result of violence, and 46 people were killed. Stempel (1969) found that during one entire week, of 202 problems presented on network programs, almost 60% were

solved by violent tactics; about one-third were solved non-violently and the remainder were unsolved.

Thus, the adolescent observes a substantial amount of violence on television, much more than he will ever see in the rest of his environment (Singer, 1971). The attempt to determine the effects of this exposure on youngsters thus seem justified. However, this research has not incorporated verbal aggression as a main dependent variable. Verbal aggression is a much more frequent aggressive response than physical aggression in this society, and it is central to the understanding of communication as it relates to aggression and conflict. This study analyzes the short-term effects of various television content manipulations on adolescents' verbal aggression.

On the more theoretical side, there is a substantial amount of literature than indicates exposure to television violence is related to physical aggression. There is also research that indicates verbal aggression is related to physical aggression. This study explores the possibility of a third relationship between exposure to television violence as it is related to verbal aggression. In so doing, this study provides a possible theoretical explanation for all three relationships.

Research on effects of exposure to television violence has determined that socioeconomic status (SES) may be an important influencer of the extent to which television violence effects the viewer. Because of these findings, this study will examine the effects of socioeconomic status (SES) on the relationship between exposure to television violence and verbal aggression. Also, little data exist concerning

verbally aggressive behavior of adolescents from families of varying socioeconomic status (SES). This study provides data of this nature.

Rationale

Several experimental studies have shown that a positive relationship exists between verbal and physical aggression. Verbal aggression in these studies is defined in two ways as derived from two distinct types of conceptualizations.

One conceptualization was developed in verbal conditioning experiments: Beech and Graham (1967), Buss (1961, 1962), Buss and Durkee (1958), Geer and Buss (1962), Loew (1967), Simpson and Craig (1967), Zedek (1959), and Zucherman (1955). Generally, verbal aggression is defined in these studies as the subject's use of words with "aggressive" denotations. Zedek, for example, characterizes these words as denoting aggressive actions (punch), feelings (hate), objects (gun), situations (war), results of aggression (destruction), and aggressive people (Hitler). "Aggression" itself normally refers to the directing or delivering of noxious stimuli towards another organism (Buss, 1961; Berkowitz, 1962). The intensity of verbal aggression within this conceptualization refers to the intensity of the aggression denoted by the words used by the subject, and is defined and scaled by subjects' ratings of the words on a dimension of aggressiveness (Buss, 1961; Simpson and Craig, 1967).

The second conceptualization of verbal aggression, certainly not exclusive from the first, was developed mainly in frustration-aggression experiments: e.g., Buss (1961), DeCharms and Wilkens (1963), Geen and

Berkowitz (1967), Haney (1971), McClelland and Apicella (1945), Mosher (1968), Mosher and Proenza (1968), and Weiss and Fine (1956). Generally, verbal aggression is conceptualized here as personal insults, derogatory remarks, and/or threats, which are directed towards another individual. Buss, for example, defines verbal aggression as "a vocal response that delivers noxious stimuli to another organism" (1961, pg. 6), the noxious stimuli being rejection and/or threat. Intensity is determined by the experimenter through the construction of categories which vary in the intensity of rejection and threat (Buss, 1961; Gottschalk, Gleser, and Springer, 1963; Mosher, 1968; and Mosher and Proenza, 1968). Subjects' statements are given an intensity value based on the category into which each statement can be placed.

Because these conceptualizations to some extent overlap, and because the relationship between physical and verbal aggression to be discussed has been found using both conceptualizations, this study will define and operationalize verbal aggression based on both conceptualizations.

Incorporating the above conceptualizations, then, the following studies suggest a positive relationship between physical and verbal aggression. Two studies show that subjects who differ on a dimension of physical aggression also differ in their use of aggressive words. Simpson and Craig (1967) demonstrated that aggressive college students exceeded non-aggressive students in intensity of aggressive content of associations to homonyms which could have both an aggressive or unaggressive meaning. Subjects were categorized as aggressive or

non-aggressive on the basis of scores on subscales of the Buss-Durkee Hostility Inventory (Buss and Durkee, 1957).[1] Beech and Graham (1967) were able to separate aggressive adolescents, ages 12-15, from adolescents average or below in aggression on the basis of aggressive sentence completions. Subjects were categorized as aggressive, average, or below average in aggressiveness on the basis of teacher's ratings.[1]

Two other studies demonstrate that eliciting and reinforcing verbal aggression, both in terms of aggressive word use and derogatory remarks, leads to a concomitant increase in intensity of physically aggressive behavior under conditions of no instigation or frustration. Loew (1967) demonstrated that college males who were reinforced for selecting and repeating aggressive words from pairs of aggressive and neutral words subsequently shocked an accomplice more intensely than subjects reinforced for choosing the neutral words. Lovaas (1961) found that children ages 3 to 7 who were reinforced for directing derogatory statements towards a doll were subsequently more physically aggressive towards another doll than similar children reinforced for directing non-aggressive verbal statements towards the doll.

These studies, then, indicate that for various age levels and under various experimental conditions, there seems to be a positive relationship between the verbal and physical response classes. The latter two studies (Lovaas and Loew) are of particular interest because these were able to manipulate physical aggression (motor activity) via reinforcement of verbal aggression (internal mediational events) in the absence of instigation or frustration.

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[1]Though verbal aggressiveness formed part of the Buss-Durkee scales, and undoubtedly was considered by teachers in their ratings, physical aggression received the major emphasis for both catagorizations.

One possible explanation for this positive relationship is that similar inhibitions have been conditioned for both response classes, physical and verbal, although to a different extent for each. Lovaas (1961) suggests that the two response classes may have similar or common reinforcing and/or punishing stimuli. This he points out seems likely since historically the two classes frequently occur together for an individual, e.g., a threat followed by being hit, being scolded and hit, name calling followed by fighting, being similarily scolded and/or hit for physically and verbally aggressive behavior. Since they frequently occur together, the reinforcing or punishing stimuli present for one class of responses generalize to the other, and vice versa. Given similar reinforcers, operating upon one class of responses may change the characteristics of response for these stimuli by the other class (e.g., sensitization of, or satiation for, the common reinforcer). Since in this society both verbal and physical aggression are usually unacceptable behaviors, the latter being generally more unacceptable, a child is punished more than he is reinforced for both behaviors. It would thus seem likely that similar inhibitions have been conditioned for both response classes, due to punishment for both types of behavior, and more so for the physically aggressive response class than the verbally aggressive response class. Thus, the occurrence of the verbal aggressive response, which is reinforced or not punished, may affect the occurrence of physically aggressive behavior in two ways:

1) the reinforcement generalizes from the verbal to the physical response class,

2) some extinction of the conditioned aversive stimuli associated with verbal aggression generalizes to the physically aggressive response class, reducing the amount of inhibitions an individual has towards performing that response.

If these two response classes have similar inhibitions, then affecting inhibitions towards either response class should similarily affect the other, and this relationship should hold under a variety of contexts in which inhibitions for either are affected.

One such context in which inhibitions towards physical aggression seem to be affected is that of exposure to mediated violence, e.g., television. Two arguments will be presented in support of this assertion. First, it is argued that exposure to television violence generally stimulates post-viewing aggression and under certain conditions can reduce post-viewing aggression. Secondly, these effects result from the viewer's inhibitions towards physical aggression having been lowered and raised respectively through exposure to mediated violence under particular conditions.

Concerning effects of exposure to televised violence, there is extensive literature, most of which points towards stimulating effects. Several excellent and thorough reviews of this literature have been published, and conclusions of these authors are presented here. The reader desiring more specific information concerning the literature on effects of exposure to television violence should consult the reviews of Ball (1969), Goranson (1969), Singer (1971), and Weiss (1969).

Ball (1969) states, "The direction of effects of mass media portrayals of violence is to extend the behavioral and attitudinal boundaries of acceptable violence beyond legal and social norms

currently espoused by a majority of Americans [Pg. 375]." Ball also points out that the weight of the research evidence favors the conclusions that exposure to television violence stimulates violent behavior rather than reduces it.

Goranson (1969) states:

> Novel, aggressive behavior sequences are learned by children through exposure to aggressive actions shown on television or in films; and a large proportion of the aggressive behaviors learned by observation are retained over long periods of time if the responses have been practiced at least once...[Pg. 400].

Also, he states:

> A substantial number of studies have, in fact, shown that, under a variety of conditions, the observation of violence increases rather than decreases the viewer's subsequent aggressiveness. This stimulation has been shown to occur in the absence of any prior insult or "aggression arousal treatment" [Pg. 454].

Weiss (1969) states:

> Evidence for cathartic reduction of aggressive motivation is meager, at best -- none of the studies purporting to test the catharsis hypothesis, or for that matter any of the research discussed, has established evidence of (catharsis) -- at best, most of the research suggests that, under certain circumstances, observation of filmed violence may lead to "what the researchers call aggressive behavior" [Pg. 139].

There are methodological inconsistencies and conceptual difficulties within the research reviewed. However, "there is a cumulative weight to the evidence, a definite trend, which points toward stimulating effects of exposure to television violence."

conditions have been researched, but the one of main interest to this study is the viewing of television violence in which the bloody consequences to the victim are shown.

Two studies have been done which provide some indication that viewing aggression under this condition may reduce post-viewing aggression relative to viewing aggression in which no consequences are shown. Goranson (1969) discusses an unpublished study by Tannenbaum and Goranson in which subjects were exposed to a filmed boxing match, then listened to a taped ending which presented a positive (success and fame) conclusion, a negative (suffering and death) conclusion, or a neutral conclusion. The subjects who listened to the negative consequences ending produced significantly less post-viewing aggression, as measured by shocking behavior. In a study by Brammel, Taub, and Blum (1968) subjects who had been insulted by an experimenter listened to a taped version of the experimenter's reactions under the influence of a drug in an experiment. Subjects heard one of three tape conditions - euphoria, neutrality, and misery. Euphoria and neutrality produced no effects, but the suffering condition reduced the subject's desire to punish the experimenter.

These findings should, of course, be accepted tentatively. More research needs to be done examining the effects of exposure to consequences to the victim. Nonetheless, these studies suggest that viewing consequences may reduce overt-expression of post-viewing aggression.

It is argued widely in the literature that these stimulating and reducing effects are a result of lowering and raising of the viewer's inhibitions towards physical aggression. Inhibition is defined by

Aronfreed (1968) as the reduction in probability of occurrence of one form of behavior relative to the probabilities of other forms. Inhibition, he points out, can be internalized by the child, and will then suppress behavior without the presence of any punishing agent. Given that a child has been punished for aggressive behaviors, this functions to establish internalized inhibitions by conditioning anxiety to the punished aggressive behaviors. Sears, Maccoby and Levin (1957) argue that people in this culture "...do not tolerate aggression comfortably, neither their own nor that displayed by others. It evokes too much anxiety..."

It is these inhibitions that may be affected by exposure to television violence. Weiss (1969) points out:

> If in socialization the child is punished for aggression or is taught, by withdrawal of rewards, to control his aggressive tendencies, then the arousal of an instigation to aggression may elicit anxiety or concern and thereby inhibit the expression of aggression ... Hence, the extent to which media-portrayed violent aggression influences these restraining forces, by suggesting that aggression is permissible or desirable or the opposite, will modulate the likelihood that aggressive behavior will be shown /Pg. 129/.

Goranson (1969) states:

> ...the situation of the media viewer who is repeatedly exposed to violence while relaxing at home or in the theater suggests the possibility that viewers are being "cured" of this kind of aggression anxiety. If this sort of process is going on, viewers may increasingly be willing to accept real-life acts of extreme violence without attempting to interfere...., and may themselves be less reluctant to engage directly in aggression when provoking circumstances arise /Pg. 405/.

Goranson reviews literature dealing with this type of inhibition-reduction process and concludes:

> Repeated observation of the anxiety provoking activity...served to eliminate the subjects' initial anxiety-based avoidance responses. If results from these studies can be generalized to the effects of aggressive episodes repeatedly presented in the mass media, the repetition of media violence may have the effect not only of reducing emotional reaction to fictional violence, but also it may make viewers more willing to actually involve themselves in aggressive actions when provoking circumstances arise /Pg. 406/.

Singer (1971), after reviewing the literature concerning effects of television violence, concludes:

> Experimental evidence suggests the possibility (which merits more extensive research) that the high content of justified aggression presented in films and television may systematically lower normal inhibitions and anxieties concerning the expression of aggression /Pg. 55/.

Literature dealing with observed reinforcement provide some further evidence concerning effects of exposure to television violence on inhibitions. Studies by Bandura, Ross and Ross (1963) and Bandura (1965a) demonstrate that children viewing televised models who are rewarded or not punished subsequently show much more aggression than children who view a model who is punished for his aggression. Since the probability of occurrence of aggression has been affected as a result of exposure to violence in these studies, it seems likely that the child's inhibitions concerning aggression have been changed.

No behavior was elicited and reinforced to bring this change about - it occurred through observation of the reinforcement or lack of punishment of a model. Kaufmann (1970) argues:

> ...everyday observation shows that much imitation learning occurs without immediate performance by the learner, and therefore, necessarily occurs without reward...it is the reinforcement contingencies, or expectations of rewards and punishments, that determine their occurrence /Pg. 49/.

Similarily, Bandura (1965b) argues, "a vicarious reinforcement event... provides (1) information concerning probable reinforcement contingencies, (2) knowledge about the controlling environmental stimuli, and (3) displays of incentives possessing activating properties... /Pg. 31/." Thus, exposure to television violence may lower the viewer's inhibitions towards physical violence by suggesting such behavior may provide certain rewards, and be beneficial in reaching goals. Goranson (1969) points out in a study by Larsen (1968) that violent methods were found to be the most popular means employed by characters to reach desired goals in television programming, and that socially disapproved methods were more frequently portrayed as being successful than were approved methods. Also, this trend was found more strongly for children's programs than for adult shows. Earlier in this paper, it was reported that Stempel (1969) found 60 per cent of problems presented in a week of network programming were solved by violent tactics. On this basis Goranson states:

> ...we might then conclude that young viewers are constantly being given the message that aggression "works." They are taught that aggression is a highly effective means of achieving one's goals even though it may be socially disapproved. The perceived effectiveness of aggressive actions may thus serve to encourage young viewers to actually use some of the techniques of aggression that they have learned from the media /Pg. 403/.

This process is, in effect, vicarious reinforcement.

In sum, the above discussion indicates that the viewer's exposure to television violence lowers inhibitions towards physically aggressive behaviors through a) observation of rewards or lack of punishment to the aggressor, b) seeing the behavior as successful in terms of reaching a goal, or c) repeated viewing of violence.

If the physical and verbal aggression response classes have similar inhibitions, as suggested by previously discussed research, then lowering the inhibitions towards the physical response class through exposure to television violence in which the aggressor is not punished should similarily lower inhibitions towards the verbal response class, and post-viewing verbal aggression should increase. On this basis, the following hypothesis is offered.

H_1: Subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown.

Earlier, two studies were discussed that suggested viewing television violence in which bloody consequences to the victim are shown may reduce post-viewing physical aggression (Brammel, Taub, and Blum, 1968; Tannenbaum and Goranson, 1969). It is argued that seeing the consequences to the victim raises the viewer's inhibitions concerning his own physical aggression. Goranson states:

> ...when subjects were made aware of the bloody, painful aftermath of aggression, they were then inhibited in their willingness to inflict harm on others...It is just these painful sufferings of the defeated victim, however, that may allow the provoked viewer to "think twice" about acting out his own aggressive impulses /Pg. 407/.

Thus, witnessing consequences to the victim may sensitize the viewer to potential harm they might inflict with aggressive acts, thereby

raising inhibitions of the viewer towards physical aggression, increasing his aggression anxiety.

Again, if the physical and verbal aggression response classes have similar inhibitions, as suggested by previously discussed research, then raising the inhibitions towards the physical response class through exposure to television violence in which consequences are shown should similarily raise inhibitions towards the verbal response class, and post-viewing verbal aggression should decrease. On this basis, the following hypothesis is offered:

> H_2: Subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown.

It should be noted that in both H_1 and H_2, the aggressor is not punished for his acts. The only difference is that of showing or not showing consequences to the victim. It is argued here that viewers are not used to seeing consequences on television. Television producers and television production codes prohibit portrayal of consequences - physical agony and suffering (Broadcasting, Aug. 19, 1968, pg. 23). As such, seeing consequences is to an extent shocking due to its novelty, and as such should have maximum impact. Thus, although seeing aggression in which the aggressor is not punished should lower inhibitions (Bandura, 1965), the viewing of consequences should overcome this effect and raise inhibitions of these viewers above those of viewers exposed to nonviolent television.

Socioeconomic Status

Past research on children from families of varying socioeconomic status (SES) would indicate differences in both normal amount of verbal aggression and effects of exposure to television violence on verbal aggression.

Allinsmith (1960) found that lower SES children were more likely to respond to potentially frustrating situations with the most direct forms of aggression than middle SES children. Also, lower SES children habitually expressed more aggressive behavior than middle SES children. The environment of the lower SES child is more likely to contain frequent acts of physical violence than the environment of the middle SES child (U.S. Government, 1968). Dominick and Greenberg (1970) found that lower SES boys (grades 4-6) were more approving of physical aggression, more willing to use physical aggression, perceived violence as a more effective means of problem solving, and responded with more physically aggressive solutions to potentially frustrating situations than middle SES peers.

Given these findings, then, it would be reasonable to assume that lower SES adolescents have lower inhibitions towards physically aggressive acts than middle SES adolescents, and as such they should also have lower inhibitions towards verbal aggression. Thus, lower SES adolescents should demonstrate more intense verbally aggressive behavior across all treatments than middle SES children. Therefore, the following hypothesis is suggested:

H_3: Subjects from families of lower socioeconomic status will demonstrate more intense verbal aggression than subjects from families of middle socioeconomic status.

Research concerning viewing differences among lower and middle SES children and adolescents, together with the research concerning differences in physical aggression suggest two television treatment by SES interaction hypotheses.

Reif (1967) found that boys more exposed to and involved with physical aggression in their environment (institutionalized delinquents) were less likely to see visual stimuli as violent than delinquents without a history of aggressiveness, and/or without current aggressive tendencies. This would suggest that the lower SES adolescent will see any violent television stimulus as less violent than the middle SES adolescent who is exposed to and involved in aggression in his environment to a much lesser extent. Schramm, Lyle and Parker (1961), and Greenberg and Dominick (1969, 1970), found that lower SES boys and girls, grades 4, 5, 6, and 10 are much heavier television viewers than middle SES boys and girls.

The lower SES adolescents are therefore exposed more to violent television programs than middle SES adolescents, which would suggest they are more desensitized to television violence and thus will be less affected by an experimental exposure. Research by Greenberg and Gordon (1971) demonstrated that lower SES boys (5th grade) who are exposed to television violence, as compared to middle SES boys who are exposed to the same violence perceive less violence, perceive the violence as more acceptable and like watching the violence more.

The above research would suggest, then, that lower SES adolescents are exposed to more television violence and see it as less violent than middle SES adolescents. It is argued, then, that lower SES adolescents

have, in effect, become desensitized to television violence (if they were ever sensitized to it initially), and as such any single television exposure will have less effect on their inhibitions than it will have on middle SES adolescents who are not exposed as much to either real or televised violence, and who see the television as more violent. On this basis, the following interaction hypothesis is made:

H_4: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

A similar argument can be made concerning effects of exposure to television violence in which consequences to the victim are shown. It was stated earlier that lower SES adolescents are exposed to and are involved in more acts of physical violence than middle SES adolescents. Therefore, they are more exposed to actual consequences of physical aggression than are the middle SES adolescents. As such, exposure to television violence in which consequences to the victim are shown should have less of an effect on the lower SES adolescent's inhibitions than on the middle SES adolescent's inhibitions who would find exposure to consequences a much more novel and shocking experience. On this basis, the following interaction hypothesis is offered:

H_5: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

In summary, past research suggests that similar inhibitions may be associated with both physical and verbal aggression. Past research also suggests that exposure to particular kinds of television violence, e.g., with and without consequences of the violence to the victim, have differential effects on the viewer's inhibitions towards physical aggression. Based on this, two hypotheses were offered concerning effects of violence with and without consequence on the intensity of adolescents' verbally aggressive behavior. Previous studies indicate socioeconomic status is a predictor of level of aggressive behavior, and that it mediates effects of exposure to television violence. On this basis, one hypothesis was formed concerning intensity of verbally aggressive behavior of youths from lower and middle socioeconomic status homes, and two other hypotheses were made concerning interaction affects of socioeconomic status and television violence with and without consequences on intensity of verbally aggressive behavior.

CHAPTER II

METHODS

The Sample

Data were collected from 242 seventh, eighth, and ninth grade boys during June, 1971. There were 234 usable questionnaires. Given the emphasis on aggressive behavior, girls were excluded from the sample to control for possible sex differences. Subjects were sampled from three schools in middle and lower socioeconomic neighborhoods in the Lansing area.

Variables and Operationalizations

Independent Variables

1) Television exposure treatments. Three video-tapes were edited, each approximately four minutes and thirty seconds, black and white, with sound, taken from the movie The Chase. The violent tape in which consequences to the victim are shown was a scene in which the town sheriff is beaten by three local men. Consequences of the beating are clearly shown, including blood, swollen face, slow and uncoordinated movements, slurred speech, etc. The violent tape in which the consequences are not shown was the same scene, but with the blood and after-beating consequences edited out. The version was recorded on video-tape using a filter to remove the reds, thus wiping out the blood; other consequences were removed through electronic editing. In the scene, the sheriff

appears to be in a fight during which he is knocked unconscious. The nonviolent tape contained the same characters as in the violent tapes, and action scenes such as cars driving and an oil well in operation, but no aggressive behavior was depicted. Similar scenes were included in each of the three tapes to control context and provide a consistent story line. All verbal aggression was edited out from all versions.

2) Socioeconomic status. At the end of a post-viewing questionnaire, subjects were asked to write down the occupation of their father and mother. Subjects were classified as middle or lower socioeconomic status on the basis of father's occupation if living, or mother's occupation if either the father was not living or if the response given for the father's occupation was otherwise uncodable. If both responses were uncodable (3% of the cases), the socioeconomic status of the school which the student attended was used for classification. A combination of the Troldahl Occupational Prestige Scale (Troldahl, 1967) and the North-Hatt Occupational Ratings (1947) were used as aids in assignment of occupations to socioeconomic classifications.

Dependent Variable

Verbal aggression was measured by three different techniques.

1) Situation items. In a post-viewing questionnaire, four situations which presented potentially verbal aggression provoking encounters were given to the subjects. For two of the items (closed items), nine verbal statements varying in intensity of verbal aggression were offered for each situation. These statements were constructed on the basis of a 10-point interval rating scale developed by Mosher (1968) to code

intensity of verbal aggression produced by delinquent boys similar in age to the present subjects. For the other two situations (open items), subjects wrote down what they would say in that situation. On the basis of the responses given and the interval scale developed by Mosher (1968) eleven categories were constructed varying in intensity of verbal aggression. Two independent judges sorted all statements of subjects into the eleven categories. Correlations between judges' sortings were 0.99 and 0.93 for open items 1 and 2 respectively. All four items and categories used are presented in Table 1. p.23

Subjects were asked to imagine themselves in each situation and to choose the one statement that was most similar to what they would honestly say (closed items), and to write down what they would honestly say (open items). For each closed item, subjects were assigned a score from one (low intensity) to nine (high intensity); for each open item, subjects were assigned a score from one (low intensity to eleven (high intensity).

Intercorrelations were computed and are presented in Table 2.

On the basis of the intercorrelations, open item 2 was dropped from the analysis. The low intercorrelations of this item with the others, are possibly due to the different type of situation depicted by this item; i.e., this item describes a situation in which a friend is being attacked, whereas the other situations involve self as the recipient of the attack. The remaining three items have a range of intercorrelations from 0.28 to 0.57, with an average correlation of 0.39.

TABLE 1

VERBAL AGGRESSION SITUATION ITEMS

Closed Item 1:

Imagine that a student you know tells your teacher that you cheated on a test. This student knows you did not cheat, so he lied. What would you say to this student? Choose the one statement that is most like what you would say and put an "X" on the line next to it.

Closed Item 2:

Imagine that a student you know takes your new pen and would not give it back when you asked for it. What would you say to this student? Choose the one statement that is most like what you would say and put an "X" on the line next to it.

Scale and Values:

Values		
1	_____	I would say nothing
2	_____	I would say something, but not about what happened.
3	_____	I would tell him that was not a good thing to do.
4	_____	I would tell him he was a pretty dumb person for doing that.
5	_____	I would tell him he was a stupid idiot for doing that.
6	_____	I would tell him I hate stupid people who do things like that.
7	_____	I would tell him I hate him for doing a stupid thing like that and make sure he knew I was mad.
8	_____	I would call him the worst names I could think of and make sure he knew I was really mad.
9	_____	I would call him the worst names I could think of and tell him I would hit him if he ever did that again.

Table 1 (cont'd.)

Open Item 1:

Imagine that you have been standing in the lunch line at the cafeteria for some time and a guy you don't like cuts into the line in front of you. What would you say to him?

(PRINT YOUR ANSWER BELOW)

Open Item 2:

Imagine that you have a friend who is not very tall. If another student called your friend a dirty name and make fun of his size, what would you say to this other student?

(PRINT YOUR ANSWER BELOW)

Scale and Values:

1	Nothing
2	Ask him nicely to stop
3	Tell him to stop
4	Tell him to stop using swear and/or taboo words
5	Swear and/or taboo words only
6	Call him a name
7	Call him a taboo name
8	Mention and/or threat of mild physical aggression
9	Mention and/or threat of intense physical aggression
10	Mention and/or threat of intense physical aggression using swear and/or taboo words
11	Mention and/or threat of severe physical aggression with or without swear and/or taboo words

TABLE 2

VERBAL AGGRESSION SITUATION ITEMS

Intercorrelations

	C1	C2	O1	O2
Closed 1	--			
Closed 2	.57	--		
Open 1	.28	.33	--	
Open 2	.04	.00	.02	--

	Means[1]	SD'S
Closed 1	5.05	2.62
Closed 2	5.12	2.70
Open 1	4.10	2.62
Open 2	3.80	2.47

[1] The higher the mean, the more aggressive the scale value

The sum of the three remaining situation items was used to index verbal aggressive behavior of each subject. The scale range was 3 - 29. Twelve of the 702 total items were uncodable or blank, and were each recoded to the grand mean for that item. The scores ranged from 3 - 28 with a mean of 14.16 and a standard deviation of 6.07.

2) Word-association test. After the situation items, a word-association test was administered to the subjects. Twelve words were presented, eight aggressive and four neutral words, one to a page with a line under each word for subject response. Subjects were instructed to write down the first word they thought of after reading the stimulus word, and to go as rapidly as possible. The eight aggressive stimulus words were chosen from Buss' (1961) listing of 146 aggressive words with intensity ratings and frequency counts for each word measured, such that the eight words represented a range in both intensity and frequency of occurrence in the English language. The twelve words used, with Buss' aggression ratings and word counts for the eight aggressive words, are in Table 3.

Subjects' associations to the eight aggressive words and one neutral word (blue) were rated by 32 judges on a five-point scale measuring intensity of aggressiveness (1 = not at all aggressive, 5 = very aggressive). Each association was presented with its respective stimulus word. Judges were Juniors and Seniors attending summer sessions of two upper-level undergraduate Communication courses. Means and standard deviations were computed for each association from the judges' ratings. Means ranged from 1.000 (Blue - Art) to 4.438 (Killing - Mom), and standard deviations ranged from 0.000 (Blue - Art) to 1.583 (Hurt - O.K.).

TABLE 3

WORD ASSOCIATION STIMULI

Stimulus Word	Buss' Aggressiveness Ratings[1]	Thorndike-Lorge Frequency Count
Killing	8.7	100 to 1 million per million
Hatred	7.4	20 per million
Cruel	6.4	46 per million
Hurt	5.8	100 to 1 million per million
Anger	5.1	50 to 100 per million
Unfriendly	4.2	4 per million
Dislike	3.9	23 per million
Disagree	3.0	3 per million
Blue	---	
Sleep	---	
Gold	---	
Warm	---	

[1]Judges rated words on a 9-point aggressiveness scale, 9 indicating most intense aggressiveness.

The nine stimulus words were submitted to a factor analysis (principle axis with varimax rotation) and intercorrelations were computed. Intercorrelations and factor loadings are presented in Table 4.

Four of the eight aggressive words consistently load highly on Factor I: Hate, Unfriendly, Disagree, and Dislike. These four words have intercorrelations which range from 0.28 - 0.36, with an average correlation of 0.33 (Table 4, A). The other four aggressive stimulus words do not load consistently nor highly with each other or the first four stimulus words. The intercorrelations further demonstrate little relationship among them (Table 4, C) or the first four words (Table 4, B).

Because of their lack of relationship, these four words were dropped from the rest of the analysis in this study. The word Blue was included as a discriminitive validity check, and as would be expected, this word produced a negative factor loading on factor I, and a loading of .77 on factor II. Thus, some discrimination was achieved by this word association method.

The sum of the four remaining words (Hate, Unfriendly, Disagree, and Dislike) was used to index verbally aggressive behavior of each subject. The scale range was 4-20. Of the 936 total items, 22 were blank or uncodable. Talbott (1967) indicates that with the type of scale used for the judge's ratings, missing data can be recoded to the mid-point scale value. This was done for all missing data (blanks and uncodable responses), and as such missing data were recoded to 3 for each item. Scores ranged from 4-13 with a mean of 7.05 and a standard deviation of 2.37.

TABLE 4 A

INTERCORRELATIONS AND FACTOR LOADINGS OF
NINE WORD ASSOCIATION STIMULI

		Hate	Unfriendly	Disagree	Dislike
A.	Hate	--			
	Unfriendly	.28	--		
	Disagree	.33	.33	--	
	Dislike	.36	.36	.31	--

		Killing	Hurt	Cruel	Anger	Blue
B.	Hate	.13	.09	.05	.08	.10
	Unfriendly	.10	.11	.16	.25	.09
	Disagree	.25	.07	.18	.08	.04
	Dislike	.11	.08	.25	.25	.001

		Killing	Hurt	Cruel	Anger	Blue
C.	Killing	--				
	Hurt	.04	--			
	Cruel	.14	.00	--		
	Anger	.12	.06	.04	--	
	Blue	-.12	-.02	.00	-.09	--

	Factor Loadings	
	I	II
Killing	0.22	-0.61
Hate	0.68	0.13
Unfriendly	0.70	-0.02
Disagree	0.62	-0.24
Hurt	0.20	-0.06
Cruel	0.34	-0.24
Dislike	0.71	-0.13
Anger	0.29	-0.39
Blue	-0.25	0.77
Proportions of Variance	.24	.14

3) Word ratings. Following the word-association test, subjects were asked to rate each of the twelve stimulus words used in the word association test on three seven-point bi-polar adjective rating scales (mean-kind, excited-calm, good-bad). A score of one indicated kind, calm, and good, and seven indicated mean, excited, and bad.

Scores for the aggressive words were intercorrelated and submitted to a factor analysis (principle axis with varimax rotation). Only the intercorrelations and factor loadings for the four words left in the analysis from the word association test (Hate, Unfriendly, Disagree, and Dislike) are reported.

In order to determine the relationship between words and scales, an overall factor analysis was computed. This produced a consistent second factor through all rotations, on which the excited-calm scores for the four words (Hate, Unfriendly, Disagree, Dislike) loaded highly: 0.57, 0.44, 0.66, 0.60 respectively. The loadings of the other scales for these words were inconsistent in the overall factor analysis. However, the intercorrelations show that three separate dimensions exist, each scale (mean-kind, good-bad, excited-calm) measuring each dimension. The intercorrelations among scales and between scales for the four words are presented in Table 5.

The matrices demonstrate fairly strong and consistent correlations among scales (Tables 5, A, B, C) and fairly inconsistent and weak correlations between scales (Tables 5, D, E, F). Within scale intercorrelations between the words on the mean-kind scale range from 0.07 to 0.38, and average 0.25 (Table 5, A). Excited-calm intercorrelations range from 0.18 to 0.36, and average 0.25 (Table 5, B). Good-bad

TABLE 5

WORD RATING INTERCORRELATIONS

A. Mean-Kind by Mean-Kind

	1	2	3	4
1 Hate	--			
2 Unfriendly	.24	--		
3 Disagree	.07	.32	--	
4 Dislike	.38	.34	.12	--

B. Excited-Calm by Excited-Calm

	1	2	3	4
1 Hate	--			
2 Unfriendly	.29	--		
3 Disagree	.24	.20	--	
4 Dislike	.20	.36	.18	--

C. Good-Bad by Good-Bad

	1	2	3	4
1 Hate	--			
2 Unfriendly	.41	--		
3 Disagree	.12	.25	--	
4 Dislike	.44	.35	.27	--

D. Good-Bad by Excited-Calm

Excited-Calm Good-Bad

	1	2	3	4
1 Hate	.05	-.05	-.02	-.10
2 Unfriendly	-.04	-.10	.07	-.01
3 Disagree	.12	-.04	-.10	.14
4 Dislike	-.03	-.08	-.07	.06

E. Mean-Kind by Excited-Calm

Excited-Calm Mean-Kind

	1	2	3	4
1 Hate	.24	.12	.18	.17
2 Unfriendly	.15	.22	.20	.16
3 Disagree	.16	.11	.26	.11
4 Dislike	.01	.11	.12	.19

F. Mean-Kind by Good-Bad

Good-Bad Mean-Kind

	1	2	3	4
1 Hate	.55	.08	.06	.19
2 Unfriendly	.35	.42	.02	.10
3 Disagree	.19	.11	.23	.12
4 Dislike	.36	.22	.15	.44

intercorrelations range from 0.12 to 0.44, and average 0.31 (Table 5, C). The lower correlations within each scale were produced by the word Disagree, which does not seem to fit as well with the others.

Analyzing the between scale intercorrelations, good-bad and excited-calm produced correlations that ranged from -0.10 to 0.14, and averaged 0.00 (Table 5, D). Intercorrelations between mean-kind and excited-calm ranged from 0.01 to 0.26, (Table 5, E) and averaged 0.15, thus showing little relationship. These figures along with the overall factor analysis show that excited-calm seems to be a separate dimension, demonstrating no relationship with good-bad, and very little with mean-kind. Mean-kind intercorrelated with good-bad produced correlations ranging from 0.02 to 0.55 with an average correlation of 0.22 (Table 5, F). There is some relationship here, but as shown by the overall factor analysis, it is an inconsistent one, and not particularly stable. As such, this relationship did not warrant combining mean-kind and good-bad. Because of the consistent and strong correlations between words within each scale, and generally weak and inconsistent relationship between scales, scores for the words were summed within each scale to form three indices for each subject. For each index, the scale range was 4-28. Blanks and uncodable responses were recoded to the mid-point of each scale, 4, as suggested by Talbott (1967). Score ranges, means, standard deviations and percent blanks and uncodable responses for each scale are presented in Table 6.

Since there was no basis on which to predict if, when inhibitions towards verbal aggression are lowered, a subject will rate a word more or less aggressively, these measures were used for exploratory purposes to determine effects of inhibition on aggressive word ratings.

TABLE 6

RANGE, MEANS, STANDARD DEVIATIONS AND % MISSING DATA FOR WORD RATING INDICES

	Range	$\bar{X}$	S.D.	% Missing Data
Mean-Kind	6-28	22.51	3.41	2
Excited-Calm	7-28	18.75	4.19	2
Good-Bad	4-28	19.34	4.81	2

Manipulation Check

An index was included which measures the subject's willingness to use physical aggression in real life. This was done to examine if the television exposure had an effect on physically aggressive tendencies, which is predicted since inhibitions towards physical aggression should be lowered and raised depending on the television exposure condition. Four items were adapted from the Buss-Durkee Hostility Inventory (Buss, 1967). Each of these items was a declarative sentence followed by a five-point scale permitting the subject to indicate his degree of agreement or disagreement (1= low willingness to use aggression, 5= high willingness to use physical aggression). The items and intercorrelations between them are presented in Table 7.

Intercorrelations ranged from 0.13 to 0.43, with an average correlation of 0.27. The lower correlations may be due to the alteration of directional sets in question wording, done for control purposes. This scale reversal may have confused some of the subjects, especially the lower SES subjects who have reading

TABLE 7

WILLINGNESS TO USE PHYSICAL AGGRESSION
ITEMS AND ITEM INTERCORRELATIONS

Items

1. "There is no good reason for ever hitting anyone."
2. "People who keep on bothering me are asking for a punch in the nose."
3. "Anybody who says bad things about me is looking for a fight."
4. "I think fighting is a waste of time."

Scale	Scale Values	
	Items 1 and 4	Items 2 and 3
I agree very much	1	5
I agree a little	2	4
I'm not sure	3	3
I disagree a little	4	2
I disagree very much	5	1

Intercorrelations

	1	2	3	4
1	--			
2	.43	--		
3	.27	.13	--	
4	.23	.29	.29	--

problems. These four items and the four verbal situation items were intercorrelated and submitted to a factor analysis (principle axis with varimax rotation). The intercorrelations and factor loadings are presented in Table 8.

The physical items and open item 2 (dropped earlier from the analysis) break out on the second factor, but not cleanly. In a further rotation, physical items 2 and 3 loaded on a third factor, with physical items 1 and 4 again loading on factors I and II. Open item 2 remained on factor II, by itself, indicating a lack of relationship between it and the other items. The difference in extent of loadings among the physical items may again be due to the scale reversal problem described earlier. The intercorrelations between the physical and verbal items are also high (excluding open item 2), ranging from 0.14 to 0.33, with an average correlation of 0.24. This may be due to one of three reasons: 1) scores are similar because the manipulations are working as predicted, i.e., inhibitions for both physical and verbal responses are similar; 2) the verbal items are measuring part of the physical dimension; or 3) the physical items are tapping part of the verbal dimension. Since the physical items are paper and pencil measures, they require a verbal rather than an actual physical response, and as such probably overlap the verbal aggression situation items. However, on the basis of the factor loadings, which show some separation of verbal from physical items, and given the face validity of the items themselves, the physical aggression items were summed to form an index of willingness to use physical aggression, separate from the verbal aggression index.

TABLE 8

PHYSICAL AND VERBAL AGGRESSION INTERCORRELATIONS AND FACTOR LOADINGS

	Closed 1	Closed 2	Open 1	Open 2
Physical 1	.23	.21	.14	.13
Physical 2	.22	.26	.26	.05
Physical 3	.27	.23	.20	.06
Physical 4	.25	28	.33	.15

	Factor Loadings	
	I	II
Closed 1	.75	.10
Closed 2	.80	.06
Open 1	.59	.18
Open 2	-.29	.71
Physical 1	.21	.58
Physical 2	.42	.47
Physical 3	.42	.43
Physical 4	.38	.55
Proportions of Variance	.27	.20

The scale range was 4-20. Blanks and uncodable responses were recoded to the scale mid-point (6 of the 936 total items). Scores ranged from 4 to 20, with a mean of 12.18 and a standard deviation of 3.75.

Relationship Among the Indices

After the development of the six indices, they were intercorrelated and submitted to a factor analysis (principle axis with varimax rotation). The intercorrelations and factor loadings are presented in Table 9.

The intercorrelations and factor loadings demonstrate a strong relationship between the verbal and physical aggression indices. The word-association index seems unrelated to the others. The mean-kind word rating index and the good-bad word rating index show some interrelation, separate from the other indices, and the excited-calm word rating index demonstrates itself to be separate from the others, loading .76 on factor three, with mean-kind and good-bad indices loading strongly and negatively on factor one (-.70 and -.87 respectively).

Extra Control Group

To insure that the group exposed to television in which no violence was shown provided base-line data, a no-treatment group was added to the design. This group was not exposed to any television. Scores obtained from this group should not differ significantly from those of the group exposed to the nonviolent television.

Procedures

1) Questionnaire construction. The order of physical and verbal aggression items, and the open- and closed-ended verbal aggression situation items were randomized. This set of items was followed by

TABLE 9

INTERCORRELATIONS AND FACTOR LOADINGS OF SIX INDICES

	VA	PA	WA	MK	EC	GB	Factor Loadings I	II	III
Verbal Aggression Situation Index	--						.01	.82	.01
Willingness to Use Physical Aggression Index	.45	--					.09	.83	-.02
Word Association Index	.11	.13	--				-.33	.33	-.60
Mean-Kind Word Rating Index	-.02	-.06	-.11	--			-.70	.00	.54
Excited-Calm Word Rating Index	.02	.00	-.04	.35	--		-.17	.15	.76
Good-Bad Word Rating Index	-.06	-.12	.06	.42	.00	--	-.87	-.14	-.09
Proportions of Variance							.23	.25	.21

the word-association test, within which the order of stimulus words were randomized. The next section of the questionnaire was the ratings of the stimulus words, and these words were also randomized. The final section included questions concerning grade, sex, and parents' occupations.

It was of interest to determine if there was an order effect with both the order of physical and verbal aggression items, and the order of open- and closed-ended verbal aggression items. This was tested for, the results of which will be presented in the Chapter III.

2) Randomization of subjects to treatments. All boys within the classes obtained from each school were used in the experiment. Treatments were randomly assigned to each class such that time of day was controlled, and approximately equal number of subjects were sought for each cell.

3) Procedures for data collection. Boys from a class were taken to the experimental room, or the girls and teacher were removed from the classroom if it was used as the experimental room. A short introduction was given to the subjects. They were told they would be shown some television (unless they were in the no-treatment group) and then given a form to be filled out; that the form was not a test; and, that answers would be kept private (no names were asked for on the forms). The appropriate video-tape was then shown, utilizing two monitors such that all subjects could easily view the scene. In the no-treatment condition, the forms were administered at this time.

Following exposure to the experimental tape, the forms were distributed and a short introduction was given, reminding the subjects that it was not a test and that their honest answers were required. Each section was completed one at a time, with instructions for each read aloud. After subjects completed the last section of the form, they were asked not to talk about what they did to their friends, and then they were dismissed. The entire procedure including exposure to the video-tape lasted approximately 35 minutes.

Design

The design is summarized below:

		Treatment			
		Violence Without Consequences	Non Violence	No-Treatment	Violence With Consequences
Socio-economic Status	Lower				
	Middle				

Dependent Measures:

1) Verbal Aggression Situation Index
2) Word Association Index
3) Mean-Kind Word Rating Index
4) Excited-Calm Word Rating Index
5) Good-Bad Word Rating Index
6) Willingness to Use Physical Aggression Index (Manipulation Check)

Analytic Procedures

First, order effects were determined. This involved computation of a two (middle-lower SES) by three (television exposure treatments)

by two (order of physical and verbal aggression items) by two (order of open- and closed-ended verbal aggression items) analysis of variance for the willingness to use physical aggression index and the verbal aggression situation index.

Secondly, differences between the nonviolent treatment group and the no-treatment group were determined by means of two by two analyses of variance for each dependent index.

Finally, all hypotheses were tested using in one case the overall two by three by two by two analysis of variance computed to test order effects, and in all other cases, two by two analyses of variance.

It was stated earlier in this chapter that treatments were randomly assigned to classes in an attempt to obtain proportionate cell frequencies. This procedure failed to obtain equality of proportionality, and as such a disproportionate analysis of variance technique was used for all tests involving analysis of variance. This technique utilizes a least-squares solution to correct for disproportionate cell frequencies.

CHAPTER III

RESULTS

Results will be presented first for order effects. Secondly, results of the comparison between the no-treatment and non-violent television treatment groups will be presented for each dependent measure and the measure of willingness to use physical aggression, the manipulation check. Finally, the results for each hypothesis will be shown, presenting the data for each dependent index and the manipulation check: verbal aggression, situations, word associations, mean-kind word ratings, excited-calm word ratings, good-bad word ratings, and willingness to use physical aggression.

Order Effects

To test for order effects, an overall two (middle-lower SES) by three (television exposure treatments) by two (order of physical and verbal aggression situation items) by two (order of open- and closed-ended verbal aggression situation items) analysis of variance was computed for the verbal aggression situation index and the willingness to use physical aggression index.

Results of the analysis of variance computed for the verbal aggression situation index are presented in Table 10.

No significant main effects or interaction effects were found for either the order of physical and verbal aggression items or the order of open- and closed-ended verbal aggression situation items.

TABLE 10

ANALYSIS OF VARIANCE OF VERBAL AGGRESSION SCORES CLASSIFIED BY SOCIOECONOMIC STATUS (SES) X TELEVISION EXPOSURE TREATMENTS (TV) X ORDER OF PHYSICAL AND VERBAL AGGRESSION SITUATION ITEMS (PV) X ORDER OF OPEN- AND CLOSED-ENDED VERBAL AGGRESSION SITUATION ITEMS (OC)

Source of Variance	SS	df	MS	F	P
SES	323.70	1	323.70	8.64	0.004
TV	103.18	2	51.59	1.38	ns
PV	28.02	1	28.02	0.75	ns
OC	7.78	1	7.78	0.21	ns
SESXTV	136.46	2	68.23	1.82	ns
SESXPV	17.43	1	17.43	0.47	ns
SESXOC	19.76	1	19.76	0.53	ns
TVXPV	117.11	2	58.56	1.56	ns
TVXOC	177.72	2	88.86	2.37	ns
PVXOC	0.94	1	0.94	0.03	ns
SESXTVXPV	76.30	2	38.15	1.02	ns
SESXTVXOC	125.22	2	62.61	1.67	ns
SESXPVXOC	12.43	1	12.43	0.33	ns
TVXPVXOC	48.66	2	24.33	0.65	ns
SESXTVXPVXOC	134.09	2	67.05	1.79	ns
ERROR	5545.54	148	37.47		
TOTAL	6746.53	171			

Results of the analysis of variance computed for the index of willingness to use physical aggression is presented in Table 11.

TABLE 11

ANALYSIS OF VARIANCE OF PHYSICAL AGGRESSION SCORES CLASSIFIED BY SOCIOECONOMIC STATUS (SES) X TELEVISION EXPOSURE TREATMENT (TV) X ORDER OF PHYSICAL AND VERBAL AGGRESSION SITUATION ITEMS (PV) X ORDER OF OPEN- AND CLOSED-END VERBAL AGGRESSION SITUATION ITEMS (OC)

Source of Variance	SS	df	MS	F	P
SES	109.38	1	109.38	8.21	0.005
TV	7.07	2	3.53	0.27	ns
PV	6.15	1	6.15	0.46	ns
OC	9.33	1	9.33	0.70	ns
SESXTV	96.59	2	48.29	3.62	0.03
SESXPV	7.91	1	7.91	0.59	ns
SESXOC	0.32	1	0.32	0.02	ns
TVXPV	115.88	2	57.94	4.35	0.02
TVXOC	39.37	2	19.68	1.48	ns
PVXOC	0.05	1	0.05	0.00	ns
SESXTVXPV	10.98	2	5.49	0.41	ns
SESXTVXOC	85.87	2	42.94	3.22	0.04
SESXPVXOC	10.25	1	10.25	0.77	ns
TVXPVXOC	1.89	2	0.94	0.07	ns
SESXTVXPVXOC	30.01	2	15.01	1.13	ns
ERROR	1972.74	148	13.33		
TOTAL	2473.23				

A significant three-way interaction was found for order of open- and closed-ended verbal aggression situation items, television exposure treatments, and socioeconomic status. The cell means are presented in Table 12, with the order of physical and verbal aggression situation items collapsed.

TABLE 12

CELL MEANS

(The Higher the Mean, the More the Willingness to Use Physical Aggression)

Order	T.V. Treatment	SES	$\bar{X}$	F
Open-Closed	NV	LSES	14.65	15
		MSES	10.65	11
	V	LSES	13.78	11
		MSES	9.92	15
	VC	LSES	10.72	13
		MSES	13.10	13
			$\bar{X}$	F
Closed-Open	NV	LSES	12.15	11
		MSES	11.41	16
	V	LSES	14.93	11
		MSES	12.20	21
	VC	LSES	13.29	13
		MSES	11.84	22

An examination of the pattern of means shows that the closed-open order shows generally higher means in each treatment, and generally less lower-middle SES differences, compared to the open-closed order. Thus, order of open- and closed-ended verbal aggression situation items seems to have affected subject responses to the items measuring willingness to use physical aggression.

Also, a significant two-way interaction was found for order of physical and verbal aggression items and television exposure treatments. The cell means are presented in Table 13, collapsing socio-economic status and order of open- and closed-ended verbal aggression situation items.

TABLE 13

CELL MEANS

(The Higher the Mean, the More the Willingness to Use Physical Aggression)

	T.V. Treatment		
	NV	V	VC
Order			
Physical-Verbal	11.58 (n=29)	11.79 (n=24)	13.25 (n=28)
Verbal-Physical	12.85 (n=24)	13.70 (n=34)	11.22 (n=33)

Examination of these means indicates that differences between television exposure treatments tend to be greater for the verbal-physical order than the physical-verbal order. Thus, order of physical

and verbal aggression items seems to have affected subject responses to the items measuring willingness to use physical aggression.

Both order of closed-open items and physical-verbal items had an effect on subject response patterns for the physical aggression index. For this reason, orders will not be collapsed for the verbal and physical aggression indices. The overall 2X3X2X2 analysis of variance will be used for comparisons involving these two indices.

Comparison Between the No-Treatment and NonViolent Television Treatment Groups

To insure that the nonviolent treatment group provided base-line data, this group was compared to a no-treatment group. A two (nonviolent television exposure and no-treatment conditions) by two (lower-middle SES) treatment by levels analysis of variance was computed for each dependent index and the index measuring willingness to use physical aggression.

No significant differences were found between the nonviolent treatment and no-treatment groups, either treatment main effects or treatment by socioeconomic status interaction effects. Thus, the nonviolent television group was used as the control group in the analysis of hypotheses. The results of the analysis of variance computed for each dependent index are presented in Table 14.

Television Treatment Effects

The overall 2X3X2X2 analyses of variance yielded main effect F-ratios which determined if exposure to the treatment conditions affected the physical and verbal aggression dependent indices. Two by two treatment

TABLE 14

ANALYSES OF VARIANCE

NonViolence - No Treatment (TV) X Socioeconomic Status (SES)

Verbal Aggression Situation Index

Source of Variance	SS	df	MS	F	P
TV	26.59	1	26.59	0.86	ns
SES	3.34	1	3.34	0.11	ns
TVXSES	40.99	1	40.99	1.32	ns
ERROR	3437.33	111	30.97		
TOTAL	3506.73	114			

Word Association Index

Source of Variance	SS	df	MS	F	P
TV	3.45	1	3.45	0.61	ns
SES	2.64	1	2.64	0.46	ns
TVXSES	0.00	1	0.00	0.00	ns
ERROR	631.58	111	5.69		
TOTAL	637.86	114			

Mean-Kind Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	1.03	1	1.03	0.08	ns
SES	11.27	1	11.27	0.83	ns
TVXSES	8.73	1	8.73	0.65	ns
ERROR	1500.59	111	13.52		
TOTAL	1523.53	114			

Table 14 (cont'd)

Excited-Calm Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	2.63	1	2.63	0.13	ns
SES	37.80	1	37.80	1.94	ns
TVXSES	2.15	1	2.15	0.11	ns
ERROR	2170.85	111	19.56		
TOTAL	2214.57	114			

Good-Bad Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	7.35	1	7.35	0.29	ns
SES	5.95	1	5.95	0.23	ns
TVXSES	0.66	1	0.66	0.03	ns
ERROR	2843.83	111	25.62		
TOTAL	2857.79	114			

Willingness to Use Physical Aggression

Source of Variance	SS	df	MS	F	P
TV	2.09	1	2.09	0.15	ns
SES	60.23	1	60.23	4.41	0.04
TVXSES	24.89	1	24.89	1.82	ns
ERROR	1515.08	111	13.65		
TOTAL	1596.30	114			

by socioeconomic status analyses were used to test treatment effects for the remaining four indices.

It was hypothesized that:

H_1: Subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown.

H_2: Subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown.

Neither of these hypotheses were confirmed for any of the dependent indices or the manipulation check (willingness to use physical aggression). Main-effect F-ratios testing H1 and H2 are presented in Tables 10 and 11 respectively for the physical and verbal dependent indices, and in Tables 15 and 16 for the other indices.

Socioeconomic Status Differences

It was hypothesized that:

H_3: Subjects from families of lower socioeconomic status will demonstrate more intense verbal aggression than subjects from families of middle socioeconomic status.

This hypothesis was tested in two ways. First, the overall 2X3X2X2 analysis of variance done for the verbal aggression situation index and the willingness to use physical aggression index yields F-ratios for SES effects (Tables 10 and 11, respectively). Socioeconomic status produced significant differences in the predicted direction on both indices ($p = .004$ for verbal aggression, and $p = .005$ for physical aggression). Cell means for these indices collapsed on physical-verbal and

TABLE 15

ANALYSES OF VARIANCES

Violence Without Consequences-NonViolence (TV) X Socioeconomic Status (SES)

Word Association Index

Source of Variance	SS	df	MS	F	P
TV	0.66	1	0.66	0.12	ns
SES	0.09	1	0.09	0.02	ns
TVXSES	3.34	1	3.34	0.62	ns
ERROR	580.81	107	5.43		
TOTAL	585.48	110			

Mean-Kind Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	10.02	1	10.02	0.81	ns
SES	0.14	1	0.14	0.01	ns
TVXSES	0.60	1	0.60	0.05	ns
ERROR	1324.65	107	12.38		
TOTAL	1336.67	110			

Excited-Calm Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	2.99	1	2.99	0.14	ns
SES	4.96	1	4.96	0.23	ns
TVXSES	45.83	1	45.83	2.10	ns
ERROR	2340.07	107	21.87		
TOTAL	2399.75	110			

Table 15 (cont'd)

Good-Bad Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	0.40	1	0.40	0.01	ns
SES	58.06	1	58.06	2.03	ns
TVXSES	36.47	1	36.47	1.28	ns
ERROR	3055.14	107	28.55		
TOTAL	3156.40	110			

TABLE 16

ANALYSES OF VARIANCE

Violence with Consequences-NonViolence (TV) X Socioeconomic Status (SES)

Word Association Index

Source of Variance	SS	df	MS	F	P
TV	0.94	1	0.94	0.15	ns
SES	11.82	1	11.82	1.83	ns
TVXSES	3.55	1	3.55	0.55	ns
ERROR	711.29	110	6.47		
TOTAL	727.83	113			

Mean-Kind Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	31.65	1	31.65	2.67	ns
SES	0.47	1	0.47	0.04	ns
TVXSES	0.08	1	0.08	0.01	ns
ERROR	1304.28	110	11.86		
TOTAL	1336.07	113			

Table 16 (cont'd)

Excited-Calm Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	0.08	1	0.08	0.00	ns
SES	61.27	1	61.27	3.22	0.07
TVXSES	10.15	1	10.15	0.53	ns
ERROR	2096.26	110	19.06		
TOTAL	2171.16	113			

Good-Bad Word Rating Index

Source of Variance	SS	df	MS	F	P
TV	13.42	1	13.42	0.62	ns
SES	0.00	1	0.00	0.00	ns
TVXSES	2.67	1	2.67	0.12	ns
ERROR	2399.77	110	21.82		
TOTAL	2415.02	113			

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open-closed orders are presented in Table 17 for each relevant treatment comparison. Secondly, the two by two analyses of variance tested SES effects for the remaining four indices. None of these other indices, word association and word ratings, seemed to tap socioeconomic differences for either treatment comparison. The excited-calm word-rating index produced a marginally significant difference (p= .07) for the violence with consequences - nonviolence comparison (Table 16), indicating that middle SES subjects rated the words as more excited than the lower SES subjects. However, since this measure

TABLE 17

CELL MEANS AND FREQUENCIES FOR VERBAL AGGRESSION SITUATION INDEX, WILLINGNESS TO USE PHYSICAL AGGRESSION INDEX, AND EXCITED-CALM WORD RATING INDEX

Verbal Aggression Situation Index[1]

	Non Violence	Violence Without Consequences		Non Violence	Violence Without Consequences
Lower SES	14.58 (n=26)	17.64 (n=22)	Lower SES	14.58 (n=26)	14.23 (n=26)
Middle SES	13.04 (n=27)	12.67 (n=36)	Middle SES	13.04 (n=27)	12.97 (n=35)

Willingness to Use Physical Aggression[1]

	Non Violence	Violence Without Consequences		Non Violence	Violence Without Consequences
Lower SES	13.42 (n=26)	14.45 (n=22)	Lower SES	13.42 (n=26)	11.62 (n=26)
Middle SES	11.04 (n=27)	11.36 (n=36)	Middle SES	11.04 (n=27)	12.37 (n=35)

Excited-Calm Word Rating Index[2]

	Non Violence	Violence With Consequences
Lower SES	18.35 (n=26)	17.69 (n=26)
Middle SES	19.22 (n=27)	19.77 (n=35)

[1]Higher means indicate more intense aggression.
[2]Higher means indicate higher excited ratings.

was used for exploratory purposes, it neither confirms nor disconfirms the hypothesis. Cell means for this index are presented in Table 17 for this comparison.

Thus, for the verbal aggression situation index and the willingness to use physical aggression index, subjects from families of lower socioeconomic status tend to be more verbally aggressive and tend to be more willing to use physical aggression than subjects from families of middle socioeconomic status, as measured by these two indices.

Interaction Effects

It was hypothesized that:

H_4: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

H_5: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

H_4 and H_5 were tested by the television treatment by socioeconomic status interaction F-ratios presented in Tables 10, 11, 15, and 16 respectively. Neither hypothesis was supported for any dependent index or the manipulation check (willingness to use physical aggression).

Thus, television treatments did not interact with socioeconomic status to produce the expected differences on any dependent measure.

In summary, then, order effects were found for order of physical-verbal items, and order of open- and closed-ended verbal aggression situation items. The nonviolent television treatment condition was shown to provide base-line data, and was therefore used as the control group in this study. Neither of the television treatment main effect hypotheses, nor the television treatment-socioeconomic status interaction hypotheses were supported. Differences were found in intensity of both verbal aggression and willingness to use physical aggression between adolescent boys from families of lower and middle socioeconomic status.

CHAPTER IV

DISCUSSION

This research examined the effects of television violence on the verbally aggressive behavior of adolescent boys from families of varying socioeconomic status (SES). Three television treatments were compared: violence with consequences to the victim, violence without consequences to the victim, and nonviolence. Two levels of SES were compared: lower and middle. Five indices of verbal aggression were developed and used as dependent measures, along with one index of physical aggression, to determine the effect of viewing violence with and without consequences on verbally and physically aggressive behavior, and in an attempt to determine the relationship between verbal and physical aggression. Subjects were 234 seventh, eighth, and ninth grade boys from three schools in middle and lower SES neighborhoods.

Television Treatment Differences

In terms of expected television treatment differences, the following hypotheses failed to receive support:

H_1: Subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown.

H_2: Subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown.

The lack of support for these hypotheses is of major importance. The comparison of the effects of these treatments formed the primary focus of this study. As such, main treatment differences shed little light on the notion of aggression inhibition, either towards verbal or physical aggression. Both of these hypotheses stemmed from research evidence which indicated that television violence without consequences has a stimulative effect; i.e., it lowers the viewer's inhibitions towards physical aggression, whereas television violence with consequences should raise the viewer's inhibitions towards physical aggression as suggested by past research. The stronger hypothesis is the former, since more research has been conducted which supports the stimulative effect of viewing television violence. The fact that it was not supported here is crucial, since the predicted increase in intensity of verbal aggression theoretically is based on a lowering of the subject's inhibitions towards physical aggression. Without this decrease in inhibitions, little can be shown about verbally aggressive behavior, except that intensity of verbal aggression did not demonstrate an increase either, and as such the theory has not been disproved. Likewise, the latter hypothesis also receive no support. Physically aggressive behavior did not show a significant decrease as a result of exposure to consequences of violence to the victim. Again, however, verbal aggression did not show a decrease in intensity either.

Several possible conclusions could be drawn from the lack of support for these two hypotheses: 1) Exposure to television has no effect on aggressive behavior, 2) Exposure to television violence does have effects on aggressive behavior, but the manipulations used

in this study were insufficient to produce the intended results, 3) The manipulations worked as predicted, but the dependent measures used were insensitive to changes in aggressive behaviors, or 4) The sample drawn for the study was biased.

The first and fourth conclusions seem unlikely. There is enough experimental evidence demonstrating stimulating effects of television violence under conditions similar to those used in this study that the first conclusion is unwarranted. Also, the schools from which the samples were drawn are representative of Michigan area schools. The boys used were normal, according to the teachers. Where boys were reported by the teachers as non-normal, e.g., overly-aggressive, they were dropped from the study. As such, the fourth conclusion also seems unwarranted.

The second and third conclusions, however, are possible. Through violence is clearly evident in the television scenes, and an attempt was made to remove consequences from the violence without consequences version, there may still have been an overtone in this version reducing the stimulating effect of the violence. For example, there is no music in this version which separates it from the "Mannix" type of fight scene, and makes it quite realistic. Also the sheriff, who is Marlon Brando - obviously a "good guy" - is knocked unconscious by three men. There is a tenor of seriousness to this, plus the fact that it may have been seen by the subjects as an unjustified beating, which could have resulted in an inhibitive rather than a stimulating effect. A comparison was made of the violence without and with consequences which produced no differences between these two treatments on any index. This adds some support to the notion that the no consequences version

in fact was perceived to have consequences. The problem here could have been alleviated by using a different scene, but this would have introduced a number of control problems associated with different contexts, characters, and a general lack of comparison between scenes. At any rate, the subjects did not react differently to the violence with and violence without consequences scenes.

The third conclusion is also possible - the indices used may have been insensitive to differences produced by the television treatments. The word associations and word ratings seem to have generally washed out. They showed no SES differences which were predicted both in terms of past research and common sense. They did not intercorrelate very well, nor correlate with other indices. Possibly the tasks were too difficult for the subjects, especially the lower SES boys. The word ratings seems very susceptible to misunderstanding by the subjects. Rating a word on an excited-calm dimension is a highly abstract type of task requiring cognitive abilities that may not have developed in the adolescents. The physical aggression measures were successfully used by Dominick (1971), but were used to measure gross differences between children of varying SES. These items tapped these gross differences in this study also, but may have been unable to detect the more sensitive differences induced by the manipulations attempted here. Possibly the "shocking" technique used by other researchers might have been more sensitive to changes in physical aggression. As argued earlier, the paper and pencil nature of these measures may have contaminated them by tapping some of the verbally aggressive behavior of the subjects. This seems a possibility given the strong intercorrelation between the physical measures and the verbal aggression situation items.

The verbal aggression situation items were developed for this study. As such, no evidence exists as to the validity or reliability of the specific measures used in this study. One problem of the items was the nature of the language used. It was necessary to use generally accepted words for two reasons: 1) the same items were to be used by both lower and middle SES adolescents, and 2) schools would not allow taboo or swear words in a questionnaire to be distributed in their classrooms. The lack of specific wording designed with the type of slang and dialect of each specific grouping of subjects in mind possibly reduced the validity of the items for any particular grouping which may have reduced subject identification with the items and alternative responses, making the items and responses appear artificial. As such, the verbal aggression measures may have been insensitive to differences in verbally aggressive intensity induced by the television treatments.

Certain experimental procedures may have also lowered treatment effects. Group viewing during school hours in a classroom, plus the novelty of participating in research may have been conditions that were not conducive to personal impact of the television stimuli.

In summary, then, there are a number of confounding factors that may have affected results of the treatment comparisons. Nonetheless, little support has been provided here for the theoretic contention that exposure to violence with consequences reduces inhibitions towards physical or verbal aggression. This conclusion would be more significant, however, if the violence without consequences treatment had produced a clear stimulative effect. Unfortunately, because inhibitions were not affected, little can also be said

concerning the relationship between physical and verbal aggression, except that television treatment comparisons did not demonstrate any differences between verbal and physical aggression. SES differences, however, provide some more evidence concerning treatment effects.

Socioeconomic Status (SES) Differences

It was hypothesized that:

H_3: Subjects from families of lower socioeconomic status will demonstrate more intense verbal aggression than subjects from families of middle socioeconomic status.

This hypothesis was in general supported, as would be expected. The word association index and word rating indices did not detect any differences as previously mentioned, with the exception of the excited-calm index in the violence with consequences - nonviolence comparison. However, given the exploratory nature of the word rating indices, it neither supports nor disconfirms the hypothesis. Also, given the inconsistency of the word ratings in general, and the difficulty of the task for the subjects, this finding should be accepted with reservations.

The verbal aggression situation index and the willingness to use physical aggression index both detected predicted differences. The pattern of significance is interesting, especially as it relates to predicted treatment differences. The overall 2X3X2X2 analysis of variance produced significant main effect SES differences in the predicted direction for both indices. Likewise, a further 2X2 violence collapsed on physical-verbal and open-closed orders without consequences - nonviolence analysis of variance produced the same significant differences.

However, a violence with consequences - nonviolence 2X2 comparison did not produce significant difference on either index. Results of these analyses of variance are presented in appendix 1. The pattern of means within these cells is important (See Table 17). Apparently, the overall significance was produced by the difference in means in the violence without consequences middle and lower SES cells (12.67 and 17.64 respectively for verbal aggression, and 11.36 and 14.45 respectively for physical aggression). Examining the violence with consequences cells, the lower SES verbal and physical aggression cell means have decreased to 14.23 and 11.62 respectively. Although these decreases were neither large enough to produce significant treatment differences in a comparison of violence with and without consequences, nor significant differences when each is compared to nonviolence, they were large enough to reduce main effect SES differences to non-significance in the violence with consequences - nonviolence comparison. This occurred for both the physical and verbal indices. This would indicate that violence with consequences, at least for the lower SES subjects, is possibly inhibiting, and similarly so for both verbal and physical aggression. This is congruent with theoretic expectations.

In summary, then, the results of this study generally demonstrate that boys from families of lower SES are more intensely verbally aggressive than boys from families of middle SES, as measured by the situation index used in this study. Also, some possible support was found for the contention that violence with consequences raises inhibitions towards both physical and verbal aggression for lower SES subjects.

Television Treatment - Socioeconomic Status (SES) Interactions

It was hypothesized that:

H_4: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are not shown will demonstrate more intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

H_5: There will be an interaction between television exposure and socioeconomic status, such that subjects who view violence in which consequences to the victim are shown will demonstrate less intense verbal aggression than subjects who view television in which no violence is shown, and this effect will be greater for subjects from families of middle socioeconomic status than subjects from families of lower socioeconomic status.

Both these hypotheses stem from research that indicates lower SES subjects are more exposed to and involved in violence and consequences of violence than middle SES subjects. As such, it was predicted that lower SES subjects would then be less affected by both the violence with and without consequences than would the middle SES subjects. Neither hypothesis was supported, however. Two significant interactions were found, but neither was in the predicted direction. The violence with consequences produced a significant interaction for the willingness to use physical aggression index. The means for these cells indicate that exposure to violence with consequences appeared to reduce physical aggression as compared to the nonviolent treatment for the lower SES subjects, as predicted. However, it seemed to increased willingness to use physical aggression for the middle SES subjects, which produced the interaction, and not in the predicted direction. Likewise a comparison

of violence with and without consequences described earlier in this chapter produced a similar interaction. This would indicate that consequences stimulated the physically aggressive behavior of the middle SES subjects. The verbal aggression situation means show a similar pattern in the violence with and without consequences comparison, though not significant. For the violence with consequences - nonviolence comparison, the middle SES subjects show a slight non-significant decrease in intensity of verbal aggression (13.04 to 12.97 for nonviolence and violence with consequences respectively, which is predicted, but much less so than the lower SES subjects' decrease (14.58 to 14.23, non-significant) which is not predicted.

Why the middle SES boys demonstrated an increase in physical aggression after viewing consequences as compared to after viewing violence without consequences is difficult to explain. Possibly there is a perception difference concerning consequences of violence for the middle and lower SES boys. Perhaps the middle SES subjects did not see the consequences as real as did the lower SES subjects. This coupled with the increased violence in the consequences version may have produced stimulating effects for the middle SES subjects, and more so than in the no consequences version.

In summary, the predicted interactions between television treatments and socioeconomic status were not supported. However, the pattern of means for the lower SES boys indicates again that the violence with consequences reduced physical aggression, thus possibly raising inhibitions, and the same tendency is present for the verbally aggressive behavior of the lower SES boys, though not significant. This

is possible support for the theoretic contention that verbal and physical aggression have similar inhibitions, at least for lower SES boys. However, the opposite effect was shown for the middle SES subjects for physical aggression, with inconsistent results shown for their verbally aggressive behavior. This does not support the theoretic contention. Nor does it support the hypothesis that lower SES boys would be less affected by exposure to consequences than middle SES boys.

***

To summarize, overall comparisons of exposure to television violence with and without consequences to each other and to nonviolent television exposure failed to show any differences in terms of either physical or verbal aggression of adolescent boys. Boys from families of lower socioeconomic status tended to demonstrate more intense verbal aggression than boys from families of middle socioeconomic status. Examining television treatment effects on only boys from families of lower socioeconomic status, and socioeconomic differences within the television treatments, there is evidence that indicates violence with consequences raises inhibitions of the lower SES boys towards verbal and physical aggression similarily. This provides some support to the theoretic contention that similar inhibitions control both verbal and physical aggression. It was not demonstrated that inhibitions of boys from families of lower socioeconomic status are less affected by violence with and without consequences than boys from families of middle socioeconomic status. Finally, of five indices developed to measure verbal

aggression, only one seemed to reliably tap this dimension - the verbal aggression situation index, which was composed of two closed-ended and one open-ended situation items.

Research Extensions

This research has raised questions which need further research efforts. First, a more valid measure of verbal aggression needs to be developed and tested, which is separate from measures of physical aggression. In conjunction with this, present paper and pencil indices of physical aggression should be revalidated in an attempt to determine the extent to which they measure verbal aggression. If in fact they do measure verbal aggression, new indices of physical aggression need to be developed which are valid and can be used along with measures of verbal aggression to determine differential effects of various types of stimuli.

Exactly what constitutes consequences of aggression, and how such consequences are perceived by adolescents needs to be determined. Consequences presented to subjects in the present study may not have been perceived as negative consequences to the same extent or in the same way by subjects from varied SES backgrounds.

Certain contextual elements of violent scenes need to be studied in terms of their effects on aggressive behavior. For example, the effects of justification in relationship to negative consequences of violence may produce differential effects on verbally aggressive and physically aggressive behavior. If the beating were delivered to a "bad guy" in this study instead of a "good guy", different effects might have resulted. What other types of contextual variables are important needs to be determined.

The relationship of physical and verbal aggression needs to be further examined. This study provided minimal support for the hypothesis that they have similar inhibitions. This study needs to be replicated with better measures and television stimuli which show consequences more in line with the perceptions of the subjects.

The effects of exposure to verbally aggressive television stimuli on both verbal and physical aggression of the viewer need to be determined. If in fact it is found from studies on the relationship between verbal and physical aggression that they have similar inhibitions, exposure to verbal aggression may increase the intensity of the viewer's physical aggression.

The effects of various experimental conditions on results of media studies need to be examined. Group viewing, viewing under highly controlled conditions, lack of alternatives in terms of what is viewed or post-viewing behaviors, viewing in schools, presence of researchers during viewing, etc., are all conditions that could confound treatment results, rendering them ineffective or invalid.

Finally, if future research demonstrates that viewing televised verbal and physical aggression does affect intensity of physical and verbal behaviors of the viewer, long term effects of such viewing must be determined. It may be that long term effects desensitize viewers to verbal and physical aggression, widening norms governing both types of behaviors in society as a whole.

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APPENDICES

APPENDIX I

ANALYSES OF VARIANCES

APPENDIX I

ANALYSES OF VARIANCES

Violence Without Consequences-Nonviolence (TV) X Socioeconomic Status (SES)

Verbal Aggression Situation Index

Source of Variance	SS	df	MS	F	P
TV	48.62	1	48.62	1.25	ns
SES	284.91	1	284.91	7.30	0.008
TVXSES	79.09	1	79.09	2.03	ns
ERROR	4178.40	107	39.05		
TOTAL	4563.03	110			

Willingness to Use Physical Aggression Index

Source of Variance	SS	df	MS	F	P
TV	12.35	1	12.35	1.02	ns
SES	201.87	1	207.87	16.60	0.0005
TVXSES	3.36	1	3.36	0.28	ns
ERROR	1301.07	107	12.16		
TOTAL	1510.11	110			

Verbal Aggression Situation Index

Source of Variance	SS	df	MS	F	P
TV	1.19	1	1.19	0.04	ns
SES	54.97	1	54.97	1.62	ns
TVXSES	0.55	1	0.55	0.02	ns
ERROR	3728.90	110	33.90		
TOTAL	3786.25	113			

APPENDIX I

ANALYSES OF VARIANCE

Willingness to Use Physical Aggression

Source of Variance	SS	df	MS	F	P
TV	1.57	1	1.57	0.10	ns
SES	18.64	1	18.64	1.24	ns
TVXSES	69.27	1	69.27	4.61	0.03
ERROR	1651.63	110	15.01		
TOTAL	1736.28	113			

APPENDIX II

INSTRUMENT

Here are some things other students have said. Think about how much you agree or disagree with each of these things. Then put an "X" on the line next to what you think.

"There is no good reason for ever hitting anyone."

What do you think?
(Choose one)

____ I agree very much
____ I agree a little
____ I'm not sure
____ I disagree a little
____ I disagree very much

"People who keep on bothering me are asking for a punch in the nose."

What do you think?
(Choose one)

____ I agree very much
____ I agree a little
____ I'm not sure
____ I disagree a little
____ I disagree very much

"Anybody who says bad things about me is looking for a fight."

What do you think?
(Choose one)

____ I agree very much
____ I agree a little
____ I'm not sure
____ I disagree a little
____ I disagree very much

"I think fighting is a waste of time."

What do you think?
(Choose one)

____ I agree very much
____ I agree a little
____ I'm not sure
____ I disagree a little
____ I disagree very much

HERE ARE SOME THINGS THAT HAVE HAPPENED TO OTHER STUDENTS. WE WOULD LIKE TO KNOW WHAT YOU WOULD SAY IF THESE THINGS HAPPENED TO YOU. PLEASE TELL US WHAT YOU WOULD HONESTLY SAY:

Imagine that you have been standing in the lunch line at the cafeteria for some time and a guy you don't like cuts into the line in front of you. What would you say to him?

(PRINT YOUR ANSWER BELOW)

Imagine that you have a friend who is not very tall. If another student called your friend a dirty name and made fun of his size, what would you say to this other student?

(PRINT YOUR ANSWER BELOW)

HERE ARE SOME THINGS THAT HAVE HAPPENED TO OTHER STUDENTS. BELOW EACH THING IS A LIST OF WHAT OTHER STUDENTS HAVE SAID IN THOSE SITUATIONS. CHOOSE THE ONE STATEMENT THAT IS MOST LIKE WHAT YOU WOULD SAY IF THAT THING HAPPENED TO YOU.

Imagine that a student you know tells your teacher that you cheated on a test. This student knows you did not cheat, so he lied. What would you say to this student? Choose the one statement that is most like what you would say and put an "X" on the line next to it.

_____ I would say nothing.

_____ I would say something, but not about what happened.

_____ I would tell him that was not a good thing to do.

_____ I would tell him he was a pretty dumb person for doing that.

_____ I would tell him he was a stupid idiot for doing that.

_____ I would tell him I hate stupid people who do things like that.

_____ I would tell him I hate him for doing a stupid thing like that and make sure he knew I was mad.

_____ I would call him the worst names I could think of and make sure he knew I was really mad.

_____ I would call him the worst names I could think of and tell him I would hit him if he ever did that again.

Imagine that a student you know takes your new pen and would not give it back when you asked for it. What would you say to this student? Choose the one statement that is most like what you would say and put an "X" on the line next to it.

_____ I would say nothing.

_____ I would say something, but not about what happened.

_____ I would tell him that was not a good thing to do.

_____ I would tell him he was a pretty dumb person for doing that.

_____ I would tell him he was a stupid idiot for doing that.

_____ I would tell him I hate stupid people who do things like that.

_____ I would tell him I hate him for doing a stupid thing like that and make sure he knew I was mad.

_____ I would call him the worst names I could think of and make sure he knew I was really mad.

_____ I would call him the worst names I could think of and tell him I would hit him if he ever did that again.

S T O P !

DO NOT GO TO NEXT SECTION UNTIL WE ARE ALL READY

On each of the following pages there is a word. Go through the pages as fast as you can and PRINT the first word you think of when you see the word.

FOR EXAMPLE:

If the word is CAT, and the first word you think of when you see the word is "DOG," then print "DOG" on the line under the word.

Like this:

CAT:

Dog

OR:

If the word is PAPER, and the first word you think of is "PEN," then print "PEN" on the line under the word.

Like this:

PAPER:

pen

REMEMBER: Print the first word you think of, no matter what it is, as soon as you see the word. Go as fast as you can. Do not go back to any words after you have completed them, or change any words after you write them down. This is not a test so there are no right or wrong answers.

KILLING: _____

BLUE:

_____

ANGER:

DISLIKE: _____

GOLD:

CRUEL:

_____

SLEEP:

_____

UNFRIENDLY:

_____

DISAGREE:

_____

HURT:

_____

VAM1:

HATE:

_____

S T O P !

DO NOT GO TO NEXT SECTION UNTIL WE ARE ALL READY

On each of the following pages there is a word. Below the word there are three questions which ask how you feel or what you think about the word. From the choices under each question, choose the one which best describes how you feel about the word and then place an "X" on the line beside it.

FOR EXAMPLE: If the word is BEAUTIFUL, the page will look like this:

BEAUTIFUL

How mean is this word?

(Choose one)

____ Very mean
_X_ Somewhat mean
____ A little mean
____ Unsure
____ A little kind
____ Somewhat kind
____ Very kind

How excited is this word?

(Choose one)

____ Very excited
____ Somewhat excited
____ A little excited
____ Unsure
_X_ A little calm
____ Somewhat calm
____ Very calm

How good is this word?

(Choose one)

_X_ Very good
____ Somewhat good
____ A little good
____ Unsure
____ A little bad
____ Somewhat bad
____ Very bad

If you feel the word BEAUTIFUL is "somewhat mean" you would place an "X" on the line beside "Somewhat mean" as shown above. If you feel it is "very kind", you would place an "X" on the line beside "Very kind".

Likewise, you would decide how "excited" and "good" the word BEAUTIFUL is, and place an "X" next to your choices. If you feel it is "A little calm" and "Very good", you would place an "X" by those choices as shown above.

REMEMBER: Answer every question, and choose only one answer for each question. Work as fast as you can, putting down what you first think of. After you have finished a question, do not go back to it. This is not a test, so there are no right or wrong answers.

GOLD

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

DISLIKE

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

ANGER

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

BLUE

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How exicted is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

KILLING

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

HATE

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little exicted
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

WARM

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

UNFRIENDLY

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

DISAGREE

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

HURT

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

SLEEP

How mean is this word?

(Choose one)

____Very mean
____Somewhat mean
____A little mean
____Unsure
____A little kind
____Somewhat kind
____Very kind

How excited is this word?

(Choose one)

____Very excited
____Somewhat excited
____A little excited
____Unsure
____A little calm
____Somewhat calm
____Very calm

How good is this word?

(Choose one)

____Very good
____Somewhat good
____A little good
____Unsure
____A little bad
____Somewhat bad
____Very bad

CRUEL

How mean is this word?

(Choose one)

___Very mean
___Somewhat mean
___A little mean
___Unsure
___A little kind
___Somewhat kind
___Very kind

How excited is this word?

(Choose one)

___Very excited
___Somewhat excited
___A little excited
___Unsure
___A little calm
___Somewhat calm
___Very calm

How good is this word?

(Choose one)

___Very good
___Somewhat good
___A little good
___Unsure
___A little bad
___Somewhat bad
___Very bad

STOP!

DO NOT GO TO NEXT SECTION UNTIL WE ARE ALL READY

HERE ARE SOME QUESTIONS ABOUT YOU:

1. What grade are you in?

____6th
____7th
____8th
____9th

2. Are you male or female?

____male
____female

3. What kind of jobs do your parents have? What sort of work do they do? (For example: "Sales clerk," "Runs a gas station," "Drives a truck," "Works on a farm," "Housewife," or "Waits on people in a clothing store.")

Mother: _____

_____

Father: _____

_____

THANK YOU VERY MUCH !!