

DOCUMENT RESUME

ED 151 808

CS 203 990

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TITLE Parental Mediation of Children's Social Behavior Learning from Television.
PUB DATE Aug 77
NOTE 29p.; Paper presented at the Annual Meeting of the Association for Education in Journalism (60th, Madison, Wisconsin, August 1977)

EDRS PRICE MF-\$0.83 HC-\$2.06 Plus Postage.
DESCRIPTORS Affection; Aggression; Altruism; Audiences; Behavioral Science Research; *Children; Elementary Education; *Emotional Response; *Parent Responsibility; *Social Behavior; *Television; *Television Viewing; Viewing Time; Violence

ABSTRACT

A study was conducted to explore the relationship between a child's exposure to television content portraying various levels of physical aggression, verbal aggression, altruism, and affection, and that child's enactment of these four types of behavior under different conditions of parent-child co-viewing and discussion of the television content. Seven hundred twenty-one children in grades four, six, and eight responded to a questionnaire listing 29 television programs appearing in one season and indicated the frequency of viewing for each program. In addition, an index of social behavior was constructed to rate each child on the four areas of behavior under consideration, and a random subsample of 293 mothers of these children participated in the study by viewing television with their children. Results of the study show that parental comments, in parent-child co-viewing of television, can shape the child's response to television messages by reducing the negative effects of physical and verbal aggression and increasing the effects of altruism and affection. (MAI)

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PARENTAL MEDIATION OF CHILDREN'S SOCIAL BEHAVIOR

LEARNING FROM TELEVISION

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Since the earliest years of television, social scientists have examined the impact of televised violence on physical aggression. Less attention has been devoted to other negative and positive effects of television on such social behaviors as verbal aggression and altruism. Few researchers have sought to isolate the environmental mediators of social learning, such as the role of family communication.

This investigation explores some of these issues by analyzing children's learning of pro-social and anti-social behaviors from television in the family context. Specifically, survey research procedures are used to assess the degree of relationship between (a) exposure to television content portraying various levels of physical aggression, verbal aggression, altruism, and affection, and (b) enactment of these four types of social behavior, under (c) different conditions of parent-child co-viewing and discussion of the television content. Differential responses within sex and age subgroups are also considered.

The existence of a relationship between TV violence exposure and physical aggression is well documented in the scientific literature (see reviews by Baker and Ball, 1969; Atkin, Murray and Nayman, 1971; and Comstock, 1975). Laboratory experiments demonstrate that young children imitate specific novel aggressive acts after observing televised models, and that aggression is stimulated through generalized arousal and disinhibited through suppression of internal moral restraints or concerns about unpleasant external consequences.

Although the laboratory research literature is extensive, presidents of the

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three television networks still argue that a definitive link has not been established in naturalistic settings (Pierce, 1977; Howard, 1977; Schneider, 1977). Thus, further empirical data from field surveys should be useful for policy purposes, although at least two major academic studies offer compelling correlational evidence (McLeod, Atkin and Chaffee, 1972; Lefkowitz, Eron, Walder and Huesmann, 1972). Of more scientific value are new findings describing the strength of relationship between exposure to TV violence and physically aggressive behavior.

The learning of verbal aggression through imitative or disinhibitory processes is less well documented, although there are indications that the Norman Lear genre portrayals of insults and hostility tend to produce similar forms of verbal aggressiveness (Wotring and Greenberg, 1973; McLeod, Atkin and Chaffee, 1972).

Numerous laboratory studies using contrived models have shown that children can learn pro-social behavior through observation (reviewed in Krebs, 1970; Bryan and London, 1970; Leibert, Neale and Davidson, 1973). Field experiments have also demonstrated that television contributes to pro-social actions such as cooperation (Leifer, Gordon and Graves, 1974), and helping (Friedrich and Stein, 1973). However, the evidence from survey research on pro-social learning is lacking. Since the networks have endeavored to increase the amount and quality of pro-social messages in programs viewed by young audiences, there are ample depictions that may be learned by children viewing in the home.

Many observers have suggested that television effects be examined in the context of the viewer's social environment, which may serve to facilitate, restrict, or counteract the lessons derived from TV. The most significant social influence in the life of the pre-adolescent is the family, particularly the mother. Acquisition of behavior patterns is influenced by family structural factors (size, marital status, social status), interaction between parent and child (communication, reinforcement, affection-punishment), and parental modeling

(display of pro-social and anti-social behavior). To these general variables can be added several factors specifically related to television: parental influence over the child's viewing (e.g., censorship of individual programs, encouragement to view other shows, or general viewing time limits), the child's understanding of TV content (e.g., parental cognitive comments about content), the child's acceptance of content (e.g., parental affective responses and commentary, especially expression of approval/disapproval and linkage of portrayal to child's life), and the child's enactment of modeled behaviors (e.g., parental reinforcement of learned responses after viewing).

This investigation focuses on interpretive comments made by parents to children pertinent to TV programming. The nature of social interaction during exposure can have a substantial facilitating or mitigating impact on the learning process. For instance, Bogatz and Ball (1972) reported that children learn intellectual skills more readily when their parents view and discuss content of educational programs with them. Atkin and Gantz (1975) discovered that parental explanation and amplification of newscast content increases acquisition of current events knowledge. Friederich and Stein (1975) found greater cognitive gains and enhanced behavioral performance under conditions of interpersonal training in role-playing and labeling of pro-social program content. McLeod, Atkin and Chaffee (1972) suggested that the harmful influence of television can be reduced when parents interpret violent acts as unrealistic or unacceptable. In an experiment, Hicks (1968) found that when adult co-viewers made approving statements about an aggressive depiction, imitative aggression was heightened; disapproving statements produced decreases in imitation.

The impact of parental mediation can be understood by reference to two dominant theoretical perspectives that guide research on children's response to television: Bandura's social learning theory, and Piaget's cognitive developmental theory. Physiological arousal theory also bears on this issue.

Most central is social learning theory, as formulated by Bandura (1971; 1973). He proposes that children's behavior will be affected by observation of the reward-cost contingencies associated with other people's behavior. Since direct reinforcement is not a necessary condition for learning, this approach has been attractive to researchers examining the effects of television models. Observation of models affects viewers in two ways: through acquisition of new behavioral tendencies, and through inducement to perform or not perform behaviors already in the viewer's repertoire. Key processes are attention, retention, and motivation; key functions are observational learning (transmission of information about ways of organizing component responses into new patterns of behavior), inhibition modification (strengthening or weakening of constraints that govern expression of normally prohibited acts), and response facilitation (modeling enhancement of sanctioned behavior through an external reminder, which elicits performance of existing response tendencies). Greatest impact occurs: (1) when models and acts are perceived to be realistic (since children want to base learning on accurate information about actual sequences of actions and consequences they might experience; (2) when the models are positively reinforced (since children want to imitate successful behavior to obtain similar rewards); (3) when the motives for portrayed aggression are perceived to be acceptable and justified (since children learn that internal moral inhibitions can be suspended when a justifiable reason is given), and (4) when attention and retention are stimulated (since children acquire and subsequently display behavior that is most closely attended and prominently represented in memory).

TV characters and plotlines provide somewhat ambiguous modeling stimuli for the young viewer, who may have difficulty understanding unclear motives, be unable to link acts and delayed consequences, or be unsure which behaviors should be enacted in real life. This is particularly the case for younger children who

are at a relatively unsophisticated stage of cognitive development; their capacity to comprehend and process complex and subtle sequences portrayed on television is limited by their level of cognitive structure, which progresses from concrete to abstract modes of understanding and from idiosyncratic to systematic representational ability. Thus, parental comments can shape children's responses to television messages in several respects:

(1) Perceived reality -- if parents tell children that the characters or events are realistic, acquisition and performance should be facilitated; if parents explain the unreal nature of the televised presentations, effects should be minimized.

(2) Consequences -- if parents say that depicted acts will eventually be positively reinforced or point out reward for a behavior, the impact should be maximized; comments linking behavior to negative consequences should either minimize learning or produce greater external inhibition.

(3) Motives -- if parents interpret the reasons for an action as principled or just, more learning should occur; statements indicating that motives are not justified should reduce the impact.

(4) Evaluation -- if parents express personal approval (or tacitly condone clearly unacceptable acts by not objecting) or disapproval of characters and actions, this should increase or decrease performance because it cues the child to modelable parental attitudes that the child may adopt and use as a guide to behavior.

(5) Acceptability -- if parents specifically encourage the child to enact certain behaviors or warn against modeling other acts portrayed on television, this should increase or decrease performance because it provides useful information about the probability of subsequently receiving positive or negative parental reinforcement. The parents directly point out whether televised depictions

are acceptable for the child's social behavior patterns.

In general, sheer volume parental commentary also serves to direct a child's attention to various aspects of a TV portrayal, facilitating acquisition and storage for later use.

All these factors involve overt communication between parent and child. Mere co-viewing may also have implications for the emotional responses of children, especially in terms of anti-social behavior. Research by Tannenbaum (1972) and Zillmann (1971) indicates that level of arousal and excitation during viewing relates to display of aggressive behavior immediately afterwards. If parents passively view exciting stimuli with the child, the emotional arousal should be dampened and anti-social behavioral enactment minimized, compared to viewing without parents.

The interpretive processes are expected to apply to both anti-social and pro-social learning from television. Since most parents seek to restrict children's anti-social behavior and encourage pro-social behavior, most commentary will be correspondingly oriented: they will point out that TV violence is not representative of real life, that aggressors will eventually be punished, and that violence should not be copied; or, that an incident of helping or sharing should be emulated. The general prediction is that parental oral mediation of anti-social content will reduce negative effects on physical aggression and verbal aggression and increase positive effects on altruism and affection. A secondary prediction posits that high levels of co-viewing will serve to suppress the anti-social arousal from TV, assuming most parents display limited excitation while viewing.

The mediatory influence of parents is expected to be greatest for younger children in primary grades. The main reason for this is the greater reliance of the less cognitively developed youngsters on interpersonal interpretation of the

ambiguous televised stimuli; in addition, younger children are more likely to believe and accept the messages of parents.

Of course, these predictions are predicated on the expectation that consumption of social behavior on television will increase expression of similar behavior by the child viewer. Four types of behavior are selected for analysis: physical aggression, verbal aggression, altruism, and affection. These terms will be briefly defined, and then content analysis evidence will be presented to show that each type is readily available on programs viewed by young persons.

Physical aggression refers to any overt behavior intended to frighten, injure, or damage another person, oneself, an animal, or property (i.e., burning, defacing, grabbing, shoving, hitting, assault, shooting, stabbing, and abridgements of privacy and security).

Verbal aggression involves expression of a noxious symbolic message, taking the form of rejection (criticism, insults, cursing), threat (warning of intention to harm), or hostility (yelling, screaming).

Altruism is a legal act (usually unselfish) which benefits another person in need, encompassing sharing (spontaneous gift or loan of one's own possession), helping (giving aid to move another toward their goal with instructions, physical assistance, and advice), and cooperating (working together with another to achieve interdependent goals).

Affection refers to the overt display or offer of positive emotions toward humans or animals, either a verbal expression (statement of love or warm sentiment) or physical actions (hugging, kissing, hand-holding).

Greenberg, Atkin, Edison and Korzenny (1977) used systematic procedures to analyze portrayal of these behaviors in the content of 92 programs (68.5 hours) on commercial television during the 1975-76 season. The shows included all regular prime-time and Saturday morning fictional series, including mid-season

replacements. They found a total of 915 acts of altruism and 528 displays of affection in this set of shows; there were also 991 physical aggression acts and 1629 instances of verbal aggression. The rate of acts was quite high for the subset of programs most frequently viewed by children: per hour, there were 14.4 acts of physical aggression, 18.2 acts of verbal aggression 13.1 acts of altruism and 6.4 acts of affection. Thus, a child with normal viewing patterns might see several hundred acts of aggression and altruism each week, and more than one hundred instances of affection.

METHOD

The survey investigation featured questionnaires administered to 721 children in the fourth, sixth, and eighth grades in Michigan and Wisconsin schools. This was supplemented by personal interviews with a random subsample of 293 mothers of these children in both locales. In some classrooms, observational ratings of respondents' behavior was obtained from peers and teachers. This analysis deals with the full-sample data from child questionnaires. The subsample mother, peer and teacher ratings are used only to validate the self-reported responses of the children for purposes of weighting in index construction. Later reports will examine the mother interviews in detail; it should be noted that the distribution of responses on facilitative mediation items is quite similar for the mother and child respondents, while mothers report higher levels on anti-social items worded to reflect mitigation of learning.

Children filled out questionnaires in classrooms during April, 1976. Fourth graders marked answers while questions and response categories were read aloud by research assistants; older children completed the instruments alone while assistants helped with specific problems. The opening section of the

questionnaire measured exposure to individual programs. This was followed by questions about social behavior patterns, measures of character identification and program involvement, items tapping parental control over viewing, and finally the questions dealing with co-viewing and talking about television. This analysis focuses on the exposure, behavior, and mediation variables:

Exposure. The survey instrument listed 29 programs that were being aired during the 1975-76 season; the 23 prime-time and 6 Saturday morning shows had been identified as most viewed by this age group in pre-tests. For each program on the list, respondents could mark a box representing frequency of viewing in four steps from "every week" to "never."

The content analysis (Greenberg, et al., 1977) provided data on the frequency and intensity of the four types of social behavior for each of the 29 programs measured in the questionnaire. For instance, the number of physically aggressive acts ranged from 0 to 56 per program across this set of shows.

To provide a more sensitive indicator of the amount of behavior, the content frequency measure was weighted by the intensity of acts, measured along a ratio scale using a value of 100 as average intensity. For instance, the weighted physical aggression content score ranged from 0 to 24624.

The child's level of viewing frequency was then multiplied by the physical aggression content score for each program, and the products were summed across the 29 programs. The index of exposure was computed with this formula:

$$\text{Exposure} = \sum_{1}^{29} (\text{child viewing frequency}) \times (\text{act frequency} \times \text{mean act intensity})$$

This produces a very precise indicator of the total amount of televised social behavior content typically consumed by each viewer. The same procedure was employed to compute exposure indices for physical and verbal aggression, altruism, and affection.

Behavior. Four indices of social behavior were constructed to correspond to the exposure indices. Behavior indices are based on the responses of children to three different types of questionnaire items: reports of recent behavior (i.e., "In the last week, how many times did you push or shove someone?"), general behavior patterns under specified circumstances (i.e., "When someone hits you first, how often do you fight back?"), and hypothetical response tendencies (i.e., "What if someone cut in front of you in a long line. What would you do -- would you push them out?"). The first type of question was designed to tap concrete behavior over a time span fresh in the child's memory; respondents reported the estimated number of instances ranging from 0 to 7 or more. The second type was intended to yield a more representative report of reactions to standardized situations; given that the contingency occurred, the respondents reported how often ("almost always," "usually," "sometimes," and "never") they generally behaved in the pro- or anti-social manner described in the question. The third measurement approach sought to tap behavioral dispositions by asking how the child expected to act under specific circumstances outlined in a hypothetical vignette (either "yes," "maybe," or "no" to each proposed response).

Nine items were summed for the physical aggression index; the weightings of the items were determined by the strength of association with the outside criterion measures from mothers, peers, and teachers. The verbal aggression index combined eight weighted items, the altruism index consisted of 11 items, and the affection index summed six items. Here are examples of items included in the final three indices:

"Suppose one of your favorite relatives comes to town to visit your family. What would you do when you see her? Would you give her a hug?" (affection)
 "Would you help her take off her coat?" (altruism)

"What if a friend is feeling bad because they keep making stupid mistakes while trying to play a new game. Would you say a mean thing to them?" (verbal aggression)
 "Would you help them to learn the rules?" (altruism)

"In the last week, how many times did you yell or scream at someone?" (verbal aggression)

"In the last week, how many times did you tell someone that you like them?" (affection)

"If someone asks to borrow something of yours, how often do you say yes?" (altruism)

Mediation. Three separate indices were created to measure mediation of physical aggression, verbal aggression and generalized pro-social learning. There are 12 items which represent the various dimensions of physical aggression commentary (see Table 3). The first six items are worded in a direction that theoretically serves to mitigate aggression learning, while the other six are reverse-worded to avoid response set and social acceptability biases. Responses are scored from low to high according to mitigating potential and summed into the index.

An abbreviated five-item index represents evaluative comments regarding verbal aggression. Three items deal with approval and two relate to acceptability of the behavior; one item of each kind is reverse-worded (Table 4). High scores are assigned to item responses that should serve to mitigate verbal aggression.

The pro-social index applies to both altruism and affection learning. The three approval items and two acceptability items are scored from low to high according to manifest likelihood of facilitating acquisition and performance of observed pro-social behavior. Unlike the two aggression mediation indices, parental commentary should maximize rather than minimize learning.

General measures were obtained for joint parent-child viewing of crime dramas and insult comedies. The questions asked, "how much do you watch police-detective programs (like Police Woman, S.W.A.T., or Rockford Files) with your parents?" and "how often do you watch comedy programs that have lots of yelling

and arguments (like Happy Days, Jeffersons, and All in the Family) with your parents?" Response categories are "almost always", "usually", "sometimes", and "almost never."

In addition, the other key variables are school grade and sex of the child. These are used as predictor, control, and contingent variables in the analyses.

RESULTS

The analyses begin with zero-order correlations between corresponding measures of exposure and behavior, along with age and sex correlates for each viewing and behavior variable. Then partial correlations controlling age and sex are computed between exposure and behavior, followed by contingent interactions for the different sexes and age groupings. Finally, parental mediation correlations and interactions are considered. Due to the large number of respondents, full-sample correlations as low as $\pm .08$ are significant beyond the .05 level.

Table 1 shows that the raw association between the physical aggression exposure index and the physical aggression behavior index is $+.26$. The other three correlations are weaker: $+.09$ for the verbal aggression exposure-behavior relationship and $+.13$ for both altruism and affection.

Table 2 displays the correlations of each of these indices with both age and sex. Generally, younger children are more exposed to each type of content on television and act more pro-socially, while older children more often display anti-social behaviors. Boys tend to be much more exposed to physical aggression and behave far more aggressively than girls; to a weaker degree, these same findings occur for verbal aggression exposure and behavior. Girls report more pro-social behavior than boys, but viewing patterns are mixed.

Since these basic demographic factors are related to both exposure and

behavior, partial correlations were computed to control for the influence of age and sex. Table 1 indicates that the physical aggression relationship drops considerably to $+0.16$, primarily because boys both watch more violence and behave more aggressively. The affection association also drops somewhat, since girls and younger children score higher on both exposure and behavior. On the other hand, the demographic factors suppress the verbal aggression and altruism correlations, and the partial correlations rise slightly.

Age and sex are also examined as contingent variables that interact with the exposure-behavior relationship. In Table 1, it can be seen that the strength of association generally increases with age; averaging across the four social behaviors, the correlation is $+0.14$ for the 4th graders and $+0.21$ for 8th graders. There is a tendency for stronger relationships between television exposure and the anti-social variables to occur among boys, while there are stronger correlations between exposure and pro-social behaviors among girls.

The central analyses involve parental mediation of social learning from television. Tables 3, 4, and 5 present each of the commentary items and report the percentage of children who say their parents make each statement. For physical aggression mediation (Table 3), it can be seen that mitigating comments are made much more than those that would be facilitative; commentary related to reality and acceptability occur more often than those pertaining to motives, consequences and approval. The age differences indicate that younger children are given somewhat more interpretation than older children. Similar patterns appear for the abbreviated sets of verbal aggression (Table 4) and pro-social mediation items (Table 5).

Mediation variables can be examined in terms of both main effects and interactions. First, it is useful to determine whether amount of exposure to each type of content is related to amount of interpretative comments from parents,

controlling for age and sex. For each aggression exposure index, there is little association with the corresponding mediation index (Table 2). Parents are no more likely to offer cognitive and affective commentary to children who heavily view shows featuring high physical and verbal aggression than to less exposed children. There is a modest tendency for more pro-social messages to be expressed by parents of highly exposed children.

The pattern of relationships between parental mediation and child behavior indices are consistently in the expected direction. Table 2 shows that parents who make comments oriented toward minimizing the impact of anti-social programming have children who behave less aggressively; the partial correlation is $-.23$ for physical aggression and $-.19$ for verbal aggression. Conversely, the comments oriented toward maximizing the impact of pro-social programming are positively related to children's altruism ($+.29$) and affection ($+.30$).

A more valid test of the role of parental mediation involves comparison of the strength of the exposure-behavior associations under high and low levels of mediation. Each mediation index was partitioned at the median, and partial correlations between exposure and behavior were computed within each subgroup. Table 6 first displays the findings for physical aggression. In homes where the parents attempt to mitigate the harmful impact of TV violence, the relationship is actually somewhat stronger than in homes where such interpretation is less prevalent. The interactions occur as predicted for the other three social behaviors. High mediation of verbal aggression portrayals yields a weaker association than low mediation. High mediation oriented toward facilitating learning of altruism and affection results in stronger relationships between exposure and behavior, compared to low mediation.

Table 6 also presents the three-way interactions by adding age as a variable. For all four sets of comparisons, the correlations indicate the greatest

degree of successful mediation occurred for 4th grade students. Associations are weaker for high anti-social mediation and stronger for high pro-social mediation. Where a weaker association is expected (high anti-social and low pro-social mediation) the average correlation across the four behaviors is $+0.06$; on the other hand, the average correlation is $+0.17$ where stronger relationships are anticipated. There is no difference in strength of average correlation across the four behaviors for 6th graders ($+0.09$ vs. $+0.09$) and a modest difference for 8th graders ($+0.09$ for predicted weaker associations and $+0.15$ for predicted stronger associations).

Another set of interaction findings is available for the two anti-social relationships. For programs high in physical aggression and those featuring high verbal aggression, children were asked how often their parents co-viewed with them. Table 7 shows that under conditions of frequent co-viewing, the exposure-behavior association is lower in each case: $+0.10$ partial correlation for physical aggression and $+0.03$ for verbal aggression, compared with respective partials of $+0.22$ and $+0.19$ where co-viewing is infrequent. Thus, sheer co-viewing functions as a mediator of social learning of both physical and verbal aggression from television by lessening the effects on behavior.

Table 7 also presents data describing the four-way interactions among exposure, behavior, co-viewing, and interpretive mediation. For physical aggression, the highest correlation occurs under conditions of frequent comments and infrequent joint viewing. High mediation yields a much smaller relationship when combined with frequent co-viewing. Even infrequent attempts at interpretation are more likely to minimize learning when co-viewing is high.

The pattern of findings for verbal aggression indicates that co-viewing in conjunction with high interpretive mediation produces a null relationship. If joint exposure is infrequent, the amount of mitigating commentary makes little difference.

DISCUSSION

The relationships between TV content exposure and corresponding behavior patterns are consistently positive although modest in strength. This result has not been previously demonstrated across a broad range of social behaviors in a field setting. The findings indicate that "social learning" principles apply to learning of verbal aggression and pro-social behaviors as well as physical aggression. The extension beyond the narrow violence issue may serve to widen the policy-making focus to other negative and positive implications of television for young viewers.

The question of causal direction in the exposure-behavior associations is not definitively answered by these data. The most tenable inference is that viewing causes behavior, but it is possible that selective exposure processes may also explain the relationship; children might be systematically seeking TV portrayals of social acts that are similar to their own patterns of behavior. Prior studies, such as Lefkowitz et al. (1972), suggest that the viewing-to-behavior sequence is predominant. Causality will be more adequately tested in time-order analyses that will be conducted after the second-wave questionnaires are administered to this sample.

The two sets of demographic findings are of interest. It appears that older children in the 8th grade learn more anti-social behavior per unit of exposure, since the correlations are stronger than for younger children. This may be partially explained by their more fully developed capacity for cognitively processing the televised stimuli since they have entered the formal operational stage of sophistication. In another sense, the findings run counter to the notion that more firmly established aggressive behavior patterns become less susceptible to outside influences as children become older.

Younger children learn the most from pro-social exposure. This contrasting evidence regarding social learning in different age groups may result from a tendency for TV to disinhibit older viewers while serving as a source of imitation and recall for younger viewers. If inhibitions against aggressing don't become salient until early adolescence, then anti-social portrayals on TV may have the greatest impact for this age group. Positive behaviors on TV may be more novel for the younger group, and facilitative reminders may be more necessary at this age level.

The results also suggest that girls are more affected by pro-social content and boys are more influenced by anti-social programming. This sex difference in response may be explained by predispositions from prior socialization. To the extent that girls are conditioned by parents and peers to be helpful and affectionate, then pro-social content is reinforcing and therefore more sizable in impact. Similarly, boys' sex-based tendencies toward aggression are subject to reinforcement while pro-social inputs may be resisted. Furthermore, each sex will acquire and store those televised behaviors that are anticipated to be useful in everyday life; if boys perceive fighting and girls perceive helping to be sexually appropriate, then these acts will be more readily learned.

The central emphasis in this study is on the parental role in the social learning process. Parental commentary is widespread, as most parents give several different kinds of interpretation at least occasionally. Parents most often talk about television with elementary school children, but there is still considerable discussion as late as the eighth grade. The effects appear to be quite tidy in the cases of verbal aggression and pro-social mediation: if parents try to mitigate learning of shouting and abusiveness and seek to facilitate learning of helping and hugging, it appears to be successful. First, the more parents make the appropriate statements, the more the child tends to behave accordingly in direct response.

Since the comments are supposed to intervene between the TV stimulus and the consequent behavior, the better test is the comparison of learning rates in families with high vs. low interpretive mediation. This type of evidence is also supportive, since children who hear parental disapproval and warnings about the unacceptability of verbal aggression seem to be uninfluenced by TV, while viewing is related to verbal aggressiveness for the other children. Moreover, if parents approve and recommend the altruistic and affectionate activities on TV, there is a stronger exposure-behavior relationship than if such commentary is infrequent.

The results for physical aggression are mixed. The amount of mitigating interpretation is negatively related to aggressive behavior, but the contingent relationship does not interact as predicted. The correlation between viewing and behaving is somewhat lower when fewer mitigating comments are made than under high interpretation. This finding occurs for each of the 12 items in the index, so poor measurement or inappropriate index construction are unlikely explanations. A closer examination of age and co-viewing interactions may help clarify the anomaly. For fourth graders, the expected findings are obtained, as there is a low exposure-behavior correlation under high mediation. The reverse pattern occurs for older children. Perhaps by early adolescence they have heard so many parental comments about TV violence that the mitigating potential has been exhausted. Such "lecturing" may be resented or rejected. This may especially be the case where the comments are delivered outside the viewing context. Where mediation comments are frequent but co-viewing is infrequent, the greatest anti-social learning occurs; when the interpretation is accompanied by joint viewing, this negative effect is weaker. Perhaps the commentary in the latter situation is perceived to be more natural and spontaneous and sincere, compared to gratuitous inoculation from a parent too busy to sit down and watch with the child;

physical co-viewing may enhance the credibility of the parents' symbolic mediation. Indeed, the amount of joint parent-child exposure is a much more significant factor than amount of discussion. If the parent is co-viewing frequently, even low levels of commentary appear to minimize adverse TV effects. One reason for the success of co-viewing may be the dampening of children's emotional and physiological arousal. Even though older children may ignore verbal preachings, their level of excitation may be diminished when parents join them for viewing action programs. Since level of parental arousal was not measured in this questionnaire, such observations remain speculative until the next wave of data are collected. While most parents probably diminish their child's arousal, some others who themselves display high affective involvement may stimulate excitation - transfer to the child.

There are other possible factors that explain the suppressing role of co-viewing on learning of verbal as well as physical aggression. Perhaps children watching with their parents maintain a higher attention to those duller aspects of the televised portrayal that serve to diminish acquisition and performance of anti-social behavior (i.e., motives and consequences) rather than focusing primarily on the violent action. Children might be more likely to critically evaluate the televised behaviors, mindful of their parents' unspoken expectations for their own behavior. They may also tend to regulate their own response or be more cognizant of the inhibitions they have already learned, when watching in the presence of such authority figures.

Evidence of differential response to mediation by age group was already cited in the case of physical aggression learning. It is noteworthy that the same finding applies to the other types of social behavior learning, as mediation is consistently most effective for fourth graders. These younger children may

be more responsive to parental interpretation because of a heightened need for guidance in understanding and applying TV content to their lives.

One cautionary note should be offered in discussing these parental mediation data. Talking to children about television and watching with them may be symptomatic of a more basic style of child-rearing that also includes patterns of affection, punishment, and example which serve to minimize expression of anti-social behavior and maximize pro-social actions. In second-wave research, these other parental practices will be measured and controlled. The role of parental tactics regarding prohibition and encouragement of actual exposure by the child will be examined in subsequent analyses. /

Concerning the practical implications of these findings, what tentative recommendations can be made to parents? To diminish the anti-social impact of TV, it is suggested that parents watch programs conjointly with the child and that parents overtly attempt to cognitively and affectively interpret the depictions for elementary age children. Learning of altruism and affection from TV can be augmented if parents watch pro-social programming with their child and reinforce the positive behaviors that are portrayed.

TABLE 1
Exposure-Behavior Correlations for Four Social Behaviors

	<u>Physical Aggression</u>	<u>Verbal Aggression</u>	<u>Altruism</u>	<u>Affection</u>
Zero-order r (exposure x behavior)	+ .26	+ .09	+ .13	+ .13
Partial r (controlling age and sex)	+ .16	+ .12	+ .15	+ .08
Contingent r				
Boys	+ .16	+ .10	+ .13	+ .09
Girls	+ .09	+ .05	+ .19	+ .11
4th grade	+ .24	+ .07	+ .19	+ .08
6th grade	+ .29	+ .11	+ .05	+ .12
8th grade	+ .36	+ .23	+ .11	+ .14

TABLE 2
Predictors of Social Behavior Exposure and Social Behavior

	Predictor variable:		
	<u>Age</u>	<u>Sex¹</u>	<u>Mediation²</u>
Physical aggression exposure	-.16	-.32	-.06
Verbal aggression exposure	-.14	-.11	+ .01
Physical aggression behavior	+ .15	-.48	-.23
Verbal aggression behavior	-.28	-.18	-.19
Altruism exposure	-.20	-.09	+ .16
Affection exposure	-.08	+ .14	+ .12
Altruism behavior	-.03	+ .26	+ .29
Affection behavior	-.25	+ .25	+ .30

¹Boys were scored as 1, girls as 2.

²The specific mediation predictor corresponds to the anti-social or pro-social variable used as criterion; coefficients are second-order partial correlations controlling age and sex.

TABLE 3

Parental Interpretation of Physical Aggression Television Content,
By Grade Level

Interpretation item ¹	Mean Score	Percent OFTEN/SOMETIMES		
	Overall	4th	5th	8th
Reminded you that people in these shows are just actors and are not really getting hurt	2.05	81%	73%	66%
Explained that fighting isn't the best way to solve problems in real life	1.99	76%	68%	62%
Told you these stories are make believe	1.95	78%	76%	60%
Said you shouldn't copy the bad things that people do on TV	1.89	66%	61%	49%
Explained that the bad guy will get punished in the end	1.73	57%	56%	50%
Said that people on TV shouldn't hit and shoot each other like that	1.49	43%	39%	28%
Told you that things are like this in real life	1.44	44%	38%	32%
Explained that tough guys always get what they want on these shows	1.36	31%	33%	22%
Said that TV heroes have good reasons for hurting other people	1.33	36%	30%	16%
Said that the bad guys really deserve to get beat up	1.32	30%	27%	22%
Said they like the way the TV stars act so mean	1.21	20%	19%	11%
Told you that it's OK for the hero to beat up people	1.20	20%	16%	10%
AVERAGE ACROSS TWELVE ITEMS	1.58	49%	45%	36%

¹Children were provided with instructions stating, "Here are some things your parents might have told you about police-detective programs when you were a little younger. How many times have they said these things?" For each item, respondents could mark OFTEN (scored 3), SOMETIMES (2), or NEVER (1).

TABLE 4

Parental Interpretation of Verbal Aggression Television Content,
By Grade Level

Interpretation Item ¹ :	Mean Score	Percent OFTEN/SOMETIMES		
	<u>Overall</u>	<u>4th</u>	<u>6th</u>	<u>8th</u>
Explained that loud arguing isn't the best way to solve problems in real life	1.83	68%	62%	42%
Said you shouldn't say the bad things people say in these programs	1.75	71%	52%	31%
Said that people on TV shouldn't yell and shout at each other like that	1.41	41%	34%	24%
Told you that it's OK for the TV star to say mean things to people	1.31	35%	25%	14%
Said they like the way the TV stars put down each other	1.30	29%	25%	17%
AVERAGE ACROSS FIVE ITEMS	1.52	49%	40%	26%

¹Children were provided with instructions stating, "Here are some things that your parents might have told you about these kinds of comedy programs (referring to programs that have lots of yelling and arguments, like Happy Days, Jeffersons, All in the Family). How many times have they said these things?" For each item, respondents could mark OFTEN (scored 3), SOMETIMES (2), or NEVER (1).

TABLE 5

Parental Interpretation of Pro-Social Television Content, By Grade Level

Interpretation Item ¹ :	Mean Score	Percent OFTEN/SOMETIMES		
	<u>Overall</u>	<u>4th</u>	<u>6th</u>	<u>8th</u>
Explained that talking about things is the best way to solve problems in real life	1.93	76%	70%	54%
Said you should help others like they do on these TV shows	1.75	66%	59%	46%
Told you that it's really nice the way people help each other on TV	1.73	68%	55%	43%
Said you should do the good things that people do on these shows	1.69	68%	58%	39%
Said they like the way TV stars help and share with each other	1.61	53%	53%	38%
AVERAGE ACROSS FIVE ITEMS	1.74	66%	59%	44%

¹Children were provided with instructions stating, "Some programs are put on TV for the whole family to watch (like The Waltons, Little House on the Prairie, and Rhoda). When these programs show people doing good things to each other, how many times have your parents said these things to you?" For each item, respondents could mark OFTEN (scored 3), SOMETIMES (2), or NEVER (1)

TABLE 6

Interactions Between Parental Mediation Age and Children's Learning¹

Physical aggression Exposure x behavior:	High mediation (N=362)	Low mediation (N=359)
4th grade	+ .08	+ .19
6th grade	+ .22	+ .05
8th grade	+ .20	+ .13
Overall	+ .18	+ .11
Verbal aggression Exposure x behavior:	High mediation (N=355)	Low mediation (N=366)
4th grade	+ .04	+ .15
6th grade	+ .11	+ .10
8th grade	- .04	+ .30
Overall	+ .06	+ .18
Pro-social behavior Altruism exposure x behavior:	High mediation (N=342)	Low mediation (N=379)
4th grade	+ .22	+ .14
6th grade	+ .11	+ .00
8th grade	+ .10	+ .15
Overall	+ .16	+ .10
Affection exposure x behavior:		
4th grade	+ .10	- .05
6th grade	+ .09	+ .04
8th grade	+ .17	+ .03
Overall	+ .13	+ .01

¹ All coefficients represent partial correlations between corresponding indices of content exposure and behavior, controlling sex (and grade in the overall correlations).

² High Mediation means frequent mitigating commentary for the two aggression behaviors, and frequent facilitating messages in the cases of altruism and affection.

TABLE 7

Contingent Exposure-Behavior Partial Correlations,
Under Conditions of Parental Co-viewing and Interpretive Mediation¹

Physical aggression Exposure x behavior:	Co-viewing frequency:	
	<u>Always/Usually</u> (N=341)	<u>Sometimes/Never</u> (N=346)
High mediation	+ .10	+ .26
Low mediation	+ .07	+ .15
Overall	+ .11	+ .22

Verbal aggression Exposure x behavior:	Co-viewing frequency:	
	<u>Always/Usually</u> (N=400)	<u>Sometimes/Never</u> (N=289)
High mediation	- .04	+ .18
Low mediation	+ .10	+ .20
Overall	+ .03	+ .19

¹ Coefficients are partial correlations between corresponding indices of content exposure and behavior, controlling sex and grade. Frequency of co-viewing is measured separately for crime-adventure dramas and for insult-argument comedies.

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