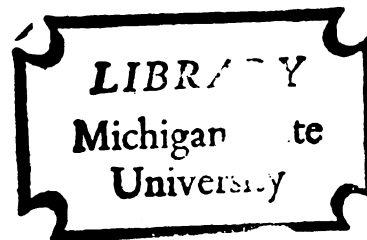




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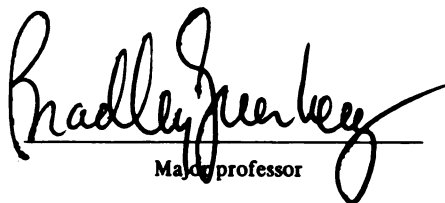
STYLES OF PARENT-CHILD INTERACTION AS A MEDIATING
FACTOR IN CHILDREN'S LEARNING FROM
ANTISOCIAL TELEVISION PORTRAYALS

presented by

Felipe Korzenny

has been accepted towards fulfillment
of the requirements for

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By

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ABSTRACT

STYLES OF PARENT-CHILD INTERACTION AS A MEDIATING FACTOR IN CHILDREN'S LEARNING FROM ANTISOCIAL TELEVISION PORTRAYALS

By

Felipe Korzenny

The present study dealt with the role of different modes of parent-child interaction as mediators of children's modeling of antisocial television portrayals, i.e., physical and verbal aggression, theft, and deceit.

More specifically, two main orientations of parent-child interactions with regard to social situations have been identified, namely, an internal and an external orientation. The main difference between the two types of orientations is that internally oriented parents are said to provide children with the necessary cognitive structure for evaluating their social behaviors. Externally oriented parents do not provide cognitive resources upon which the child can rely when social decisions have to be made.

Six hypotheses were tested in this study. Three hypotheses dealt with the main effects expected from the internal and external orientations of parents and children and exposure to antisocial television portrayals. The fourth hypothesis predicted the relative magnitude of antisocial predispositions in children for different subsamples defined by the internal and external orientations and antisocial television exposure. The last two hypotheses were concerned with the contingent relationships between exposure to antisocial television exposure

and the child's antisocial predispositions at different intersections of the internal and external orientations of parents and children.

Two hundred and twenty-seven mothers and their children in the fifth, seventh and ninth grades were tested.

The results of this study were as follows:

1. Exposure to antisocial television portrayals had a significant direct independent effect on the children's antisocial predispositions, as reported by both mothers and children.
2. The external orientation of parents had a significant direct independent effect on physical and verbal aggression and deceit, based on the mothers' report of the child's behavior. However, with the children's data the external orientation of children had a negligible effect on the children's antisocial predispositions.
3. The children's internal orientation was found to be the most powerful negative predictor of antisocial predispositions. The mothers' data, on the other hand, did not show an appreciable relationship between the parental internal orientation and the children's negative predispositions.
4. With both sets of data, from parents and children, it was consistently found that highly internally oriented children, who watch small amounts of antisocial television, and whose parents and themselves are low in their external orientation displayed the least amount of antisocial

predispositions. Also, the children highest in antisocial predispositions were those lowest in the internal orientation and high in antisocial television exposure and the external orientation.

5. Those highly internally oriented parents who were low in their external orientation had children for whom the correlation between exposure to antisocial behaviors on television and their display of antisocial predispositions was the lowest when compared with all the children and with other subsamples. The children who showed the highest correlation between exposure and predispositions were those whose parents were highly externally oriented and low in their internal orientation. With the children's orientations the pattern of findings was the opposite to the hypothesized expectations. Few of these contingent correlation comparisons were found to be statistically significant.

One of the main conclusions of this study was that television remains a contributing source of socialization independently of parental practices and the children's internalization of moral values. The results were discussed taking in consideration the research literature dealing with the internalization of moral standards in children.

To Sandy, for the third time.

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Dr. Stephen L. Yelon introduced me to the area of moral development and took me by the hand in understanding critical issues regarding the role of parental practices on children's behavior.

Dr. Charles K. Atkin was always helpful in encouraging me to be flexible regarding analytic methods and in the consideration of alternatives.

All four, Drs. Greenberg, Farace, Yelon and Atkin, besides being members of my doctoral committee are good friends that I hope to preserve.

Several other members of the faculty in the Department of Communication gave me assistance in understanding issues related to the present dissertation. Dr. Edward L. Fink was one of the most notorious.

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Ruth Langenbacher efficiently typed the manuscript.

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CHAPTER I

STYLES OF PARENT-CHILD INTERACTION AS A MEDIATING FACTOR IN CHILDREN'S LEARNING FROM ANTISOCIAL TELEVISION PORTRAYALS

INTRODUCTION

During the past decade, a great deal of concern has been expressed by public and private sectors of society with regard to the effects that negative television content may have on children. A large amount of research has been generated by this concern and the results point to a positive association between the child's exposure to undesirable television content and antisocial attitudes and behavior on the part of the child (The Surgeon General's Advisory Committee on Television and Social Behavior, 1972). However, few researchers have focused their attention on the role of other socialization agencies in mediating television's effects (Chaffee, 1976).

Parents constitute the first source of socialization to which children are exposed. This primacy factor makes parental practices a central point of inquiry when one raises questions about the social behavior of children. The main point of the present investigation is to see if contrasting parental styles of discipline and interaction substantially mediate the relationship between watching antisocial portrayals on television and the child's own negative social behaviors.

Some recent research has been concerned with different activities parents carry out with regard to television exposure by their children. This research can be categorized into two tendencies: parental control of television exposure, and parental interpretation of television content. The innovative contribution of this dissertation is the exploration of the role of parent-child interaction modes on the relationship between exposure to antisocial portrayals on television and the children's antisocial predispositions.

In this first chapter, the research on parental control and interpretation of television will be summarized as the most immediate antecedent for this line of inquiry. Next, the role of parent-child interactions with regard to social situations in general,* as mediators of television modeling of antisocial behaviors will be explored. Here, also, the relevant literature on family interaction will be reviewed. Lastly, the derived empirical hypotheses that constitute the nucleus of this dissertation will be presented.

Parental Controls over Viewing

Hanneman et al. (1976) indicate that "research on control of children's television behavior by parents indicates that parents generally do not control their children's TV behavior: (p. 13). Atkin (1972) reported data that suggest "that the parents are not always aware of the television fare

*Without reference to the TV viewing situation.

that their children are exposing themselves to" (p. 1).

Atkin also mentions that parental censorship, when it occurs, tends to be with regard to sex content rather than violence.

Sears et al. (1957) found that some mothers use television as a soporific to keep their children "quiet and out of mischief" (p. 289). They found that 58% of the mothers of kindergartners interviewed reported from moderate to severe restrictions on watching: "Children may look only during specific times, or at specific programs" (p. 291).

Barcus (1969) reported that formal rules were stated about what the child should not watch, with or without power exertion, once the infant had started exposure to undesirable shows. Formal rules use was the most widespread type of control. Greenberg, Ericson and Vlahos (1972) interviewed 100 fourth and fifth graders and their mothers.

Four items concerned parental regulation of the child's viewing habits. One item asked if there were any rules about how late the child could watch television. Another asked if there were some shows the child was not allowed to watch. Two items dealt with the loss of viewing privileges as punishment and extended viewing privileges as reward for something special the child did (p. 398).

They found that the agreement between the mother and her child was low ($r=.19$) with respect to the perceived nature of television rules in the household. However they found that "all of the parents and 90 percent of the youngsters said there were rules about how late television could be watched; two-thirds of each group said there were some

forbidden shows; one-third said there was punishment in the form of not being allowed to watch television; one-third of the children and one-fifth of the parents said more television watching was used as a reward for good behavior" (p. 403).

Lyle and Hoffman (1972) in a study with first, sixth and tenth graders found that "although the majority of the first grade mothers interviewed stated that they did try to guide program selection for their young children, few indicated that they attempted to restrict amount of viewing. About one-third of the students themselves said that their parents tried to control their viewing, either 'now' or 'when they were younger'" (p. 134).

In the studies reviewed here one finds that parental control of their children's television exposure is not very widespread. This may be due to the pervasiveness of the medium. Television has taken roots in the family setting.

Parental Interpretation of Television Content

In a large summarizing effort with regard to instructional television, Chu and Schramm (1967) documented that discussion of television content promotes learning. Ball and Bogatz (1972), in their evaluation of the effects of Sesame Street, found that children who rehearsed the concepts they watched on Sesame Street with their mothers, learned more than children who watched by themselves.

Atkin and Gantz (1974) discovered that parental explanation and amplification of news program content tends to increase the child's acquisition of current events knowledge. McLeod, Atkin and Chaffee (1972) found that parents can mitigate some of the harmful influences of television violence by interpreting the violent acts as they are portrayed. Tolley (1973) found some evidence that parental communication, regarding TV news reports, leads to a greater adoption of parental attitudes about issues such as war.

Hicks (1968) in an experiment with seven year-old children found that positive and negative sanctions by an adult co-viewer produced corresponding increases and decreases in imitative aggressive behavior when the adult co-viewer remained with the children who had viewed a film of aggressive behavior. These effects disappeared when the co-viewer did not remain with the children in the observation period. Feshbach (1972) found that adult labeling of a violent act as fantasy or reality tended to decrease or increase, respectively, the level of aggression displayed by his young subjects. These adults were not the children's parents.

Walling (1976) conducted an experiment with first graders. He assigned them to three groups at random: Interaction with parents, no interaction, and a control group. After one week, the children were interviewed in order to assess their learning of problem resolution techniques from three television shows. He found that "children who

interacted with their parents were significantly better able to complete problems which paralleled those" (pp. 21-22) they had viewed on television than children who did not interact with parents during viewing and children who did not watch television at all.

More recently, Atkin and Greenberg (1977) have reported that "the most important factor is joint viewing: the relationship between exposure and aggression is half as strong for children who frequently view police-detective shows with their parents than for children who seldom view with parents" (p. 4).

In general, it seems to be that those parents who take the time and exert the effort to explain television content, "and teaching children discernment and discrimination in regard to television" (Leifer et al. 1974) may effectively inoculate them against possible negative influences. This may generalize to those occasions in which the child watches alone or with peers.

When one considers parental interpretation, it seems that parent-child interaction with regard to television offerings has the potential for modifying the medium's impact. In a related vein, it is to be expected that parent-child interactions in everyday situations, without regard to television, but with regard to the social behaviors of the child, may constitute important determinants of what the child acquires from television portrayals, given the cognitive structure provided by parental tuition.

Parent-Child Interaction Modes with Regard to Social Situations

Now the research on parent-child interaction modes will be considered. In the past this has not been related to what the child acquires from television, with the exception of the family interaction paradigm, that will also be reviewed below.

Here the evidence available with regard to parent-child interactions will be reviewed, and testable hypotheses that predict the influence of those interaction modes on children's social learning from television will be derived. Generally, the writer interprets parent-child interaction during TV time as a special case of the more general phenomenon consisting of enduring and ongoing interaction and response modes across the wide variety of social situations in which parents have the opportunity for shaping their children's response patterns.

The ways in which parents handle the development of moral behavior in their children should be especially relevant to the examination of the child's acceptance or rejection of television portrayals of antisocial behavior. Children may acquire what they watch without necessarily translating their acquisitions into practice. "Social learning theory distinguishes between acquisition and performance because people do not enact everything they learn" (Bandura, 1977, p. 28).

Children whose parents have enabled them to differentiate between "good" and "evil" should be able themselves to approve or disapprove of television behaviors to which they are exposed. Bandura explains:

Parents cannot always be present to guide their children's behavior. Successful socialization requires gradual substitution of symbolic and internal controls for external sanctions and demands. After moral standards of conduct are established by tuition and modeling, self-evaluative consequences serve as deterrents to transgressive acts (Ibid, p. 43).

Moral training has been a major concern with child psychologists. Internalization of moral values, identified as conscience or superego, should be the result of certain parental practices.

Internalization has been defined in a variety of ways, for example:

By 'internalization' I mean that they have a set of cognitions that they employ under appropriate conditions and thus guide their own behavior, and that they experience self-reinforcement and self-punishment as a function of their behavior (Staub, 1975, p. 118).

Generally to those qualities of children's behavior represented by the control of impulse and the reactions to loss of such control . . . resistance to temptation and feelings of fear, shame, or guilt concerning deviation (or anticipated deviation) from right and proper conduct . . . it is a part of the mind that controls other parts, directing behavior in ways that are mainly inhibiting and self-punishing (Sears et al., 1965, p. 199).

Is the predisposition to subordinate one's hedonistic needs in favor of the social and moral requirements of a situation, without regard for external sanctions . . . it is reasonable to

assume that the most important socialization experiences for the development of such motivation are those in which the child faces the conflict between hedonistic needs and moral demands, as communicated by the parent early in life (Hoffman, 1975, p. 234).

The tendency of society to satisfy itself as cheaply as possible results in appeals to 'good conscience,' through which the individual pays to himself the wages for his righteousness, which otherwise would probably have to be assured to him in some way through law or custom (according to Simmel, Hoffman, 1970, p. 262).

The concept of internalization is often used to refer to the child's adoption of social norms or roles as its own, and to the resulting control of its behavior by the most complex mediational functions of cognitive and verbal processes (Aronfreed, 1969, pp. 264-265).

All these definitions of internalization have at least three elements in common. First, internalization requires the adoption of social norms; second, these social norms give internal direction to the behavior of the child; and thirdly, such internal direction is achieved by self-generated consequences* for the social behavior of the child.

The most highlighted point of the concept of internalization is precisely the idea of inner-directedness. The child who has been brought up to be independent of external stimulation for the control of his/her behavior should also be more resistant to the modeling of behaviors that run counter to the child's values. Hoffman (1970) mentions that one aspect of internalization is precisely "the amount of resistance offered to pressures and temptations to behave counter to the standard" (pp. 286-287).

*The child's internal punitive or rewarding reactions.

The child who is inner directed should then be able to behave according to what he/she considers appropriate, and then, when exposed to direct or vicarious models that do not fit his/her norms, discount and criticize their behaviors.

Conscience, also called internalization or supergo, has been operationalized in a variety of ways. Some commonly accepted indicators of conscience are: (1) "maintenance of control, in the face of temptation, when there is no one present to insist, and when there is little danger of being caught" (Sears et al., 1957, p. 366); (2) occurrence of guilt feelings when temptation is not overcome (Ibid.); (3) admitting transgression when asked (Grinder, 1962); (4) emotional upset and confession (Sears et al., 1965, p. 240); (5) moral judgments about others which are based on internal rather than external considerations, e.g., confession, accept responsibility, consideration for others (Hoffman and Saltzstein, 1967, p. 45); (6) "moral stage advance" (Lickona, 1976, p. 25); (7) self-condemnation (Hoffman, 1970, p. 264); etc.

A low level of moral internalization has been identified in the literature as "behaving properly through fear of external sanctions and evaluating moral action on the basis of the likelihood of external punishment" (Hoffman, 1975, p. 232), or as external resolution (or externally oriented initiation and performance) indicated in story completion

tasks (Aronfreed, 1961, p. 227).

How is moral internalization achieved? The most likely source of influence to greatly affect moral development are parental practices and interactions with regard to social behavior. The importance of parental practices is emphasized because parents are the initial source of influence on their children (Hoffman, 1975, p. 232).

Numerous studies have shown that there is a relationship between parental disciplinary practices and the internalized control of their children's social behavior. Among them one can identify the following: Allinsmith (1960); Aronfreed (1961); Bandura and Walters (1959); Burton, Maccoby and Allinsmith (1961); Hoffman and Saltzstein (1967); and Sears et al. (1957).

Of these studies, perhaps the most salient are the ones by Aronfreed (1961), and by Hoffman and Saltzstein (1967). Aronfreed utilized a projective story completion technique to elicit response tendencies in 122 white children from the sixth grade classes of two public schools. In the stories, the central child committed an act of aggression directed against parents, a friendly neighbor, or a close companion. The mothers of the children were interviewed at home to find out "about the different things which mothers do to help their children grow up" (p. 227). The mother was asked 12 questions, each describing a particular form of aggressive behavior and then asking the mother to report how

she usually responded when her child behaved in that way. In general, the findings indicated that middle-class children were more likely to give internalized moral responses, while lower socioeconomic class children tended to be more concerned with the external aspects of the transgressions. In a congruent fashion, middle-class mothers were more likely to report the use of love oriented practices, such as reasoning and explanation. Lower-class mothers showed a preference for externally oriented, or power assertive modes of discipline. Also, there was a clear tendency for love oriented, inductive, mothers to have children who focus their attention on internal aspects of the wrongdoing, while power assertive, or externally oriented mothers were found to be more likely to have children who focus their attention on the external aspects of transgressions.

Hoffman and Saltzstein assessed the degree of internalization of morality of a sample of 444, seventh grade children by means of projective story completion and hypothetical transgression items. Parents, teachers and peers were also asked to rate the children on their level of moral internalization. Children reported their parents' disciplinary practices, and the parents were interviewed to obtain a report of their own disciplinary techniques.

Each respondent (the child or parent) was asked to imagine four concrete situations. . . . Following each situation was a list of from 10 to 14 practices. The respondent was asked to look over the list, then rate the absolute frequency of each (p. 42).

The authors found that parental power assertion techniques were consistently associated with weak moral internalization in the children.

. . . in sum it is a pattern of infrequent use of power assertion and frequent use of induction by middle-class mothers which generally appears to facilitate the facets of morality included in this study (p. 49).

No parental data was obtained from lower-class parents, and the results for this subsample were mixed.

Two main global categories of disciplinary types of interactions among parents and their children have been identified by Aronfreed (1976) and Hoffman (1975). One of these disciplinary types is called induction, and the other sensitization.

Induction types of discipline have in common . . . that they tend to make the child's control of its behavior independent of external contingencies. In contrast, disciplinary habits of direct physical and verbal attack may be characterized as sensitization because they tend merely to sensitize the child to the anticipation of punishment (Aronfreed, 1969, pp. 309-310).

In general, induction techniques include the use of reasoning and explanation, e.g., to point out the requirements of a situation, or the consequences of the behavior for the child or others. Also, appeals to the child's pride and achievement are considered to be inductive techniques (Hoffman, 1970, p. 286).

Sensitization, sometimes called power assertion, "includes physical punishment, deprivation of material objects

or privileges, the direct applications of force, or the threat of any of these" (Ibid., p. 285). Although less documented in the literature, the use of external rewards is also expected to belong to the class of parental practices that have been labeled sensitizing techniques. External rewards "reduce intrinsic motivation by creating the impression that one's behavior is externally prompted and by weakening feelings of competence and self-determination" (Bandura, 1977, p. 107).

The main difference between these two modes of parental discipline is that induction is communication oriented and sensitization is based on the exercise of actual and implied power. Induction can be said to provide the cognitive structure with which the child will be able to categorize his social experiences: "Cognitive structure facilitates internalized suppression by serving as an intrinsic mediator of anxiety which can intercede before the commission of a punished act" (Aronfreed, 1969, p. 276).

Sensitization, by requiring continuous surveillance, and by being limited to the disciplinary event, reduces the length of time during which the child experiences anxiety for transgressions (Ibid., p. 313).

According to Hoffman (1970), dissonance theory would also account for the effectiveness of induction in forming an independent moral orientation. Induction techniques exert little external power over the child and if she/he refrains from a negative behavior, she/he will be more likely to

reduce dissonance by thinking that she/he refrained voluntarily. However, sensitizing techniques are too obvious and the child may just think that she/he refrained due to external demands (p. 284). Furthermore, because inductive techniques point out the consequences of the child's behavior for others, they may develop the child's capacity for empathy. So if transgression occurs, the child who learned by induction strategies will be more likely to experience emotional discomfort or guilt (p. 328).

Actually, inductive techniques may be more severe than sensitizing techniques, due to their property of conservation of anxiety, e.g., guilt feelings may be more long lasting than the physical pain derived from a spanking.

Induction and sensitization are not mutually exclusive. The parent may balance both techniques in a variety of ways. It has been suggested that a maximizing situation for promoting internalization is a minimal amount of sensitization and some larger proportion of inductive parental acts (Hoffman and Saltzstein, 1967). "Apparently, a spoonful of medicine helps the reasoning go down" (Lickona, 1976, p. 25).

An affective and love oriented family seems to be a prerequisite for inductive techniques to be effective. "Being well loved provides the emotional security and feeling of confidence in the essential good of the world . . . necessary for considering the needs of others" (Hoffman, 1970, p. 286). Sears et al. (1957) in their extensive study

of children's acquisition of social behaviors, found that accepting mothers who love their children and use inductive more than sensitizing techniques produce children with more moral internalization than other mothers. Henry (1971), found that in the homes of mentally disordered children "a person is viewed as an adversary and treated like one. 'The child as enemy' is a fairly constant theme in these families." This stands as evidence of the possible negative effects of lack of love. In general, a fairly constant positive correlation has been found between nurturance of parents and internalization (Aronfreed, 1969, p. 305).

Love withdrawal in the form of ignoring, refusing to speak, explicitly stating dislike, and isolating the child, are considered as inductive techniques by Aronfreed (1968, p. 314). However, this has not been found to be as consistently related to the internalization of morality as the other inductive techniques detailed above (Saltzstein, 1976, p. 254; Hoffman, 1975, p. 233). The reasons cited for this lack of consistent relationship is that other-oriented induction capitalizes on the child's capacity for empathy, while love withdrawal only emphasizes egoistic concerns, more in accord with sensitizing child rearing practices.

To summarize, one can say that a love oriented family will tend to have children who are less dependent upon external stimulation for proper behavior to take place. A love oriented family is that in which parents use power assertion (sensitization) only when absolutely necessary, but

tend to guide their children's social behavior on the basis of considering the consequences of the child's behavior for others, and use reasoning and explanation as the mode of problem resolution. Loss of love as a disciplinary measure is not necessarily effective in promoting moral internalization.

It is illuminating to call attention to a parallel that Saltzstein (1976) has drawn between the set of techniques described above and Kelman's types of attitude change in response to social influence: "Power assertion goes with compliance; love withdrawal and sometimes parent-oriented, and even peer-oriented, induction with identification; and the reasoning component of induction with internalization (pp. 261-262).

A child who has internalized moral standards can be expected to be in a better position to reject portrayals of negative behaviors offered on the television screen. The core of the matter resides in the differentiation between "good" and "evil" based on internal conviction and not on external considerations. A child who does not have an internal pilot for social behavior will model those negative portrayals which he/she has witnessed when the likelihood of discovery and external punishment is minimal. A strong moral conscience can be thought of as a servant who follows the child everywhere and prevents him/her from undesirable behavior. This servant is inside the child and its

punishments and rewards may be more powerful than all the spankings or prizes of a parent. Children may learn, from many televised instances, that by resorting to force they can obtain certain satisfactions. However, only those with internalized moral values will say "no, it's wrong." Some also will say "no," but because "I may be punished."

Family Interaction Perspective

Another trend of related research has evolved from the work of a team of social scientists at the University of Wisconsin (McLeod, Chaffee, and Eswara, 1966). This trend of inquiry emerged from an interest in studying "the possibilities of changing personality through the change in the person's interaction patterns" (p. 4) mainly within the family. These researchers "felt that families were likely to differ in the degree to which they emphasize harmony in interpersonal relations and impose restrictions on the expression of anger" (p. 5).

McLeod and Chaffee (1972, p. 83) report that they have consistently found two uncorrelated dimensions of communication structure in families. The first of these dimensions is called concept-orientation, and the second one socio-orientation.

In concept-oriented families, "the child is stimulated to express his ideas and to challenge others' beliefs. He is frequently exposed to both sides of an issue, and takes part in controversial discussions" (McLeod, Chaffee and Wackman, 1967, p. 2).

In families which are socio-oriented, "the child is encouraged to maintain harmonious personal relations with his parents and others. He may be advised to give in on arguments, avoid controversy, repress anger, and generally keep away from trouble" (Ibid., p. 1).

These two dimensions interact to render a fourfold family style typology: (1) protective families emphasize harmonious and hierarchical socio relations but do not stress exposure to controversy or expression of ideas; (2) consensual types emphasize both harmonious, hierarchical relations and controversy or expression of ideas; (3) laissez faire families, where neither socio, nor concept orientation is emphasized; and (4) pluralistic families which stress concept orientation and not harmonious, hierarchical social relations.

This typology was first used to predict public affairs knowledge and participation. It was expected that children from pluralistic families would be the most likely to acquire and rehearse political knowledge. The pluralistically raised child should feel free of constraints which might inhibit expression of his/her own opinions, and the exposure to different points of view should foster diverse interests. The results of at least two studies supported the prediction: "Pluralistic parents and children appear to be more politically informed and active, and more often use the media for information" (Ibid., p. 6), while the children from the other

three types of family differed little among themselves.

The offsprings of pluralistic families have been shown to be more independent in the judgment of social situations. They should also be expected to be more resistant to persuasive messages. In two experiments with 9th grade children Eswara (1968) and McLeod, Chaffee and Wackman (1967) found that students from concept-oriented homes were less persuasible and more sensitive to the amount of information substantiating arguments in a persuasive message. Persons from a socio-oriented background indicated they would be more likely to abandon a plan if a neighbor friend said he thought it was a poor idea.

In an experiment with adolescents, Stone and Chaffee (1970) replicated those findings. Youngsters from highly socio-oriented homes were more persuaded than others to change their opinion with respect to a social truism (p. 243-244), when attacked by a highly credible source.

Pluralistic families may in fact immunize their children against many sources of influence in the child's environment, as bases for decision making, and provide him/her with a tool for judging evidence in order to arrive at satisfactory solutions. "The socio-oriented person . . . asks: Who is involved? Do I like them? Do they like me? The concept-oriented person asks: What is involved? Is it a good idea? How does it compare to what I know?" (McLeod and Chaffee, 1972, p. 87).

Further studies using the family typology approach have found suggestive evidence on the role of family interaction patterns in mediating the relationship between TV violence viewing and aggressive behavior. Protective families have children who are the heaviest television viewers, and are quite high in violence viewing. Children from pluralistic families have been found to be very low consumers of television content, and specifically violent television fare. Protective families tend to have highly aggressive children, while pluralistic families raise quite pacific children. The consensual and laissez faire types fall somewhere in between. This set of findings by McLeod, Atkin and Chaffee (1972) and others, have rendered suggestive evidence of the possible indirect role of parental practices in reducing the relationship between television violence viewing and the child's aggressive behavior.

For example, Atkin (1972) reported that:

The relationship between violence viewing and aggressive behavior in homes where the parent tried to teach the child not to act aggressively was compared to homes where a more laissez-faire attitude was implemented. The relationship between violence viewing and aggressive behavior was much stronger in the half of the . . . samples where no emphasis was placed on nonviolent behavior--while only a slight positive relationship was found where the parents did emphasize non-violence (p. 2).

Reiss (1971) reports that families of delinquents have been found to experience the acceptance of "suggestions, observations, or ideas of others as a sign of his own weakness"

(p. 23) rather than in a rational frame of mind. One would expect that a child who is positively oriented towards the expression of ideas and their consideration and who is less likely to be manipulated by external influences, would more likely discount television violence as an appropriate means of problem resolution. This type of child may consider many options, including reasoning, before resorting to alternatives that may go counter to his/her empathy concerns. This child can be expected to be more likely to try to understand the ideas and needs of others, without necessarily adopting them.

Two main theoretical and research tendencies have been outlined with regard to parent-child interaction modes and their effects on social behavior. Some implications of both perspectives have been indicated for the relationship between anti-social television viewing and negative behaviors on the part of the child. A synthesis of these two perspectives is now required.

From our review, one can observe the similarities between the moral internalization perspective and the family interaction orientation. Children from pluralistic families can be expected to be children of inductive parents, and furthermore, to be those children who are relatively independent of external pressures in order to decide about appropriate social behavior. These children may watch less anti-social television content, but even if they watch the same amount as their counterparts, they will be less influenced by it.

The parental styles of both research trends are congruent. Concept orientation goes with reasoning, explanation and an informational orientation in general. Power assertion or sensitization fits the social power orientation where external pressures towards conformity are the rule.

At this point two general labels are proposed in order to characterize the two general categories that have been outlined. We can think of parental practices and child characteristics as belonging to either external or internal types of orientation (Aronfreed, 1968b, p. 34).

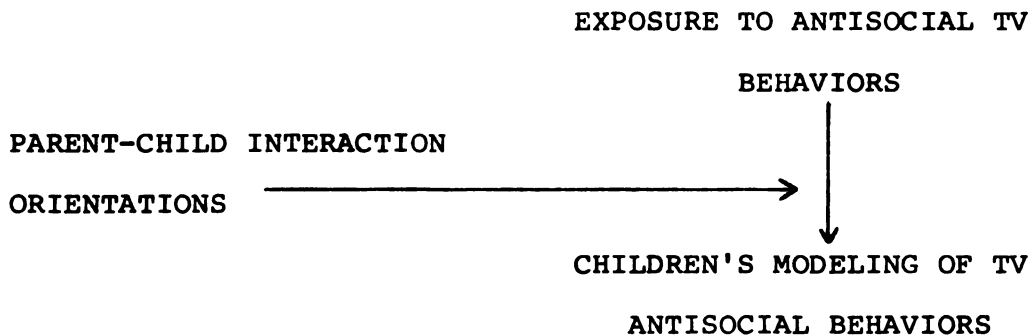
The externally oriented child is one who looks for the possible external consequences of his/her behavior in a sensitizing or socio-oriented parent. The internally oriented child will focus on his internalized resources for judging the behavior that might be appropriate under certain circumstances, and will use the information supplied by the family in an atmosphere of love, for furthering his/her understanding of the world.

An externally oriented child is expected to be morally heteronomous or dependent, and an internally oriented child is expected to be morally autonomous. The first will reproduce undesirable behaviors if they are expected to go unpunished or undetected; the latter will refrain from such behaviors when it is known that the welfare of others is in jeopardy.

Hypotheses

The combination of a high regimen of internal guidelines and scarce externally oriented behavioral tendencies should be the optimum mix to permit the child to evaluate social situations and self-responses in terms of internal considerations. Internally oriented children will be in a better position to respond to the behaviors they have internalized as proper or inappropriate. On the other hand, when parents generally resort to power assertion and less to reasoning and explanation, their children should be externally oriented and be less inhibited from performing the antisocial behaviors witnessed on television. This is specifically so if they feel that they can get away with it in order to resolve conflict or attain satisfaction of their needs.

The basic model underlying the present research is:



Parent-child orientations should mediate the relationship between TV exposure to antisocial portrayals and the child's performance of such behaviors.

Before examining the complex contingent relationships that properly test the mediation of parent-child interaction orientations on the relationship between exposure and anti-social predispositions, attention should first be focused on the main effects and specific cell contrasts derived from the theoretical statements presented above.

It is clearly the case that an internalized approach or orientation to social situations should inhibit antisocial attitudes and behaviors on the part of the child. Externally oriented parents and children should, on the other hand, facilitate antisocial attitudes and behaviors. Exposure to antisocial portrayals on television has been repeatedly shown to be associated with antisocial predispositions in children. Consequently the independent effect of the internal and external orientations and exposure should behave in the following way:

- H_a: The more exposure to antisocial portrayals on television, the more antisocial behavioral predispositions will be displayed by children.
- H_b: The more externally oriented the parents and the children, the more antisocial behavioral predispositions will be displayed by children.
- H_c: The more internally oriented the parents and the children, the less antisocial behavioral predispositions will be displayed by children.

The cells resulting from the intersections of the three factors, internal and external orientations and exposure, should result in specific contrasts that can be

logically derived.

Let \bar{x}_1 - \bar{x}_8 be the means in each of the following cells

		INTERNAL ORIENTATION			
		<u>LO</u>		<u>HI</u>	
		EXTERNAL ORIENTATION		EXTERNAL ORIENTATION	
		LO	HI	LO	HI
E X P O S U R E	LO	\bar{x}_1	\bar{x}_2	\bar{x}_5	\bar{x}_6
	HI	\bar{x}_3	\bar{x}_4	\bar{x}_7	\bar{x}_8

and given H_a , H_b , and H_c , we expect that \bar{x}_4 , which represents the mean of the children's antisocial predispositions at a high level of the external orientation and exposure and a low level of the internal orientation, to be the highest mean in the table.

On the other hand \bar{x}_5 , which is the mean of the children's antisocial predispositions at a high level of the internal orientation and a low level of exposure and the external orientation, should be the lowest mean in the table, since the only factor impinging upon those children in any substantial manner is the internal orientation.

According to Hypotheses a, b and c, it is expected that the low internal orientation cells should be higher than the high internal orientation cells; that the high exposure cells should be higher than the low exposure cells; and that the

high external orientation cells should be higher than the low external orientation cells. Following these expectations, one can posit the rank order of the cells in Hypothesis d.

$$H_d: \bar{x}_4 > \bar{x}_3 = \bar{x}_2 > \bar{x}_1 > \bar{x}_8 > \bar{x}_7 = \bar{x}_6 > \bar{x}_5$$

Since there is no theoretical reason to expect that exposure to antisocial TV portrayals would be more powerful in affecting antisocial predispositions than the external orientation, or vice versa, it is indicated that \bar{x}_3 should be equal to \bar{x}_2 and that \bar{x}_7 should be equal to \bar{x}_6 .

Finally, the relationship between exposure to television antisocial portrayals and the children's antisocial predispositions should be mediated by the external and internal orientations. Highly internally oriented and low externally oriented parents and children should result in the lowest correlation between exposure and antisocial predispositions in the children. Highly externally oriented and low internally oriented parents and children should result in the highest correlation between exposure and antisocial predispositions. Also, the overall correlation between exposure and antisocial predispositions, and the correlation at the high-high and low-low intersections of the internal and external orientations should all be localized in between the two extremes specified above.

To illustrate, let's visualize the combinations that are expected from both the external and the internal parent-child orientations:

		INTERNAL ORIENTATION	
		LOW	HIGH
EXTERNAL ORIENTATION	LOW	r1	r2
	HIGH	r3	r4

Let r_A be the overall correlation between exposure to anti-social portrayals on television and antisocial predispositions in the child.

r_1 = correlation between exposure to antisocial portrayals on television and the antisocial predispositions of the child, at a low level of the internal orientation and a low level of the external orientation.

r_2 = correlation between the same two variables among children with a low external orientation and a high internal orientation.

r_3 = correlation between the same two variables among children with a high external orientation and a low internal orientation.

r_4 = correlation between the same two variables among children with a high internal orientation and also a high external orientation.

Considering the theoretical framework presented above one would expect cell r_2 to yield the lowest correlation in the table, cell r_3 to be the highest, and r_A and cells r_1 and r_4 to have a coefficient lying in between cells r_2 and r_3 . In other words,

$H_e: r_2 < r_A < r_3$ and

$H_f: r_2 \leq r_1 \leq r_3$

$r_2 \leq r_4 \leq r_3$

It should be noted that the expectations with regard to H_f are logically derived but less documented. In the case of r_1 , the child may obtain influential socialization experiences mainly outside of the home, and the precise prediction of the effect of those socializing forces lies outside of the realm of this research. The children in r_4 receive contradictory messages from their parents, and the prediction of the effects of such inconsistencies is not within the domain of this study either, although it has been found that a hypocrite model can enhance negative behaviors at the expense of pro-social ones (Bryan, 1975).

Summary

Two main orientations, internal and external, concerning parent-child types of responses to social situations have been discussed. The main expectation resulting from a literature review and a theoretical effort, is that the internal orientation should have a hindering effect on the child's modeling of antisocial television portrayals, and that the external orientation should have a facilitative effect on the same phenomenon.

It has been hypothesized that exposure to antisocial television portrayals and the two parent-child orientations

should have an independent effect on the child's display of antisocial predispositions. The specific contrasts that derive from the independent effects of exposure and the parent-child orientations have in turn been hypothesized.

Finally, a set of hypotheses were derived that deal with the potential role of those two dimensions in mediating the relationship between exposure to antisocial portrayals on television and the child's display of attitudes or behaviors modeled after such examples.

CHAPTER II

METHODS

In this chapter several sets of data will be dealt with. First the results of some pretest data will be presented and discussed. Second, the sample of the present study will be described, and the measures and descriptive statistics pertaining to the data collected in this project will be presented. Third, the reader will find the validity and reliability coefficients for the measures used in this study. Fourth, the data replicating the emergence of the two dimensions, internal and external will be presented and discussed. Lastly, the analytical methods to be utilized in order to test the hypotheses proposed in Chapter I will be introduced.

PRETEST

Preliminary Methodology

A first attempt at creating an instrument for measuring the internal and external orientations will be reported here. At the same time, the hypothesized emergence of the two external and internal dimensions will be tested.

Instrument Design

The instrument designed was based on the one utilized by Hoffman and Saltzstein (1967) in which "each respondent (the child or parent) was asked to imagine four concrete situations: one in which the child delayed complying with a parental request to do something, a second in which the child was careless and destroyed something of value, a third in which he talked back to the parent, a fourth situation in which he had not done well in school" (p. 48).

In response to the hypothetical situations it was desired to obtain parental reactions towards the child's behavior, and the child's own responses to social situations. Although the greater bulk of research on moral internalization, especially in field surveys, has been concerned with responses and practices in relation to transgression (Hoffman, 1970, pp. 291, 348), it was felt that socially approved behavioral situations should be included. Consequently, positive social situations were also designed.

The rationale underlying the construction of positive as well as negative situations is that children who are internally oriented with regard to transgressions should also be internally oriented with regard to "good" doing. Externally oriented children should also reflect their preference consistently across both types of situations. Likewise, parents who are power assertive in negative situations should also be externally oriented in positive situations by the

use of external rewards. Parents who are more inclined towards the use of inductive techniques should also be more likely to show their approval consistently in the form of internal types of rewards.

The negative situations constructed were: Suppose "you get mad and yell at your parents"; "your parents asked you to do something for them, and you didn't do it"; "you lie to your parents and they find out that you lied to them"; you tell another kid that you are going to hurt him"; "you hit a kid in the neighborhood because of an argument."

The positive situations designed were: Suppose "you do something really nice for someone in your family"; "you help a kid in the neighborhood with some hard work"; "you do something bad and your parents punish you. The next day you tell your parents you are really sorry for what you did"; you do something nice for your parents to show them that you love them."

The response items were designed for the child to indicate "what would your parents do?" and what their own reaction "would" be. Positive and negative situations were repeated twice in different parts of the questionnaire, one instance was for the parental reaction items and the second for the child's own reactions.

The response items were designed with the internal and external orientations in mind, based on past research.

Parental responses as perceived by the child were designed for negative and positive situations. The parental orientation practices in the case of negative situations were:

"Keep you from watching TV"
 "Don't let you go out for a while"
 "Hit or slap you"
 "Yell at you"
 "Don't talk to you for a while"
 "Say that they are disappointed in you"
 "Tell you to make up for what you did"

The first five items attempted to measure the external orientation, and the last two to reflect the internal one.

The external items include one with regard to television exposure control as a disciplinary practice. The item "don't talk to you for a while" was included as a measure of love withdrawal, which has been found to be more externally than internally oriented: "both love withdrawal and power assertion direct the child to the consequences of his behavior . . . for the child himself, and to the external agent producing these consequences" (Hoffman and Saltzstein, 1967, pp. 54-55).

Responses like "don't let you out for a while," "hit or slap you," and "yell at you" have been consistently found to be externally sensitizing (Adkins et al., 1974, p. 118). The two internal items "say that they are disappointed in you" and "tell you to make up for what you did" have been reported to lead to moral internalization, as opposed to the external items (Aronfreed, 1969, p. 309).

The parental response items in the case of positive situations were intended to reflect the same predispositions as the ones for the negative situations. The response items were:

"Let you watch extra TV"
 "Give you something special"
 "Pay extra attention to you"
 "Kiss or hug or pat you on the back"
 "Tell you they are proud of you"
 "Tell you to feel good about what you did"

The first three items were intended to reflect the external orientation. "Kiss or hug or pat you on the back" was designed to tap general affection. "Being well loved provides the emotional security and feeling of confidence in the essential goodness of the world . . . necessary for considering the needs of others" (Hoffman, 1970, p. 286). Also, "there is some evidence . . . that the learning processes which underly internalization may be dependent on a certain minimum of nurturance (warmth, affection, etc.) in the general climate of child rearing" (Aronfreed, 1969, p. 304). The last two positive items were intended to be the counterparts to the internal negative ones.

The child items for negative situations were:

"Would you feel guilty?"
 "Would you try to make up for what you did?"
 "Would you be afraid your parents (or your teacher or other people) may find out?"
 "Would you be afraid you may be punished?"

The first two items which include predispositions to guilt feelings and towards reparation were designed to tap the internal dimension (Hoffman and Saltzstein, 1967, p. 228).

The last two items were intended to tap external considerations for the commitment of a negative action (Ibid).

The child items for positive situations were:

"Would you feel happy with yourself?"
"Would you feel that you deserve a prize?"
"Would you want people to know about it?"

The first item should correspond to its guilt counterpart in terms of the internal orientation. Reparation ("would you try to make up for what you did?") could not be issued a mirror image in the positive situations. The last two items were intended to measure external expectations of reward and recognition.

All of the items were to be answered with a "yes" a "maybe" or "no." A "no" would be coded with a 0 (zero), a "maybe" with a 1, and a "yes" with a 2. The higher the likelihood of each parental or child item, the higher the numerical value that would be assigned to it.

Questionnaire Administration

In the Spring of 1976, the above instrument was administered to 202 children in two schools of the Lansing, Michigan area. Half the children were fourth graders and the other half were sixth graders, about equally divided by sex. The self administered instruments were given to the children in their classrooms, and were guided through it by one adult. The instrument contained other items for a larger research project. No items presented special difficulties for the children, except for a minority of fourth graders

with reading problems, in which case all situations and response items were read to them. The time of administration was 15 minutes in the average. The children were assured anonymity, and were asked to tell us "how you really feel."

Index Construction

For both parental and child items, all responses were summed across identical items* to form an index for that item. The parental response indexes for positive situations could range from 0 to 8, and for the negative situations from 0 to 10. The child's response indexes for positive situations could go from 0 to 8, and for the negative situations they could range from 0 to 10.

An example may help in clarifying this procedure. If a child reported that his/her parents would yell ("yes") if he/she committed the actions described in all five of the negative situations, then the index for "yell at you" would have a score of 10. However, a child who said that his/her parents would never yell at them, would receive a score of 0. Table 1 presents the means, standard deviations, and number of cases for each index.

The addition of scores across identical items was reasoned to be a more valid measure of enduring parental or child response modes than each separate, situation specific, response.

* Recall that each item could be answered with a "yes" (2), a "maybe" (1) or a "no" (0).

with a leading company in which case all other cases and the
 expenses were paid to them. The time of admission

was 15 minutes in the morning. The children were about 5
 years old, and the mother was 35 years old.

CHILD'S HISTORY

The child was born on 10/10/1910, at 10/10/1910, at 10/10/1910,
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In Table 1 all indexes have some degree of variability. Even in the case with the smallest standard deviation ("Would you feel happy with yourself?"), the average variation was 1.8 units in a scale of 0 to 8.

In the case of parental responses to negative situations, parents were mostly expected to yell and express disappointment in the average given the means of 5.5 and 5.4, respectively. Love withdrawal ("Don't talk to you for a while"), on the other hand, resulted in a mean score of 1.9 in a scale of 0 - 10, being this the least likely parental disciplinary technique as perceived by the children.

The parental responses to positive situations indicate that in the average children expect their parents to express pride more often than anything else. However, the item "pay extra attention to you" showed the lowest mean.

In hypothetical negative situations, children were most likely in the average to indicate that they would try to repair their undesirable actions. They didn't show, however, that much concern for being caught or punished.

In positive situations, the highest mean score was for "feel happy with yourself," and the lowest for feeling that they "deserve a prize."

One way of deciding which items should be reused would be to select items frequently endorsed in the average, and with a minimally acceptable variation. This procedure, however, may not be acceptable in the present case. The

Table 1. Means, Standard Deviations, and Number of Cases for Each Index of Parental or Child Responses to Social Situations.

	\bar{X}	S	N
<u>Parental Responses</u>			
Negative Situations (Scale 0 - 10)			
1. Keep you from watching TV	2.8	2.7	195
2. Don't let you go out for a while . .	4.1	3.0	194
3. Hit or slap you	2.7	2.8	194
4. Yell at you	5.5	2.9	190
5. Don't talk to you for a while	1.9	2.4	190
6. Say that they are disappointed in you	5.4	3.0	190
7. Tell you to make up for what you did	3.8	3.1	194
Positive Situations (Scale 0 - 8)			
8. Let you watch extra TV	2.6	2.3	195
9. Give you something special	2.7	2.0	193
10. Pay extra attention to you	2.1	2.0	189
11. Kiss or hug or pat you on the back .	4.0	2.6	194
12. Tell you they are proud of you . . .	5.1	2.2	193
13. Tell you to feel good about what you did	4.4	2.6	197
<u>Child Responses</u>			
Negative Situations (Scale 0 - 10)			
14. Would you feel guilty?	5.6	2.9	193
15. Would you try to make up for what you did?	6.0	3.0	194
16. Would you be afraid your parents(or teacher or other people) may find out?	3.8	3.1	193
17. Would you be afraid you may be punished?	3.8	3.2	191
Positive Situations (Scale 0 - 8)			
18. Would you feel happy with yourself? .	6.3	1.8	198
19. Would you feel that you deserve a prize?	1.6	2.2	195
20. Would you want people to know about it?	2.7	2.1	196

theory presented in Chapter I predicted the emergence of two dimensions, internal and external. Those indexes of response clearly associated with each dimension should be the ones to be retained. Furthermore, the indexes should be closely associated with the dimension of which they were predicted to be a part. It was considered that the most appropriate technique to use would be confirmatory factor analysis (Rummel, 1970, p. 22). A certain type of response may not be very widely utilized and still constitute an important mediator of what children model from antisocial television portrayals.

Two questions are to be answered in this section:

1. Do an internal and an external orientation emerge as hypothesized?; and 2. Which are the items that better differentiate one dimension from the other?

To answer the above questions, the indexes for parental and child responses were submitted to a principal axis factor analysis routine with varimax rotation. Since two dimensions were hypothesized, the solution was limited to the extraction of two factors. According to the numbering of indexes in Table 1, the items predicted to belong in the internal orientation dimension were: 6, 7, 11, 12, 13, 14, 15, and 18. The items hypothesized to load on the external orientation dimension were: 1, 2, 3, 4, 5, 8, 9, 10, 16, 17, 19, and 20.

Table 2 presents the results of the factor analysis procedure. A loading of .35 is considered to be the cutoff point for including an index in a certain factor, since "loadings exceeding .35 have been found to be stable and replicable" (Overall and Klett, 1972, p. 109).

Table 2. Principal Factor Matrix with Varimax Rotation,
Ordered According to Hypothesized Indexes Loadings.

Item	Factor 1	Factor 2
<u>Internal Orientation</u>		
6. Say that they are disappointed in you	.13	.58
7. Tell you to make up for what you did	.41	.47
11. Kiss or hug or pat you on the back	.11	.53
12. Tell you they are proud of you	.12	.62
13. Tell you to feel good about what you did	.20	.64
14. Would you feel guilty?	.08	.60
15. Would you try to make up for what you did?	.02	.68
18. Would you feel happy with yourself?	.02	.50
<u>External Orientation</u>		
1. Keep you from watching TV	.81	.08
2. Don't let you go out for a while	.57	.25
3. Hit or slap you	.46	-.05
4. Yell at you	.36	.09
5. Don't talk to you for a while	.53	.07
8. Let you watch extra TV	.62	.14
9. Give you something special	.48	.22
10. Pay extra attention to you	.47	.26
16. Would you be afraid your parents (or teacher or other people) might find out?	.36	.36
17. Would you be afraid you may be punished?	.43	.34
19. Would you feel that you deserve a prize?	.42	-.06
20. Would you want people to know about it?	.44	.16

Factor loadings can be interpreted to represent "correlations between original measurements and the factors" (Ibid., p. 91). Looking at Table 2 one can say that in general, the two hypothesized dimensions contain the predicted indexes. Factor 2 clearly represents the internal orientation dimension. All hypothesized internal indexes load highly and consistently on Factor 2, and in general show low or almost zero loadings on Factor 1. The one exception is response index number 7, which does not seem to differentiate between the two factors.

Factor 1 consistently represents the external orientation dimension. Two response indexes, numbers 16 and 17 do not discriminate between the two factors.

The results support the expectation that postulated the existence of two parental and child orientations, one external and one internal. Second, although the majority of the indexes pretested to tap both dimensions in fact seem to underly them, three different items correlate about equally with both factors. This last finding deserves further consideration.

Index number 7 "Tell you to make up for what you did" was originally hypothesized to be part of the internal orientation dimension. This index does show a higher loading on the predicted dimension, however, its loading on the external factor is above the .35 criterion, and the difference between both loadings is very small, .06. One may conclude that

parental requests for reparation accompany both a spanking in one case, and an expression of disappointment in another, or that at least children expect their parents to act in this manner.

One course of action would be to simply delete such response item from a future instrument. However, it is not known whether the actual parental response would behave in the same fashion. This writer considered collecting the parents own responses in the final study, and did.

Two more indexes did not discriminate between the two types of orientation: 16. "Would you be afraid your parents (or your teacher or other people) may find out?" and 17. "Would you be afraid you may be punished?" These two indexes were originally hypothesized to belong in the external orientation. Index 16 loads equally on both factors, and index 17 loads higher on the external dimension but the difference between the two loadings is small (.09). Besides, index 17 is close to reaching the .35 criterion. Both indexes reflect the children's own responses as reported by themselves. The first explanation that comes to mind is that perhaps these responses, as they are formulated, are too vague. The children who report other reactions also report fear of punishment and fear of detection. Some children might have internalized moral values, but if they do transgress then they are afraid of the consequences. In the case of detection or finding out, it seems to be best to delete

the response item from future consideration.

In the case of being afraid of punishment, the item could be rewritten in two separate ones, for example: "Would you be afraid your parents may spank you?" and "Would you worry about disappointing your parents?" With these two new items, one could identify children who are afraid of the painful physical consequences for themselves, and children who wouldn't want to hurt their parents. In the first case we would have an external orientation, and an internal in the second.

FINAL STUDY

Sample Description

Three hundred mothers and their children who were part of a panel sample contacted a year before (Atkin and Greenberg, 1977) provided the data base for this study. The mothers were interviewed at home by trained interviewers, and the children were administered questionnaires in their school classrooms. No more than 5% of the children were administered the questionnaires in their homes, since they could not be reached in the schools. The data were collected in two comparable cities of the United States, Haslett, Michigan, and Verona, Wisconsin, from middle class respondents. The children were from the fifth, seventh and ninth grades.

The actual data return was from 227 respondent pairs from the original sample of 300. This was due mainly to geographical mobility and refusals.

The composition of the final sample was as follows:

Location:

Haslett, Michigan:	130
Verona, Wisconsin:	97

Grade in school:

Fifth:	74
Seventh:	81
Ninth:	72

Sex:

Males:	112
Females:	115

The average interviewing time for the mothers was approximately 45 minutes. The children took about one hour in the average to complete their questionnaires.

Measures and Descriptive Statistics

Several sets of data will be presented in this section. In the first place the reader will find the measures utilized in order to tap the internal and external dimensions of parent-child interactions. Next, the measures of television exposure used in this project will be presented. Finally, the child's antisocial measures will be introduced.

Internal and External Orientations

The measures used in order to tap the internal and external orientations of parent-child interactions do not

differ substantially from the measures utilized in the pre-test, and the results of the preliminary study were taken into consideration in order to improve the instrument.

Four sets of items were assembled to tap the two dimensions. The mothers responded to the parental practices items, and the children responded to the child response items. Each, mother and child, was presented with eight hypothetical situations, four positive and four negative, as follows:

Mothers:

Positive situations

Suppose (NAME OF CHILD) does something really nice for you (and your husband) to show that (HE/SHE) loves you. What would you (and your husband) do?

Suppose (NAME OF CHILD) helps a friend in the neighborhood with some hard work, and you (and your husband) hear about it. What would you (and your husband) do?

Suppose (NAME OF CHILD) does something really nice for someone in your family. What would you (and your husband) do?

Suppose (NAME OF CHILD) apologizes and tells you (and your husband) (HE/SHE) is really sorry for something bad (HE/SHE) did to you. What would you (and your husband) do?

Negative situations

Suppose (NAME OF CHILD) hits a kid in the neighborhood after an argument, and you (and your husband) find out. What would you (and your husband) do?

Suppose you (or your husband) asked (NAME OF CHILD) to do something for you, and (HE/SHE) doesn't do it. What would you (and your husband) do?

Suppose (NAME OF CHILD) lied to you (and your husband) and you find out. What would you (and your husband) do?

Suppose (NAME OF CHILD) gets mad and yells at you (or your husband). What would you (and your husband) do?

Children:

Positive situations

Suppose you do something really nice for your parents to show that you love them.

Suppose you help a friend in the neighborhood with some hard work.

Suppose you do something really nice for someone in your family.

Suppose you apologize and tell your parents you are really sorry for something bad you did to them.

Negative situations

Suppose you hit a kid in the neighborhood after an argument.

Suppose you lie to your parents.

Suppose your parents ask you to do something for them, and you don't do it.

Suppose you get mad and yell at your parents.

The results of the pretest data presented above were taken into consideration for the generation of the response items used in the final study. The rationale for including the different response items was presented in the preceding section dealing with the pretest, and it will not be repeated here. However, two major types of items were added. For both parental and children orientations response items were included to tap parental emphasis about the consequences of the children's behaviors on others, and the children's

consideration for the welfare of others including the parents. These types of responses have been found to be important components of the internal orientation of both parents and children (Aronfreed, 1968b and 1976; and Staub and Feinberg, in press).

The final set of items also included reasoning and explanation as a parental technique since it has been found to promote the internalization of moral values in children (Sears et al., 1957; Aronfreed, 1969; Aronfreed, 1976; and Saltzstein, 1976).

The number of items used to tap the internal and external orientations in children and parents was determined by the antecedents present in the literature reviewed, the pretest results, and by a set of ten parental and children interviews conducted in order to check for those response modes that take place in the home setting.* Consequently, the reader will find that the number of items for the internal and external orientations and for both parents and children is not necessarily the same.

The following parental responses were generated for the positive situations:

Internal:

Say you are proud of (HIM/HER).

* These were informal interviews in the home setting, where parents and children were asked for criticisms and elaboration. Also, a team of researchers highly familiar with this type of research provided inputs for the questionnaire formation.

Tell (HIM/HER) to feel good about what (HE/SHE) did.

Kiss or hug or pat (HIM/HER) on the back.

Explain why it was a good thing to do.

Say that you appreciate the good things (HE/SHE) does.

Tell (HIM/HER) reasons why (SHE/HE) should keep doing these things.

External:

Let (HIM/HER) do something (HE/SHE) wanted to do very badly.

Let HIM/HER) watch extra TV.

Give (HIM/HER) something special.

The parental response items for the negative situations were:

Internal:

Say you are disappointed in (HIM/HER).

Explain why (HE/SHE) shouldn't behave that way.

Say (HIS/HER) behavior makes you feel bad.

Tell (HIM/HER) another way to solve (HIS/HER) problem.

External:

Don't talk to (HIM/HER) for a while.

Yell at (HIM/HER).

Hit, spank or shake (HIM/HER).

Keep (HIM/HER) from watching TV.

Don't let (HIM/HER) go out for a while.

The response items for the children's positive situations were:

Internal:

Would you feel good about it?

Would you be proud of yourself?

Would you feel happy for them?

Would you feel happy with yourself?

External:

Would you feel you deserve a treat?

Would you want people to know about it?

Would you think you should get something special?

The items for the children's negative situations

were:

Internal:

Would you feel guilty?

Would you worry about how they feel?

Would you worry about disappointing your parents?

Would you try to make up for what you did?

External:

Would you worry that your parents may hit, spank or shake you?

Would you worry that your parents may yell at you?

Would you worry that your parents may take something away from you?

Would you worry that your parents may not let you watch your favorite TV show?

The response categories for all the above items was a yes, maybe or a no, coded as 2, 1, and 0, respectively.

All responses to identical items were summated to create indexes of response, across varied situations for both parents and children, and for positive and negative situations. The descriptive statistics of these indexes of response are presented in Tables 3 and 4.

Table 3. Means, Standard Deviations, and Number of Cases for Each Index of Parental Responses to Social Situations (Index range 0-8).

<u>Negative Situations</u>		<u>\bar{X}</u>	<u>S</u>	<u>N</u>
INTERNAL				
1. Say you are disappointed in (HIM/HER)	. . . . .	6.8	1.7	226
2. Explain why (HE/SHE) shouldn't behave that way	. . . . .	7.5	1.3	221
3. Say (HIS/HER) behavior makes you feel bad	. . . . .	6.7	2.1	225
4. Tell (HIM/HER) another way to solve (HIS/HER) problem	. . . . .	7.1	1.5	225
EXTERNAL				
5. Don't talk to (HIM/HER) for a while	. . . . .	0.3	0.9	226
6. Yell at (HIM/HER)	. . . . .	3.4	2.6	225
7. Hit, spank or shake (HIM/HER)	. . . . .	1.2	2.0	226
8. Keep (HIM/HER) from watching TV	. . . . .	2.4	2.7	225
9. Don't let (HIM/HER) go out for a while	. . . . .	4.3	2.8	226
Positive Situations				
INTERNAL				
10. Say you are proud of (HIM/HER)	. . . . .	7.4	1.3	226
11. Tell (HIM/HER) to feel good about what (HE/SHE) did	. . . . .	6.6	2.1	226
12. Kiss or hug or pat (HIM/HER) on the back	. . . . .	6.1	2.4	226
13. Explain why it was a good thing to do	. . . . .	6.5	2.1	225
14. Say that you appreciate the good things (SHE/HE) does	. . . . .	7.6	1.2	226
15. Tell (HIM/HER) reasons why (SHE/HE) should keep doing these things	. . . . .	6.3	2.4	224
EXTERNAL				
16. Let (HIM/HER) do something (HE/SHE) wanted to do very badly	. . . . .	3.4	2.3	226
17. Let (HIM/HER) watch extra TV	. . . . .	1.7	2.3	223
18. Give (HIM/HER) something special	. . . . .	2.1	2.2	225

Table 4. Means, Standard Deviations, and Number of Cases for Each Index of Child Responses to Social Situations (Index range 0-8).

<u>Negative Situations</u>		<u>\bar{X}</u>	<u>S</u>	<u>N</u>
INTERNAL				
1. Would you feel guilty?	. . . . .	5.5	2.2	224
2. Would you worry about how they feel?	. . . . .	5.6	2.1	225
3. Would you worry about disappointing your parents?	. . . . .	5.4	2.3	223
4. Would you try to make up for what you did?	. . . . .	5.8	2.1	225
EXTERNAL				
5. Would you worry that your parents may hit, spank or shake you?	. . . . .	2.4	2.4	226
6. Would you worry that your parents may yell at you?	. . . . .	4.1	2.5	224
7. Would you worry that your parents may take something away from you?	. . . . .	2.6	2.7	223
8. Would you worry that your parents may not let you watch your favorite TV show?	. . . . .	1.8	2.5	226
Positive Situations				
INTERNAL				
9. Would you feel good about it?	. . . . .	7.0	1.4	227
10. Would you be proud of yourself?	. . . . .	6.0	2.0	227
11. Would you feel happy for them?	. . . . .	5.6	1.8	225
12. Would you feel happy with yourself?	. . . . .	6.5	1.9	226
EXTERNAL				
13. Would you feel you deserve a treat?	. . . . .	1.8	1.8	226
14. Would you want people to know about it?	. . . . .	2.9	1.7	225
15. Would you think you should get something special?	. . . . .	1.5	1.8	224

The indexes in all cases could range from 0 to 8. In Table 3 one can observe that, in general, the means for the response items belonging to the positive situations are higher than for the negative ones, but more interesting is to notice that across both positive and negative situations, the internal items have higher means than the external ones. Seemingly, parents tend to be more likely to explain and show affection than to withdraw it or physically punish their children, or at least these are the things that they are most willing to report.

Congruent with the pretest results, item 5 shows the lowest mean in the table and the lowest variability as indicated by the standard deviation. Item 5 is at this point a good candidate for exclusion from the analysis. All other items in Table 3, at this point seem to be acceptable, since the discriminatory value for the internal and external orientations of an item with a low mean can be of importance in selecting those cases that are extremes in either orientation.

In Table 4 one finds a similar pattern of means for children reactions to that of the parental practices in Table 3. The means for the internal are consistently higher than the means for the external orientation items. At this point, all of the items seem to be appropriate for further analysis, since all the means evidence the existence of the behaviors of interest to an acceptable degree.

Television Exposure
to Antisocial Behaviors

The children in this study were asked to rate a list of 29 shows as to whether they watched each of the shows "every week," "most weeks," "some weeks," or "never." The scale points were coded as 5, 4, 2, or 1 respectively. The exclusion of the value 3 was done because it was considered that the interval between watching "most weeks" and "some weeks" was about twice as large the distance between "every week" and "most weeks," or the distance between "some weeks" and "never."

The 29 shows were selected on the bases of high viewership, distribution across the days of the week and the behaviors characteristically portrayed in those shows. The selection of high viewership levels of each show and the variability of portrayal of antisocial behaviors in each show was carried out according to the results of a recent viewership and content analysis set of studies (Greenberg, Atkin, Edison and Korzenny, 1977 and forthcoming).

The shows included in the questionnaire were: The Six Million Dollar Man, Rhoda, The Jeffersons, Little House on the Prairie, Happy Days, Laverne and Shirley, Baa Baa Black Sheep, Police Woman, Kojak, Good Times, the Bionic Woman, Charlie's Angels, The Waltons, Welcome Back Kotter, Hawaii Five-0, Sanford and Son, Chico and the Man, The Rockford Files, Emergency!, The Mary Tyler Moore show, Bob Newhart,

Starsky and Hutch, All in the Family, Jabber Jaw, The Pink Panther, The Bugs Bunny/Roadrunner hour, Shazam, Isis, and Fat Albert and the Cosby Kids.

The viewership rating of each show was weighted by the frequency of occurrence of antisocial behaviors in each show, as determined by the content analytic studies cited above. In those studies it was found that the most prevalent antisocial behaviors available on the current television fare are, in order of prevalence: verbal aggression, physical aggression, deceit and theft. Based on those results it was decided to limit the study of antisocial behaviors to those more available for modeling on television programming.

Four indexes of exposure to antisocial behaviors were then created, one for each type of antisocial behavior. In each index, each amount of exposure to a show in the questionnaire list was multiplied by the frequency of each of the four types of antisocial behaviors in that show. So, if a show did not contain any physical aggression, the product of exposure by frequency of portrayal would be zero.

The advantage of such indexes of exposure is that they are intended to reflect more accurately than other methods used in the past the degree to which individuals are actually exposed to specific television portrayals. The stability of television portrayals by the methods of content analysis used by Greenberg et al. (Ibid) has been demonstrated in ongoing research across three episodes of a subsample of programs.

Below are the means, standard deviations and number of cases for each index of exposure to antisocial behaviors on TV.

<u>Index of Exposure to:</u>	<u>\bar{X}</u>	<u>S</u>	<u>N</u>
TV Physical Aggression (range 365-1502)	848.63	249.84	213
TV Verbal Aggression (range 534-1857)	1020.31	248.33	212
TV Theft (range 32-116)	62.92	17.77	215
TV Deceit (range 136-518)	287.60	73.93	213

Children's Measures of Antisocial Predispositions

In order to tap the children's proclivity to utilize antisocial modes of conflict resolution, the mothers and their children were asked to report the likelihood that the child may respond antisocially across varied social situations. This method has been widely utilized in the research concerning children's modeling of antisocial behaviors, especially physical aggression (e.g. Leifer and Roberts, 1972).

The mothers interviewed were presented with the following social situations and response items:

For instance, what if someone cut in front of (HIM/HER) in a long line. What would (HE/SHE) do? . . .

Would (HE/SHE) push them out . . . yes, maybe, or no?¹

Would (HE/SHE) yell at them . . . yes, maybe, or no?²

Would (HE/SHE) tell them politely to leave?

The cashier at a store gives (NAME OF CHILD) one dollar more in change than (HE/SHE) is supposed to get. What would (HE/SHE) do?

Give the extra money back

Keep the money³

Suppose (HIS/HER) friends are all going to the movies, but you order (HIM/HER) to stay home and finish (HIS/HER) homework for school.

Would (HE/SHE) argue with you?²

Would (HE/SHE) finish (HIS/HER) homework like you tell (HIM/HER)?

Would (HE/SHE) lie and say (HE/SHE) already finished it?⁴

What if a kid is using (NAME OF CHILD)'s bike without asking (HIM/HER). (HE/SHE) asks to ride it, but the kid won't give it back. What would (HE/SHE) do?

Scream at the kid?²

Wait awhile until the kid gives it back?

Hit the kid?¹

¹These items constituted the index of physical aggression.

²These items constituted the index of verbal aggression.

³These items constituted the measure of theft.

⁴These items constituted the index of deceit.

Suppose your child is playing a game. No one is watching when (HE/SHE) takes (HIS/HER) turn, and (HE/SHE) doesn't do well. What would (NAME OF CHILD) do?

Say (HE/SHE) did well⁴

Say (HE/SHE) hasn't had (HIS/HER) turn yet, and takes another turn⁴

Tell the truth

All response items could be answered with a yes, maybe or no, coded respectively as 2, 1, and 0. Items indicating the same type of response, e.g. physical aggression, verbal aggression, theft or deceit were summed to form indexes for that type of response.

Table 5a contains the means, standard deviations, the number of cases and the range for each of the indexes of the mothers' report regarding their children's antisocial predispositions.

The children's questionnaires contained the following social situations and response items.

What if someone cut in front of you in a long line. What would you do?

Would you push them out¹. . .

Would you yell at them². . .

¹These items constituted the index of physical aggression.

²These items constituted the index of verbal aggression.

³These items constituted the measure of theft.

⁴These items constituted the index of deceit.

Suppose you are playing a ball game and one kid throws the ball at your head while you aren't looking, and it hits you. What would you do?

Hit the kid with the ball¹. . .

Kick the kid¹. . .

Shout bad names at the kid². . .

The cashier at a store gives you one dollar more in change than you are supposed to get. What would you do?

Give the extra money back . . .

Keep the money³. . .

A kid is using your bike without asking you. You ask to ride it, but the kid won't give it back. What would you do?

Scream at the kid². . .

Hit the kid¹. . .

Knock the kid off your bike¹. . .

What if a friend is feeling bad because they keep making stupid mistakes while trying to play a new game. What would you do?

Help them to learn the rules . . .

Say a mean thing to them². . .

Say you still like them anyway . . .

¹These items constituted the index of physical aggression.

²These items constituted the index of verbal aggression.

³These items constituted the index of theft.

⁴These items constituted the index of deceit.

Suppose you are playing a game. No one is watching when you take your turn, and you don't do well. What would you do?

Say you did well⁴. . .

Say you haven't had your turn yet, and take another turn⁴. . .

Swear at the kid who tells on you². . .

Your friends are all going to the movies, but your mother orders you to stay home and finish your homework. What would you do?

Argue with your mother². . .

Lie and say you already finished it⁴.

You are playing a game with another kid and you are winning. The other kid decides to quit in the middle. You ask them to stay, but the kid says no. What would you do?

Say a mean thing to the kid². . .

Grab the kid¹. . .

What if you find somebody's pen on the floor at school. What would you do?

Try to find the owner . . .

Keep the pen³. . .

You work really hard to finish your homework for school. Some kid takes your papers and rips them up. What would you do?

Shout at the kid². . .

¹These items constituted the index of physical aggression.

²These items constituted the index of verbal aggression.

³These items constituted the index of theft.

⁴These items constituted the index of deceit.

Beat up the kid¹. . .

Copy someone else's homework⁴. . .

You are walking down the street and drop a dollar bill. Another kid grabs the money and won't give it back. What would you do?

Yell at the kid². . .

Start a fight with the kid¹. . .

Throw something at the kid¹. . .

What if your friends are playing a game and really need one more person to play, but you don't like that game. What would you do?

Join in so they can play it . . .

Help them find another player . . .

Lie and say you have to go home⁴. . .

All response items could be answered with a yes, maybe or no, coded as 2, 1, and 0 respectively. Items indicating a similar type of antisocial behavior were added to form and index for that type of behavior.

Table 5b contains the means, standard deviations, the number of cases and the range for each of the indexes of the child's own report of antisocial predispositions.

¹These items constituted the index of physical aggression.

²These items constituted the index of verbal aggression.

³These items constituted the index of theft.

⁴These items constituted the index of deceit.

Within the range for the mother and child indexes, one finds that the means indicate that all behaviors were reported to exist to some extent, and that none of them is not within the potential behavioral repertoire of the child. The standard deviations indicate that, within the limits of the index, all the behaviors are reported to varying extents by different mothers and children.

Validity and Reliability

Validity addresses the question of whether we are measuring the phenomenon that we intended to measure or not. Reliability addresses the question of whether measurements render consistent results over time or internally, within a measurement instrument. This last reliability estimate is better known as internal consistency. In the instruments there were three main sets of variable measurements: 1. Parent and child responses to social situations in terms of internal and external orientations; 2. Exposure to anti-social television portrayals, in the areas of physical aggression, verbal aggression, theft and deceit; and 3. Antisocial predispositions on the part of the child for resolving social conflict situations. The questions of validity and reliability will be addressed for each set of measurements separately.

Table 5. Means, Standard Deviations, Number of Cases and Index Range of Mother and Child Indexes of Reports of the Child's Antisocial Behaviors in Hypothetical Situations.

a. Indexes of the Mother's Report	<u>\bar{X}</u>	<u>S</u>	<u>N</u>	Index Range
Physical aggression	1.2	1.1	224	0-4
Verbal aggression	3.6	1.7	225	0-6
Theft	0.4	0.7	223	0-2
Deceit	1.2	1.5	223	0-6
 b. Indexes of the Child's Report				
Physical aggression	7.4	5.1	220	0-18
Verbal aggression	8.3	3.9	222	0-18
Theft	1.9	1.4	225	0-4
Deceit	2.4	2.2	221	0-10

Parent and Child Internal and External Orientations

a. **Validity:** As documented in the first chapter, several studies in the past have found both an internal and an external orientation. Through a factor analytic confirmatory solution, with the pretest data presented above, it was found that the two hypothesized factors did appear within the same type of instrument described for use in the present study. The confirmatory factor analysis solution is an indication of "factor validity" which can be interpreted as evidence of construct validity. Those items designed to measure the constructs clustered together, according to the indications of past research, some of which is based on direct observations of behavior. Nunally (1967) explains: "With content validity, factor analysis mainly is important in suggesting ways to revise instruments for the better. With construct validity, factor analysis provides some of the tools that are most useful for determining internal structures and cross-structures for sets of variables" (p. 101).

The ideal and most definitive validation of these instruments would consist of correlating actual observations of behavior with responses to the questionnaire items. However,

it was not possible to conduct such concurrent test validation given the resources available.

Convergent validity estimates were derived from items administered independently to the mother and the child. The mothers were asked to respond to one positive and one negative child situations, and the child was asked to respond to one positive and one negative parental situations.

The mothers were asked to report how the child "would feel or react if (HE/SHE) did any of these things," and the child was asked to report "what your parents would do to you if you did any of these things."

The two situations with the appropriate wording for mothers and children were the ones in which the child helps "a friend in the neighborhood with some hard work," and the one where the child gets mad and yells at his/her parents. Tables 6 and 7 contain the situations and the response items used for validating parental and child responses respectively. These tables also contain the zero order correlation coefficient between the mother and the child responses, the number of cases, and the significance of the coefficient.

In Table 6 one can observe that when children are asked to report about parental practices the covariation between the mother's responses and the child reports is generally very low. Only one statistically significant correlation is found in the case of the positive situation, and two in the case of the negative situation. The average

Table 6. Pearson Correlation Coefficients* Between Mother and Child Items Concerning the Parent's Reactions to a Positive and a Negative Situation.

Suppose (NAME OF CHILD) helps a friend in the neighborhood with some hard work, and you (and your husband) hear about it. What would you (and your husband) do?	<u>r</u>	<u>N</u>	<u>Significance</u> <u>p ≤</u>
Say you are proud of (HIM/HER) . . .	.04	227	n.s.
Kiss or hug or pat (HIM/HER) on the back . . . . .	.18	227	.003
Explain why it was a good thing to do	-.02	226	n.s.
Let (HIM/HER) watch extra TV . . .	.01	226	n.s.
Give (HIM/HER) something special. .	.08	227	n.s.
Average r = .07			

Suppose (NAME OF CHILD) gets mad and yells at you (or your husband). What would you (and your husband) do?

Say you are disappointed in (HIM/HER) . . . . .	.01	226	n.s.
Yell at (HIM/HER) . . . . .	.02	226	n.s.
Explain why (HE/SHE) shouldn't behave that way	-.04	226	n.s.
Hit, spank or shake (HIM/HER) . . .	.27	226	.001
Keep (HIM/HER) from watching TV . .	.29	225	.001
Average r = .12			

*Zero-order

correlation for the positive situation was .07, and .12 for the negative one.

In Table 7 the reader finds that the mothers seem to perceive their children's reactions quite differently from themselves. The average correlation for the positive situation is .05, and .15 for the negative situation.

The correlations, in general, are very low, despite the statistically significant coefficients, and at this point the only validation available is that forthcoming from the factor validation replicating the existence of the internal and external dimensions. A separate section, below, will deal with factor analytic results replicating the emergence of the two dimensions.

b. Reliability: A measure of internal consistency for the newly created indexes was obtained for all response items corresponding to parental and child responses, and to the positive and negative situations. Cronbach alpha as an extension of the Richardson Kuder formula 20 was utilized for this purpose. Cronbach alpha is a summary measure of the average correlation between all possible random halves of the components of the scale.

Table 8 contains the alpha coefficients for the indexes of parental responses to social situations. The reader should recall that these items were only presented to the mothers. With one exception, all the indexes seem to be internally consistent to an acceptable degree. The only

Table 7. Pearson Correlation Coefficients* Between Mother and Child Items Concerning the Child's Reactions to a Positive and a Negative Situation

Suppose you help a friend in the neighborhood with some hard work.	<u>r</u>	<u>N</u>	Significance <u>≤</u>
Would you feel you deserve a treat? . . . . .	.13	227	.03
Would you feel good about it? . . . . .	.02	227	n.s.
Would you want people to know about it? . . . . .	.06	226	n.s.
Would you be proud of yourself? . . . . .	.01	227	n.s.
Would you feel happy for them?	-.04	227	n.s.
Would you think you should get something special? . . . . .	.00	226	n.s.
Would you feel happy with yourself? . . . . .	.09	227	n.s.
Average r = .05			
Suppose you get mad and yell at your parents.			
Would you worry that your parents may hit, spank or shake you? . . . . .	.25	226	.001
Would you feel guilty? . . . . .	.11	226	.05
Would you worry about how they feel? . . . . .	.12	226	.03
Would you worry that your parents may yell at you? . . . . .	.03	223	n.s.
Would you worry about disappointing your parents? . . . . .	.16	223	.007
Would you worry that your parents may take something away from you? . . . . .	.17	225	.006
Would you try to make up for what you did? . . . . .	.07	226	n.s.
Would you worry that your parents may not let you watch your favorite TV show? . . . . .	.26	226	.001
Average r = .15			

* Zero-order

Table 8. Internal Consistency α Coefficients for the Indexes of Parental Responses Reflecting the Internal and External Orientations for Positive and Negative Social Situations.

Item Index	α
<u>Positive Situations</u>	
Say you are proud of (HIM/HER) . . . . .	.70
Tell (HIM/HER) to feel good about what (HE/SHE) did . . . . .	.76
Kiss or hug or pat (HIM/HER) on the back . . . . .	.86
Explain why it was a good thing to do . . . . .	.78
Let (HIM/HER) do something (HE/SHE) wanted to do very badly . . . . .	.78
Let (HIM/HER) watch extra TV . . . . .	.86
Say that people appreciate the good things (HE/SHE) does . . . . .	.80
Give (HIM/HER) something special . . . . .	.84
Tell (HIM/HER) reasons why (HE/SHE) should keep doing these things . . . . .	.85
<u>Negative Situations</u>	
Don't talk to (HIM/HER) for a while . . . . .	.00
Say you are disappointed in (HIM/HER) . . . . .	.66
Yell at (HIM/HER) . . . . .	.81
Explain why (HE/SHE) shouldn't behave that way . . . . .	.67
Hit, spank, or shake (HIM/HER) . . . . .	.84
Say (HIS/HER) behavior makes you feel bad . . . . .	.81
Keep (HIM/HER) from watching TV . . . . .	.90
Don't let (HIM/HER) go out for a while . . . . .	.87
Tell (HIM/HER) another way to solve (HIS/HER) problem . . . . .	.71

index for which there is no internal consistency is the first one for the negative situations (don't talk to him/her for a while). That one item has been pointed out as a candidate for exclusion from the final analysis, as indicated by its descriptive statistics.

Table 9 presents the alpha coefficients for the indexes of child responses to social situations for the internal and external orientation dimensions. All indexes seem to be internally consistent to varying degrees. The lowest coefficient in the table is .61 for "would you feel good about it," and the highest is .88 for "would you worry that your parents may not let you watch your favorite TV show?."

Measures of test-retest reliability were also obtained for both parental and child responses. All items dealing with the internal and external orientations were included at the beginning of the questionnaire or interview, and one of the situations containing a subset of the items was repeated at the end of the questionnaire or interview in order to obtain an estimate of test-retest reliability.

Table 10, parts a and b contain the correlation coefficients between duplicate response items in the mother's interviews and in the children's questionnaires. The social situation in both cases is that in which the parents ask the child to do something for them, and the child doesn't do it. All the test-retest correlation coefficients are above .40, and all are statistically significant. The average

Table 9. Internal Consistency α Coefficients for the Indexes of Children's Responses Reflecting the Internal and External Orientations for Positive and Negative Social Situations.

Item Indexes	α
<u>Positive Situations</u>	
Would you feel you deserve a treat? . . . . .	.76
Would you feel good about it? . . . . .	.61
Would you want people to know about it? . . . .	.64
Would you be proud of yourself? . . . . .	.78
Would you feel happy for them? . . . . .	.67
Would you think you should get something special? . . . . .	.76
Would you feel happy with yourself? . . . . .	.83
<u>Negative Situations</u>	
Would you worry that your parents may hit, spank or shake you? . . . . .	.81
Would you feel guilty? . . . . .	.73
Would you worry about how they feel? . . . . .	.76
Would you worry that your parents may yell at you? . . . . .	.79
Would you worry about disappointing your parents? . . . . .	.82
Would you worry that your parents may take something away from you? . . . . .	.86
Would you try to make up for what you did? . . .	.82
Would you worry that your parents may not let you watch your favorite TV show? . . . . .	.88

Table 10. a. Test-retest Reliability for Children's Reactions.

Suppose your parents asked you to do something for them, and you don't do it.	<u>r*</u>	<u>N</u>	Signif- icance <u>p ≤</u>
Would you worry that your parents may hit, spank or shake you? . . .	.65	226	.001
Would you feel guilty? . . . . .	.57	225	.001
Would you worry about how they feel?	.60	225	.001
Would you worry that your parents may yell at you? . . . . .	.49	225	.001
Would you try to make up for what you did? . . . . .	.66	224	.001
Average r = .60			

b. Test-retest Reliability for Parent's Reactions.

Suppose you (or your husband) asked (NAME OF CHILD) to do something for you, and (HE/SHE) doesn't do it. What would you (and your husband) do?			
Don't talk to (HIM/HER) for a while .	.41	225	.001
Yell at (HIM/HER) . . . . .	.60	223	.001
Explain why (HE/SHE) shouldn't behave that way . . . . .	.52	222	.001
Hit, spank or shake (HIM/HER) . . . .	.69	225	.001
Say (HIS/HER) behavior makes you feel bad . . . . .	.68	224	.001
Average r = .58			

*Zero-order Pearson correlation coefficients.

test-retest correlation coefficient is .60 for both parental and child responses. These measures were considered to be reliable enough for further analysis.

Exposure to Antisocial Television Portrayals

a. Validity: Direct validation of the exposure measure that was used has not been conducted. Bechtel, Achelpohl, and Akers (1972) attempted such a task with direct observation of viewing behaviors of 20 families and a diary record kept by the participants. Respondents in that study were found to overestimate their exposure time.

No attempt was made to obtain exposure measures from both mothers and children since children are the best source of information with regard to the television programs they watch. Besides, the mothers' interviewing schedule was already lengthy.

b. Reliability: A measure of test-retest reliability was obtained for the indexes of exposure for each of the four areas of concern in this research, namely, physical aggression, verbal aggression, theft and deceit. Identical indexes to the ones created in this study were available from the survey and content analysis conducted one year earlier.

Table 11 contains the correlation between the first and the second year indexes of exposure to antisocial behaviors. All the correlations are statistically significant ($p \leq .001$) and all of them are of the magnitude of about .60.

Table 11. Correlations* Between the Indexes of Exposure to Antisocial Behaviors in the First and Second Years.

Indexes of Exposure	r	N	Significance p ≤
Physical Aggression	.65	188	.001
Verbal Aggression	.62	186	.001
Theft	.56	199	.001
Deceit	.62	190	.001

*Zero-order

Given the time lag of one year between one index and the other, and given the fact that there are measures for only two points in time, it is impossible to ascertain what part of the variance left unexplained is due to unreliability and what part is due to true change. However, the coefficients obtained are conservative in any case.

Given the composition of the indexes, the reliability coefficients reported do not only refer to viewing reliability, but to show content stability as well. Conceptually, one can interpret the coefficients to mean the amount of stability of exposure to the four types of behaviors of interest.

Child's Antisocial Predispositions

a. Validity: Leifer and Roberts (1972) obtained a correlation between similar items to the ones used here and a teacher's rating of $r=.33$ and $r=.49$. A similar coefficient was obtained by this writer with Latin American children. In this study, the mothers and the children were asked to

report the antisocial behavioral tendencies of the child, and similar measures obtained from the mother and the child were correlated in order to obtain an estimate of convergent validity. The indexes detailed in the section above were correlated for each one of the subcategories of antisocial behaviors that we are concerned with. The results of that analysis are reported in Table 12. The correlations for physical aggression and for theft were found to be statistically significant and not very high but in line with the coefficients typically encountered with this type of data. The correlations for verbal aggression and deceit were found to be unexpectedly low. Given the low degree of agreement between mother and child about the child's predispositions, it was decided that the data for mother and child should be separately analyzed with regard to these measures.

b. Reliability: Leifer and Roberts (1972) found a test-retest reliability coefficient of $r=.72$ with measures similar to this writer's. In order to obtain a test-retest reliability coefficient for the child's antisocial predispositions as reported by the mother and the child, indexes similar to those created for the second year were created for the first year data. Theft was absent from the first year data, consequently no coefficients could be calculated for that type of behavior.

Table 12. Correlations* Between Mother and Child Indexes of Reports of the Child's Antisocial Behaviors in Hypothetical Situations.

Index	r	N	Significance p ≤
Physical Aggression	.30	217	.001
Verbal Aggression	.10	220	.067
Theft	.23	221	.001
Deceit	.10	217	.074

*Zero-order

Table 13, parts a and b, presents the correlations between the indexes of antisocial behaviors for the first year with the ones for the second year. The reliability coefficients for the children's data are generally higher than for the mothers' report, with the exception of deceit. For both mothers' and children's reports the correlations are statistically significant, although not as substantial as one might have expected. Here again, one does not know how much of the unexplained variance is due to true change, and what part is due to unreliability.

Table 14 presents the internal consistency coefficients for the mothers' and children's reports of antisocial predispositions of the child. Since a minimum of three items are necessary in order to compute any measure of internal consistency, physical aggression and theft for the mothers' report are excluded from the table. It can be seen that the internal consistency for the children's indexes is generally

Table 13. Test-retest Reliability for the Indexes of the Children's Antisocial Predispositions in Hypothetical Situations. Correlations* Between One Year Lag Indexes.

	r	N	Significance p ≤
a. Mothers' Report			
Physical Aggression	.52	223	.001
Verbal Aggression	.51	221	.001
Deceit	.43	221	.001
b. Children's Self-report			
Physical Aggression	.68	214	.001
Verbal Aggression	.57	217	.001
Deceit	.37	217	.001

*Zero-order

Table 14. Internal Consistency α Coefficients for the Indexes of the Mother's Report and the Child's Own Report of Antisocial Behaviors in Hypothetical Situations. Year 2.

Index	α
<u>Mother</u>	
Verbal Aggression	.50
Deceit	.58
<u>Child</u>	
Physical Aggression	.88
Verbal Aggression	.81
Theft	.61
Deceit	.72

Note: Physical aggression and theft coefficients for the mother's report were noncomputable due to the small number of variables.

higher than for the mothers'. This difference, however, may be due to the larger number of items available for the children's indexes. All coefficients in Table 14 are of the magnitude of .50 and over.

Data Replicating the Emergence of the
Internal and External Orientations

As indicated earlier, mothers were asked to report parental practices, and the children responded to the child reaction items dealing with the internal and external dimensions. Both parental and child items were submitted to a principal axis factor analysis routine with varimax rotation, limiting the extraction of factors to the number of two. This was done in order to try to replicate the findings of the pretest and to further validate the existence of the internal and external dimensions. The results of this factor analysis were discouraging. Two clear dimensions emerged, but contrary to expectations, the children's responses clustered on one factor and the mother's responses on the other. Given this initial finding, the two sets of data for mothers and children were factor-analyzed separately. Since these were confirmatory factor analytic solutions, the extraction of factors was limited to two with the two sets of data.

Table 15 contains the results of the principal axis factor-analytic solution for parental practices. The indexes were ordered according to their position in the internal or in the

Table 15. Principal Factor Matrix with Varimax Rotation, Ordered According to Hypothesized Indexes Loadings. Parental Reactions.

Item	Factor 1	Factor 2
<u>Internal Orientation</u>		
Say you are disappointed in (HIM/HER) . . . . .	.44	.26
Explain why (HE/SHE) shouldn't behave that way . . . . .	.67	.07
Say (HIS/HER) behavior makes you feel bad . . . . .	.44	.27
Tell (HIM/HER) another way to solve (HIS/HER) problem . . . . .	.75	-.01
Say you are proud of (HIM/HER) . . . . .	.52	.09
Tell (HIM/HER) to feel good about what (HE/SHE) did . . . . .	.64	.09
Kiss or hug or pat (HIM/HER) on the back . . . . .	.36	.14
Explain why it was a good thing to do . . . . .	.79	.07
Say that you appreciate the good things (HE/SHE) does . . . . .	.52	.11
Tell (HIM/HER) reasons why (HE/SHE) should keep doing these things	.80	.14
<u>External Orientation</u>		
Don't talk to (HIM/HER) for a while . . . . .	.04	.17
Yell at (HIM/HER)	-.09	.35
Hit, spank, or shake (HIM/HER)	-.00	.36
Keep (HIM/HER) from watching TV . . . . .	.22	.54
Don't let (HIM/HER) go out for a while . . . . .	.19	.39
Let (HIM/HER) do something (HE/SHE) wanted to do very badly	.23	.67
Let (HIM/HER) watch extra TV . . . . .	.11	.64
Give (HIM/HER) something special . . . . .	.19	.54

external orientation. As can be seen the two expected dimensions appeared. The reader should be reminded that a loading of .35 was considered to be the cut-off point. Factor 1 underlies the internal orientation, and factor 2 comprises the external orientation of parental practices. Only one item loaded about equally and very low on both factors, namely, "don't talk to him/her for a while." It already has been noted that the mean and standard deviation for that index was the lowest, and also that this index had the lowest internal consistency coefficient. Apparently, the withdrawal of attention is not a pervasive parental technique neither does it accompany any consistent parental strategy. This one index also had a very low mean in the pretest. However it clearly loaded in the external dimension as hypothesized. In the pretest, the children provided the information regarding both parental and child reactions, and perhaps for children this technique of withdrawal of attention or love, is perceived to be symptomatic of externally oriented practices by their parents. However, when the parents themselves are questioned, the technique is not a part of the externally oriented syndrome.

In the factor-analytic solution, the internal dimension accounted for 28% of the total variance, and the external orientation accounted for 12%.

Table 16 presents the results of the factor analysis of the child responses indexes. Here, once again, the

Table 16. Principal Factor Matrix with Varimax Rotation, Ordered According to Hypothesized Indexes Loadings. Children's Reactions.

Item	Factor 1	Factor 2
<u>Internal Orientation</u>		
Would you feel guilty? . . . . .	.80	.02
Would you worry about how they feel? . . . . .	.82	.09
Would you worry about disappointing your parents? . . . . .	.80	.07
Would you try to make up for what you did? . . . . .	.70	.13
Would you feel good about it? . . . . .	.71	-.02
Would you be proud of yourself? . . . . .	.53	.16
Would you feel happy for them? . . . . .	.60	.03
Would you feel happy with yourself? . . . . .	.60	.07
<u>External Orientation</u>		
Would you worry that your parents may hit, spank or shake you? . . . . .	.14	.71
Would you worry that your parents may yell at you? . . . . .	.32	.60
Would you worry that your parents may take something away from you? . . . . .	.12	.77
Would you worry that your parents may not let you watch your favorite TV show? . . . . .	.10	.71
Would you feel you deserve a treat?	-.29	.50
Would you want people to know about it? . . . . .	.08	.13
Would you think you should get something special?	-.31	.47

clear emergence of the two dimensions is found. Factor 1 underlies the internal orientation and factor 2 reflects the external one. One item loads about equally low on both dimensions, "would you want people to know about it." This finding is surprising since the same index did discriminate between factors in the pretest, and in both the pretest and in this study the children were the respondents for this item. The children in this study were older than the children in the pre-test. However, if age was the explanatory factor for the discrepancy, other indexes should reflect the discrepancies as well. At this point this inconsistency escapes explanation.

The children's internal factor accounted for 33% of the total variance, and the external dimension accounted for 19%.

At this point the existence of the two internal and external dimensions for both parental practices and children's responses to social situations have been successfully replicated. However, the replication was done for parental and child indexes separately, since the solution including both sets of data renders a parental set of practices and a child's cluster of responses without discrimination between the two orientations. The low convergent validity coefficients reported below may explain to some extent the overriding covariation within the two separate sets of data. It is apparent that mothers and children see things quite differently.

To represent the internal and external orientations for parental practices and children's responses, four indexes were created by summing those indexes that loaded together in different factors. The two indexes that did not clearly load in any one dimension were excluded. Parental internal and external indexes were created as well as children's internal and external indexes.

Table 17 contains the means, medians, standard deviations, number of cases, index ranges and the internal consistency alpha coefficients for the four indexes. From examining this table it is clear that the external orientation is consistently lower than the internal. The variation within indexes is proportionally higher, however, for the external dimensions.

Table 17. Means, Medians, Standard Deviations, Number of Cases, Index Range and Internal Consistency α Coefficients for the Internal and External Indexes of Parent-Child Modes of Interaction.

Index	\bar{X}	Median	S	N	Index Range	α
<u>Child</u>						
Internal	47.6	50.5	11.6	216	0-64	.89
External	14.1	12.17	9.7	218	0-48	.79
<u>Parents</u>						
Internal	68.6	72.92	11.8	217	0-80	.85
External	18.3	17.45	10.2	219	0-56	.72

The alpha coefficients of internal consistency indicate that the indexes are sufficiently internally reliable given that the lowest of them all was .72.

The four indexes were intercorrelated among themselves and the results are as follows:

Child Internal x Child External	$r=.13$	$p<.05$
Child Internal x Parent Internal	$r=.11$	$p<.06$
Child External x Parent Internal	$r=.08$	n.s.
Child External x Parent External	$r=.27$	$p<.001$
Child Internal x Parent External	$r=.03$	n.s.
Parent Internal x Parent External	$r=.36$	$p<.001$

According to the literature reviewed in the first chapter, besides expecting to find one factor for both parental practices and child reactions for each of the internal and external orientations, it was to be expected that the internal parental orientation should be associated with the internal child orientation, and that the parental external orientation should be associated with the external child orientation. The correlation obtained between the two internal indexes was low ($r=.11$, $p=.053$) and fell short of significance. However, the correlation found between two external orientations was

.27 and statistically significant. These results seem to indicate that either the perceptions of parents and children differ substantially, or that internally oriented parents do not necessarily contribute to the internalization of moral values in their children. However, the more obvious types of discipline encompassed by the external orientation do seem to contribute to the child's focus on external factors of social situations.

The correlations obtained between the internal and external orientations for both the parental practices and the children's reactions were .36 and .13 respectively, both of them statistically significant. These findings seem to indicate that to the extent that parents and children are more internally oriented, they tend to also be more concerned with external considerations. In the children's case, the correlation, although statistically significant, is not substantial in magnitude. In the parents case the coefficient is more substantial and it may indicate that parents that are more concerned about their children tend to do more of everything, although it is noted that generally there is stronger tendency towards being internally oriented.

Given the discrepancies obtained from the mothers' and the children's data, it was decided that the analysis to test the hypotheses presented in Chapter I should be done separately for the mothers' and the children's data.

Analytical Methods

There were six main hypotheses to be tested, $H_a - H_f$, and different analytical tools seemed most appropriate in each case.

Hypotheses $H_a - H_c$ were tested by means of multiple regression analysis. Multiple regression analysis renders regression coefficients that, when standardized, indicate the magnitude of the unique contribution of one standard deviation of one of the independent variables on the dependent variable when holding all other factors constant. This form of analysis will also supply us with a multiple correlation coefficient that, when squared, indicates the amount of variability in the dependent variable that is accounted for by the set of independent variables. The interactions among variables can also be ascertained by this method when entering the interaction terms as independent variables in the regression equation.

To complement the regression analysis, a multiple analysis of variance was conducted to obtain contingency tables where the magnitude of individual cell means could be visually inspected. The results from both forms of analysis were expected to be very similar since both forms are derived from one general analytic model (Kerlinger and Pedhazur, 1973, pp. 6-9).

H_d , was tested by means of Student t-tests.

Finally, Hypotheses H_e and H_f were tested by means of contingent correlations. A contingent correlation is a conditional statement that separates those cases that fall in certain categories for which a Pearson Product Moment correlation is computed.

All analyses were conducted in a CDC 6500 computer system, with programs of the Statistical Package for the Social Sciences, at the computer facilities of Michigan State University.

Summary

First, the results of a preliminary study pretesting a set of instruments intended to tap two dimensions of parent and child modes of response were introduced.

The sample utilized in this study was described and the descriptive statistics of the measures used in this research project were presented. Three main sets of variables were considered: a. Internal and external orientations of parents and children; b. Exposure to antisocial television portrayals; and c. Antisocial behavioral predispositions of children. Validity and reliability estimates for the measures utilized were obtained and discussed.

The existence of an internal and an external orientation of parental and children's reactions to social situations was replicated, and it was found that although the two dimensions emerged for parents and children separately, they did not appear when the data for parents and children

were jointly analyzed. It was decided that the hypotheses of this study would be tested for the parental and the children's data separately.

Finally, the analytical tools utilized for testing the hypotheses of this research were presented and described.

CHAPTER III

RESULTS

The results of this study will be presented in three general sections, according to the order in which the hypotheses were originally introduced. The first section presents the results dealing with the main effects of the internal and external orientations, and exposure to antisocial television portrayals on the child's antisocial predispositions. Here, the interactions are explored.

Secondly, the hypothesized contrasts among different cells resulting from the intersections of exposure to television antisocial portrayals and the internal and external orientations on the child's antisocial predispositions, are presented. The last section comprises the results dealing with contingent correlations between exposure to antisocial portrayals on television and the child's antisocial predispositions at different intersections of the internal and external dimensions of parent-child orientations.

Within each section the internal and external parental and child modes of interaction are separately considered. Also, the four different categories of antisocial portrayals and children's predispositions are separately analyzed, namely, physical aggression, verbal aggression, theft, and deceit.

Analysis of Variance and Regression: H_a , H_b , and H_c

In this section, Hypotheses a, b, and c are tested by means of regression analysis and analysis of variance.

The hypotheses were worded as follows:

H_a : The more exposure to antisocial portrayals on television, the more antisocial behavioral predispositions will be displayed by children.

H_b : The more externally oriented the parents and the children, the more antisocial behavioral predispositions will be displayed by children.

H_c : The more internally oriented the parents and the children, the less antisocial behavioral predispositions will be displayed by children.

All three hypotheses will be simultaneously tested by both analytic methods, regression and analysis of variance, for each of the sets of data we have, the mothers and children, and for each category of antisocial behaviors of interest in this study: physical aggression, verbal aggression, theft and deceit.

Since there are three main effects that are being hypothesized, there are three possible two-way interactions, and one possible three-way interaction. In the analyses of variance the interactions are dealt with by the traditionally accepted methods (Overall and Klett, 1972, pp. 448-449). In the regression analyses, however, the interaction terms are constructed as multiplicative terms of the different combinations of the independent variables. These multiplicative

terms, by including the independent variables in themselves, are highly correlated with the independent variables. This collinearity presents a problem in determining the magnitude of regression coefficients.* In order to avoid collinearity the interaction or multiplicative terms are standardized, and through such standardization procedure the correlations between the independent variables and the interaction terms are attenuated (Fink and Noell, 1972). The resulting regression coefficients for the interactions are directly interpretable.

Now, the test of Hypotheses a, b, and c will be presented.

a. Physical Aggression

As the reader will recall, the parental internal and external orientations were reported by the mother, and the child's internal and external orientations were reported by the child.

Table 18a indicates that exposure to physical aggression on television and the external orientation of the parents have a relatively strong effect on the children's aggressive predispositions, when the interaction terms and the internal orientation are held constant, as evidenced by the partial standardized regression coefficients (B).

The same trend is observed when one looks at the zero order correlation coefficients. The interaction term of exposure by the external dimension also shows a statistically

* If extreme collinearity exists, it may be impossible to invert the correlation matrix of the independent variables, and if regression coefficients are obtainable they tend to be unstable from sample to sample. See Kerlinger and Pedhazur (1973).

Table 18. Parental Orientations and Child's Exposure on the Mothers' Report of the Child's Physically Aggressive Predispositions: Regression and Analysis of Variance Results.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
Exposure	.29**	.31**
External	.20*	.28**
Exposure x Internal x External	-.15	.01
Exposure x External	.14	.16*
Exposure x Internal	-.13	.03
External x Internal	.07	.09
Internal	-.02	.01

$$R = .41^{**} \quad R^2 = .17$$

b. Analysis of Variance

		INTERNAL	
		LO	HI
		External	
		LO	HI
Exposure	LO	$\bar{x}_1 = .83$ N=35	$\bar{x}_2 = 1.06$ N= 17
	HI	$\bar{x}_3 = 1.50$ N=26	$\bar{x}_4 = 2.00$ N=21
	LO	$\bar{x}_5 = .54$ N=24	$\bar{x}_6 = 1.23$ N=22
	HI	$\bar{x}_7 = .77$ N=17	$\bar{x}_8 = 1.70$ N=34

OVERALL MEANS
(Range 0-4)

EXPOSURE**		EXTERNAL**		INTERNAL	
HI	LO	HI	LO	HI	LO
1.55	0.89	1.54	0.92	1.14	1.29

*
p < .05
**
p < .001

Note: No interactions were significant

significant correlation coefficient which is not relevant since that correlation is still the result of the attenuated original correlation between the external orientation and exposure.

Table 18b which presents cell means for the dichotomized independent variables and significance of the analysis of variance test, provides identical results.

The multiple correlation in Table 18a when all the variables are correlated with the dependent variable is statistically significant, and the coefficient of determination (R^2) indicates that all the regressed variables jointly contribute 17% to the variation of the child's physically aggressive predispositions.

Hypotheses a and b are supported and Hypothesis c is rejected in favor of the null, since the internal parental orientation does not appear to diminish the children's favorable predispositions towards physical aggression. None of the interaction terms exhibit a significant regression coefficient, nor were the interactions found to be significant in the analysis of variance.

When we turn to the children's data in Table 19a and b we find that both forms of analyses render identical results. The internal dimension is overwhelmingly the most critical factor in predicting the children's aggressive predispositions. Exposure and the external child orientation are also found to be significant contributors, and none of the

Table 19. Children's Orientations and Exposure on the Self-report of Physically Aggressive Predispositions: Regression and Analysis of Variance.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
Internal	-.49**	-.45**
Exposure	.19*	.23**
External	.15*	.14*
External x Internal	-.10	.05
External x Internal x Exposure	-.03	-.13
Exposure x External	.02	.09
Exposure x Internal	.01	.09
R=.53** $R^2 = .29$		

b. Analysis of Variance

INTERNAL

		LO		HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}_1=7.55$ N=30	$\bar{x}_2=10.73$ N=11	$\bar{x}_5=3.79$ N=28	$\bar{x}_6=5.22$ N=27
	HI	$\bar{x}_3=9.06$ N=18	$\bar{x}_9=11.63$ N=32	$\bar{x}_7=5.70$ N=23	$\bar{x}_8=6.17$ N=24

OVERALL MEANS
(Range 0-18)

EXPOSURE*		EXTERNAL*		INTERNAL**	
HI	LO	HI	LO	HI	LO
8.39	6.16	8.29	6.32	5.16	9.66

* $p \leq .05$

** $p \leq .001$

Note: No interactions were significant

interactions are statistically significant. The contributions of all three variables are in the expected direction, and it was decided to reject the null hypotheses in all three cases, for H_a , H_b , and H_c . It is observed that all three independent variables and interaction terms contribute 29% of the variation in the dependent variable, the principal contributors being the main effects.

It is interesting to note that while the external dimension was significant and the largest predictor with the mother's data, the internal orientation was a substantial and significant predictor in the child's case. With the mother's data the internal orientation was unimportant, and with the child's data the external orientation contributed a smaller amount to the child's physically aggressive predispositions. Exposure to television physical aggression was about equally important in both sets of data.

b. Verbal Aggression

Table 20a and b present the results regarding the parental orientations and the mother's report of the child's verbally aggressive predispositions. Again, one finds that both forms of analyses give the same results, and that these results are very similar to those for physical aggression. The external orientation and exposure to TV verbal aggression are the most important predictors of the child's verbally aggressive predispositions. Neither the interaction terms nor the internal orientation were found to be significant or

Table 20. Parental Orientations and Child's Exposure on the Mothers' Report of the Child's Verbally Aggressive Predispositions: Regression and Analysis of Variance Results.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
External	.20*	.24**
Exposure	.17*	.23**
Exposure x Internal	-.06	-.07
Internal	-.08	.06
Internal x External	-.07	-.08
Exposure x External	.04	.05
Exposure x External x Internal	-.01	.10

$$R = .31^* \quad R^2 = .09$$

b. Analysis of Variance

		INTERNAL			
		LO		HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}_1=3.17$ N=35	$\bar{x}_2=3.81$ N=16	$\bar{x}_5=3.12$ N=26	$\bar{x}_6=3.58$ N=24
	HI	$\bar{x}_3=3.81$ N=26	$\bar{x}_4=4.26$ N=23	$\bar{x}_7=3.13$ N=15	$\bar{x}_8=4.29$ N=31

OVERALL MEANS
(Range 0-6)

EXPOSURE*		EXTERNAL*		INTERNAL	
HI	LO	HI	LO	HI	LO
3.97	3.36	4.02	3.31	3.62	3.69

* $p \leq .05$

** $p \leq .001$

Note: No interactions were significant

substantial. Nine percent of the variance in the dependent variable was accounted for by total set of predictors.

Hypotheses a and b were supported by these data, and Hypothesis c was rejected in favor of the null.

The results of the analyses that tested the three hypotheses with the children's data are presented in Table 21a and b. The children's internal orientation shows again to be the most potent negative predictor of the child's predispositions, verbal aggression in this case. Exposure is again found to be important, and the external orientation has a contribution of zero. None of the interactions turned out to be significant or important in any sense.

With the children's data it was decided to reject the null hypotheses in the cases of H_a and H_c , but it wasn't possible to reject the null in the case of H_b . All the predictors in the system accounted for 12% of the variance in the children's verbally aggressive predispositions.

c. Theft

Table 22a and b presents the results for the mothers' data regarding theft, for Hypotheses a, b, and c.

The analysis of variance results indicate that none of the main effects or interactions were statistically significant. The regression analysis results are almost identical except for the regression coefficient for the interaction of exposure with the external orientation. This discrepancy between both forms of analyses can be readily explained due

Table 21. Children's Orientations and Exposure on the Self-report of Verbally Aggressive Predispositions: Regression and Analysis of Variance.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
Internal	-.26**	-.29**
Exposure	.19*	.18*
Exposure x Internal	.05	.14*
Exposure x Internal x External	-.06	-.14*
Internal x External	-.05	.06
Exposure x External	.04	.07
External	-.01	.01

$$R = .35^{**} \quad R^2 = .12$$

b. Analysis of Variance

		INTERNAL			
		LO	HI	HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}1=8.70$ N=27	$\bar{x}2=8.77$ N=13	$\bar{x}5=6.77$ N=35	$\bar{x}6=6.96$ N=23
	HI	$\bar{x}3=9.33$ N=21	$\bar{x}4=9.9$ N=30	$\bar{x}7=9.41$ N=17	$\bar{x}8=7.68$ N=28

OVERALL MEANS
(Range 0-18)

EXPOSURE*		EXTERNAL		INTERNAL*	
HI	LO	HI	LO	HI	LO
9.05	7.61	8.37	8.28	7.50	9.26

* $p \leq .05$

** $p \leq .001$

Note: No interactions were significant

Table 22. Parental Orientations and Child's Exposure on the Mother's Report of the Child's Predispositions Towards Theft: Regression and Analysis of Variance Results.

<u>a. Regression</u>		<u>B</u>	<u>r</u>
Exposure x External		.17*	.17*
External		.14	.14*
Internal		-.13	-.10
Exposure x Internal		-.14	-.01
Exposure		.07	.09
Internal x External		.05	.10
Exposure x External x Internal		-.05	-.01

$$R = .27 \quad R^2 = .08$$

b. Analysis of Variance

		INTERNAL	
		LO	HI
		External	
		LO	HI
Exposure	LO	$\bar{x}_1 = .51$ N=39	$\bar{x}_2 = .47$ N=15
	HI	$\bar{x}_3 = .44$ N=23	$\bar{x}_4 = .54$ N=24
		External	
		LO	HI
Exposure	LO	$\bar{x}_5 = .28$ N=25	$\bar{x}_6 = .44$ N=18
	HI	$\bar{x}_7 = .20$ N=15	$\bar{x}_8 = .43$ N=37

OVERALL MEANS
(Range 0-2)

EXPOSURE		EXTERNAL		INTERNAL	
HI	LO	HI	LO	HI	LO
0.42	0.43	0.47	0.39	0.36	0.50

* $p \leq .05$

** $p \leq .001$

Note: No interactions were significant with ANOVA

to the elimination of variation in the independent variables resulting from their dichotomization into high and low. The significant interaction means that although none of the components, exposure or the external orientation, contribute to favorable predispositions towards theft in children, the joint action of both variables does seem to have an impact. Originally the writer did not hypothesize this two way interaction effect, and will not elaborate further on it, except to recognize its interest as a post hoc finding.

In this instance, Hypotheses a, b, and c are rejected in favor of the null. The inconsistency of this set of findings with regard to the pattern that has been identified with physical and verbal aggression can be explained in terms of the restricted variability of the dependent variable. The mothers were only presented with one item regarding their children's predispositions towards theft, and the range of the scale was extremely limited as can be seen in Table 22b.

The children's data in Table 23a and b are more consistent with the patterns of results identified above. The internal orientation on the part of the child is the most powerful negative predictor of the child's predispositions towards theft. Neither the external orientation or the measure of exposure were found to predict the dependent variable to any extent. In the regression analysis, it was found that there was a small significant effect of the

Table 23. Children's Orientations and Exposure on the Self-report of Predispositions Towards Theft:
Regression and Analysis of Variance Results.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
Internal	-.33**	-.33**
Internal x External	-.17*	-.07
Exposure x External x Internal	-.09	-.16*
External	-.08	-.13*
Exposure	.03	-.01
External x Exposure	.01	.01
Internal x Exposure	.01	.03
$R = .38^{**} \quad R^2 = .15$		

<u>b. Analysis of Variance</u>		INTERNAL			
		LO		HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}_1=2.07$ N=29	$\bar{x}_2=2.39$ N=13	$\bar{x}_5=1.59$ N=32	$\bar{x}_6=1.23$ N=22
	HI	$\bar{x}_3=2.00$ N=20	$\bar{x}_4=2.16$ N=32	$\bar{x}_7=1.81$ N=21	$\bar{x}_8=1.33$ N=30

<u>OVERALL MEANS</u> (Range 0-4)					
EXPOSURE		EXTERNAL		INTERNAL**	
HI	LO	HI	LO	HI	LO
1.82	1.76	1.72	1.85	1.44	2.13

* $p \leq .05$

** $p \leq .001$

Note: No interactions were significant with ANOVA

interaction of the internal and the external orientations, and this constitutes another post hoc finding that is presented at face value. This interaction term indicates that the unique effect due to the joint action of both orientations depresses the likelihood of the child's favorable attitudes towards theft. The larger range of this scale makes the results to be trusted a little more than the ones for the mother's data, however they must be treated with caution.

Hypothesis c is supported and Hypotheses a and b are rejected in favor of the null.

Fifteen percent of the variance in the dependent variable is accounted for by all the independent variables, being the internal dimension the most important of all of them.

At this point it is important to emphasize that no correlation between exposure to television theft and the children's predispositions towards theft was found either with the mothers' or the children's data. Further examination of the data dealing with theft would be useless since the original focus of this study is the analysis of parental mediation of children's learning from antisocial television portrayals. Since no original correlation was found no mediation can be investigated. Consequently the rest of the hypotheses to be tested will not include theft.

d. Deceit

The results regarding deceit for both the mothers' and children's data are in Tables 24 and 25.

Both regression and analysis of variance have rendered identical results in this case, with one exception. The mothers' data in Table 24a and b show that exposure and the external orientation are significant predictors of the child's favorable predispositions towards deceit. The internal dimension was found to be a significant predictor with the regression analysis, but not so with the analysis of variance. The reason for the discrepancy can one more time be explained by the restriction of variability due to the dichotomization of the independent variables in the analysis of variance approach. Given this restriction of variability we can confidently opt for placing more weight on the regression analysis results and decide to reject the null hypotheses in favor of the research Hypotheses a, b, and c with the mothers' data. The complete set of independent variables accounted for 18 percent of the variance in the dependent variable, and no interactions were found to be significant.

When one considers the results for the children's data, we find that one more time the internal dimension is a very powerful negative predictor by itself, and that no other main effects or interactions are statistically significant. These results are in Table 25a and b. Taking into

Table 24. Parental Orientations and Child's Exposure on the Mother's Report of the Child's Predispositions Towards Deceit: Regression and Analysis of Variance Results.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
External	.30**	.28**
Internal	-.29**	-.08
Exposure	.21*	.28**
External x Internal	-.12	-.02
Exposure x External	.07	.09
Exposure x Internal	-.06	-.04
Exposure x Internal x External	.01	.08

$$R = .42^{**} \quad r^2 = .18$$

b. Analysis of Variance

INTERNAL

		LO		HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}_1 = .81$ N=37	$\bar{x}_2 = 1.31$ N=16	$\bar{x}_5 = .64$ N=25	$\bar{x}_6 = 1.09$ N=22
	HI	$\bar{x}_3 = 1.39$ N=23	$\bar{x}_4 = 1.65$ N=23	$\bar{x}_7 = 1.00$ N=16	$\bar{x}_8 = 1.61$ N=33

OVERALL MEANS
(Range 0-6)

EXPOSURE*		EXTERNAL*		INTERNAL	
HI	LO	HI	LO	HI	LO
1.46	0.91	1.45	0.93	1.14	1.22

* $p < .05$

** $p < .001$

Note: No interactions were significant with ANOVA

Table 25. Children's Orientations and Exposure on the Self-report of Predispositions Towards Deceit:
Regression and Analysis of Variance Results.

<u>a. Regression</u>	<u>B</u>	<u>r</u>
Internal	-.40**	-.36**
Exposure	.12	.15*
Internal x External	-.12	.00
External	.09	.06
Exposure x External x Internal	-.02	-.11
Exposure x Internal	.02	.08
Exposure x External	-.00	.05
$R = .41^{**} \quad R^2 = .17$		

b. Analysis of Variance INTERNAL

		LO		HI	
		External		External	
		LO	HI	LO	HI
Exposure	LO	$\bar{x}_1=2.41$ N=29	$\bar{x}_2=2.54$ N=13	$\bar{x}_5=1.53$ N=32	$\bar{x}_6=1.91$ N=23
	HI	$\bar{x}_3=3.00$ N=19	$\bar{x}_4=3.97$ N=29	$\bar{x}_7=1.90$ N=; 9	$\bar{x}_8=1.79$ N=29

OVERALL MEANS
(Range 0-10)

EXPOSURE		EXTERNAL		INTERNAL**	
HI	LO	HI	LO	HI	LO
2.71	2.02	2.60	2.14	1.76	3.06

* $p < .05$

** $p < .001$

Note: No interactions were significant

consideration all the independent variables, the amount of variance explained in the child's favorable predispositions towards deceit is 17%. Hypothesis c is confirmed and Hypotheses a and b are rejected by the results obtained.

To summarize, two main patterns of results have been found, one with the mothers' and another with the children's data. In the mothers' case it was consistently found that television exposure to antisocial behaviors and the parent's external orientation towards the child's behavior are the most consistent predictors of the child's antisocial predispositions.

In the children's case, it was found that exposure to antisocial behaviors in general is also a consistent predictor of the child's antisocial predispositions, but not as powerful as the internal orientation of the child with regard to social situations.

The internal orientation on the parents part was not found to always significantly predict the children's antisocial predispositions, in the sense of reducing them. With the children's data the external orientation of the child was not found to always enhance the antisocial predispositions of the child.

The analyses of variance have given us the opportunity to inspect the means of the dependent variable at different intersections of the dichotomized independent variables.

In Hypothesis d specific predictions were made regarding the differences or similarities among the cells in those tables, and will now proceed to present the results of those hypothesized comparisons.

T-tests: H_d

In order to check for the specific effects of different values of the independent variables on the dependent variable, a set of one-tailed t-tests was conducted. The reference for the specific means being tested are the tables in the above section that deal with the analyses of variance results. A special notation will be utilized for indicating the statistical significance of the comparisons hypothesized and this notation will be exemplified with the original hypothesis. It was stated and expected that:

$$\bar{x}_4 > \bar{x}_3 = \bar{x}_2 > \bar{x}_1 > \bar{x}_8 > \bar{x}_7 = \bar{x}_6 > \bar{x}_5$$

If the hypothesis were completely supported with a set of data it would look exactly as the original statement of the hypothesis except that it would have the actual means between the symbols larger than (>) or equal (=). Whenever a symbol ">" is placed between two means the difference between them is at a probability level of less than .05. In the cases of hypothesized equalities, in order to avoid a type I error, the probability level is established at .5 two-tailed, and only in those occasions in which the

statistical significance level of "t" is larger than .5 it is said that the equality is confirmed. Both symbols ">" or "=" will only be used for hypothesized differences or equalities.

At this point the reader should be reminded that according to the theory in the first chapter, there are reasons to expect that \bar{x}_4 should be the highest mean and \bar{x}_5 should be the lowest. Clearly, those children who themselves or their parents are highly externally oriented and who are highly exposed to television antisocial portrayals, and who themselves or their parents are low in their internal orientation should be the children most likely to be antisocially predisposed. However, those children who are not highly exposed to television antisocial behaviors, who themselves or their parents are highly internally oriented, and low in their external orientation, should be the children least likely to be antisocially predisposed.

The above relation is expressed in Hypothesis d, and the rest of the comparisons are derived from that expectation giving equal weights to exposure and the external and internal orientations, the external orientation being considered a facilitator and the internal an inhibitor of antisocial predispositions. With these considerations in mind we proceed to present the results of comparisons between specific means.

a. Physical Aggression

Below are the results for Hypothesis d regarding physical aggression for the mothers' and the children's data.

$H_d:$	$\bar{x}_4 > \bar{x}_3 = \bar{x}_2 > \bar{x}_1 > \bar{x}_8 > \bar{x}_7 = \bar{x}_6 > \bar{x}_5$
Mothers:	2.0 1.5 1.6 0.83 1.7 > 0.77 1.23 > 0.54
Children:	11.63 > 9.06 10.73 > 7.53 6.17 5.7 = 5.22 3.79

The pattern of the means for the mothers' data confirms the expectations for the comparisons comprising $\bar{x}_4 - \bar{x}_1$, but not so for the comparisons for the second half of the hypothesized order of means. There are no statistically significant differences between the pairs from \bar{x}_4 to \bar{x}_1 , and there are two significant comparisons, as postulated, in the second part of the expression.

The comparison between \bar{x}_4 and \bar{x}_5 was found to be statistically significant ($t=4.55$, $df=30.25$, $p < .001$ with a separate variance estimate) in the expected direction, and in general we can conclude that H_d is partially supported with the mothers' data.

The general pattern of the means is consistent with the results presented in Table 18a and b. In that table it was found that exposure and the external orientation had significant main effects but not so the internal orientation, that is why we find that \bar{x}_8 is larger than \bar{x}_1 ($t=-3.38$, $p < .001$) in the direction opposite to that hypothesized.

The means corresponding to the children's data are all in the expected direction. Three of the comparisons were statistically significant. The comparison between \bar{x}_4 and \bar{x}_5 is also significant ($t=8.08$, $df=58$, $p < .001$) in the predicted direction. With the children's data Hypothesis d can be said to be partially supported as was the case with the mothers' data.

b. Verbal Aggression

The results pertaining to the mothers' and the children's data with regard to verbal aggression are presented below:

$H_d:$	\bar{x}_4	$>$	\bar{x}_3	$=$	\bar{x}_2	$>$	\bar{x}_1	$>$	\bar{x}_8	$>$	\bar{x}_7	$=$	\bar{x}_6	$>$	\bar{x}_5
Mothers:	4.26		3.81	$=$	3.81		3.17		4.29	$>$	3.13		3.58		3.12
Children:	9.9		9.33	$=$	8.77		8.70		7.68	$>$	9.91		6.96		6.77

With the mothers' data the means are generally in the direction predicted. The equality between \bar{x}_3 and \bar{x}_2 is significant below the probability level established of .5, and the other hypothesized equality was not statistically significant. Only one of the hypothesized comparisons was significant, and one post hoc comparison was found to be significant in the opposite direction to that hypothesized ($t= -2.86$, $df=64$, $p \leq .006$, two-tailed test) for \bar{x}_1 and \bar{x}_8 . The difference between \bar{x}_4 and \bar{x}_5 is one more time found to be significant ($t=2.43$, $df=47$, $p < .02$). Hypothesis d regarding verbal aggression, with the mothers' data can be said to be partially supported.

The means for the children's data are all in the predicted direction with one exception, that is, there was a post hoc significant difference between \bar{x}_7 and \bar{x}_6 , where an equality was initially expected ($t=2.13$, $df=38$, $p < .05$, two-tailed test). The equality between \bar{x}_3 and \bar{x}_2 was found to be statistically significant, and the hypothesized difference between \bar{x}_8 and \bar{x}_7 was significant in the predicted direction. The difference between \bar{x}_4 and \bar{x}_5 , the two extremes of Hypothesis d was significant ($t=3.77$, $df=63$, $p < .001$), and Hypothesis d is supported in part one more time.

c. Deceit

The results dealing with predispositions towards deceit are:

$H_d:$	\bar{x}_4	$>$	\bar{x}_3	$=$	\bar{x}_2	$>$	\bar{x}_1	$>$	\bar{x}_8	$>$	\bar{x}_7	$=$	\bar{x}_6	$>$	\bar{x}_5
Mothers:	1.65		1.39	$=$	1.31		0.81		1.61		1.0	$=$	1.09		0.64
Children:	3.97		3.0	$=$	2.54		2.41		1.79		1.9	$=$	1.91		1.53

The mothers' data follow the same pattern found for physical and verbal aggression. One more time \bar{x}_8 was found to be larger than \bar{x}_1 ($t= -2.55$, $df=68$, $p < .02$, two-tailed test) in a post hoc fashion. The two hypothesized equalities were corroborated, and the difference between \bar{x}_4 and \bar{x}_5 was found to be significant ($t=2.59$, $df=36.05$, $p < .02$, with a separate variance estimate). These results one more time follow the main effects encountered in Table 24a and b, that is, no main effect was found for the parental internal orientation. We can say that Hypothesis d received partial support

with the mothers' data in the case of deceit.

The children's data exhibit the hypothesized pattern of means, but only the equalities found statistical support. The difference between \bar{x}_4 and \bar{x}_5 is statistically significant in the hypothesized direction ($t=4.91$, $df=46.21$, $p < .001$, with a separate variance estimate). In this case we can say that Hypothesis d follows the pattern identified for physical aggression and verbal aggression, and is partially supported.

Contingent Correlations: H_e and H_f

The internal and external dimensions of parent-child orientations were divided at the median* in order to obtain the following four cells, each of which contains a zero order correlation coefficient.

		INTERNAL ORIENTATION	
		LOW	HIGH
EXTERNAL ORIENTATION	LOW	r1	r2
	HIGH	r3	r4

The correlation coefficient in each of the cells is between one of the types of exposure to antisocial behaviors on television, and the same type of antisocial predisposition in the child.

* Three different breakdowns also were considered: the dimensions were subdivided into three equal segments and then two extreme combinations were produced. Whatever the breakdowns the results rendered were similar. Consequently the partition at the median was chosen as the least arbitrary for presentation.

As indicated in the first chapter, if r_A is the overall correlation between a type of specific television exposure and the same type of antisocial predisposition in the child, it was then hypothesized:

$$H_e: r_2 < r_A < r_3 \quad \text{and}$$

$$H_f: r_2 \leq r_1 \leq r_3 \\ r_2 \leq r_4 \leq r_3$$

Z tests for difference between independent correlations were used in order to assess the statistical significance of the differences between pairs of correlations (Bruning and Kintz, 1968, pp. 191-192).

a. Physical Aggression

First of all, the overall zero order correlations between exposure to TV physical aggression and the child's and mother's reports of the child's physically aggressive predispositions were:

Exposure to TV	Child's Physically Aggressive Predispositions	
	<u>Mother's Report</u>	<u>Child's Report</u>
Physical Aggression	$r = .31$ $N = 210$ $p \leq .001$	$r = .23$ $N = 206$ $p \leq .001$

The reader should be reminded that the measure of exposure to television was obtained only from the child.

Table 26 presents the contingent zero order correlations obtained at different intersections of the internal and external

Table 26. Contingent Correlations Between Exposure and the Child's Physical Aggression as Reported by Mother and Child at Different Intersections* of the Internal and External Orientations of Parents and Their Children.

- a. Internal and external parental orientations.
Correlations of exposure with the mother's report of the child's physical aggression.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = .27$ $N = 57$ $S = .02$	$r = .19$ $N = 45$ $S = .12$
	HIGH	$r = .44$ $N = 36$ $S = .004$	$r = .23$ $N = 58$ $S = .04$

- b. Internal and external child orientations.
Correlations of exposure with the child's own report of physical aggression.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = .05$ $N = 48$ $S = .37$	$r = .29$ $N = 51$ $S = .02$
	HIGH	$r = .19$ $N = 44$ $S = .11$	$r = .03$ $N = 50$ $S = .43$

* When the two dimensions are divided at the median

parental orientations. Each of the dimensions was partitioned at the median. The correlations reported include the measures of the child's predispositions that correspond to the orientations utilized, be them the parents or the child's. The portion a of the table always refers to parental orientations and the child's predispositions as reported by the mother. The portion b of the table uses the child's internal and external orientations and his/her own report of predispositions.

Table 26a, at first glance seems to corroborate the original expectations, as stated in Hypotheses e and f. The correlation at the low external, high internal intersection is lower than the overall correlation and the one at the high external, low internal cell. Also, the correlations at the high-high and low-low cells are in between the other two correlations.

The Z value for $p \leq .05$ is 1.64 in the case of one-tailed tests. When comparing the Z value of the difference between pairs of correlations in Table 26a, and between the correlations in the table and the overall, with 1.64 it was found that none of them was higher, and consequently none of the comparisons were found to be statistically significant at the probability level of .05.

Although for the individuals in the sample Hypotheses e and f are not rejected, inferentially they are. All the differences among correlations were found to be in the expected direction in the sample, but they were not statistically

significant.

When considering the children's data in Table 26b one finds that none of the expectations are fulfilled. The pattern of correlations is reversed, and the inferential significance tests are all insignificant. Hypotheses e and f are rejected in favor of the null both for the sample cases and for the population these cases represent.

b. Verbal Aggression

The overall zero order correlations between exposure to TV and verbal aggression and the child's predispositions to be verbally aggressive were:

Exposure to TV Verbal Aggression	Child's Verbally Aggressive Predispositions	
	<u>Mother's Report</u>	<u>Child's Report</u>
	$r = .23$	$r = .18$
	$N = 210$	$N = 207$
	$p \leq .001$	$p \leq .005$

Table 27 presents the correlations at different intersections of the internal and external dimensions for both parents and children.

For the parental orientations and the mother's report of the children's verbally aggressive predispositions, Table 27a contains the correlation coefficients obtained.

The patterns of correlations in Table 29a is close to the expectations, except that neither the overall correlation, neither the correlations at the high-high or low-low intersections fall between the high internal-low external and the

Table 27. Contingent Correlations Between Exposure and the Child's Verbal Aggression as Reported by Mother and Child, at Different Intersections* of the Internal and External Orientations of Parents and Their Children.

- a. Internal and external parental orientations.
Correlations of exposure with the mother's report of the child's verbal aggression.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = .26$ $N = 57$ $S = .03$	$r = -.09$ $N = 45$ $S = .27$
	HIGH	$r = .15$ $N = 37$ $S = .20$	$r = .26$ $N = 57$ $S = .03$

- b. Internal and external child orientations.
Correlations of exposure with the child's own report of verbal aggression.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = -.09$ $N = 48$ $S = .27$	$r = .36$ $N = 52$ $S = .004$
	HIGH	$r = .14$ $N = 44$ $S = .19$	$r = .13$ $N = 50$ $S = .18$

*When the two dimensions are divided at the median

high external-low internal coefficients. However, as expected, the lowest correlation in the table is that at the high internal-low external cell. All comparisons among the correlation coefficients are nonsignificant, except for the comparison between the overall coefficient and the one located at the high internal-low external cell, and it is in the predicted direction ($Z=1.92$, $p < .05$). In this sample the original Hypotheses e and f are partially confirmed, and inferentially, for the statistically significant finding, Hypothesis e is also partially confirmed.

When we turn to Table 27b one finds a pattern of correlations contrary to our expectations. None of the comparisons among correlation coefficients are significant, except for one post hoc finding. The correlation in the low-low cell is significantly lower than the coefficient in the high internal-low external cell, according to a two-tailed Z test of significance ($Z=2.26$, $p < .05$). This statistically significant finding is contrary to these expectations. In general with the children's data it was decided to reject Hypotheses e and f.

c. Deceit

The overall zero order correlations between exposure to deceit on television and the child's favorable predispositions towards deceit were:

Exposure to TV Deceit	Child's Favorable Predispositions Towards Deceit	
	<u>Mother's Report</u>	<u>Child's Report</u>
	$r = .28$	$r = .15$
	$N = 209$	$N = 207$
	$p \leq .001$	$p \leq .02$

Table 28 presents the correlations obtained between exposure to TV deceit and the child's favorable predispositions towards this type of behavior at different intersections of the internal and external orientations of both the child and the parents.

For the mothers' data, Table 28a indicates that at first glance the expectations are disconfirmed. The low internal-high external cell shows the lowest correlation in the table. This is in the exact opposite direction of the hypothesized relationships. Z tests of significance indicate that no comparisons are statistically significant.

Part b of Table 28 shows that for the children's data, the pattern of correlations is contrary to Hypotheses e and f. No inferential statistical tests were significant for any of the comparisons among correlation coefficients.

To summarize, it can be said that in general, the patterns of correlations for the mothers' data support the expectations expressed in Hypotheses e and f. However, when inferential statistical tests are used no significant differences among correlation coefficients appear. If a larger sample had been utilized, and if the coefficients had not

Table 28. Contingent Correlations Between Exposure and the Child's Dispositions Towards Deceit as Reported by Mother and Child, at Different Intersections* of the Internal and External Orientations of Parents and Their Children.

- a. Internal and external parental orientations.
Correlations of exposure with the mother's report of the child's dispositions towards deceit.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = .38$ $N = 56$ $S = .002$	$r = .20$ $N = 45$ $S = .10$
	HIGH	$r = .12$ $N = 37$ $S = .24$	$r = .28$ $N = 57$ $S = .02$

- b. Internal and external child orientations.
Correlations of exposure with the child's own report of his/her dispositions towards deceit.

		INTERNAL	
		LOW	HIGH
EXTERNAL	LOW	$r = -.04$ $N = 48$ $S = .39$	$r = .19$ $N = 51$ $S = .09$
	HIGH	$r = .15$ $N = 43$ $S = .16$	$r = -.03$ $N = 51$ $S = .41$

* When the two dimensions are divided at the median

changed in magnitude, Hypotheses e and f would have been mostly supported, especially in the cases of physical aggression and verbal aggression.

With the children's data, one encounters a general pattern that not only disconfirms the hypotheses but that is reversed. The tests of statistical significance used showed that the correlations in each of the cells tended not to significantly differ from each other, but the pattern is surprising.

Summary

Chapter III has dealt with the results of the tests of the hypotheses of this study. The results were divided into three main sections: 1. regression and analysis of variance; 2. t-tests for comparisons between pairs of means; and 3. contingent correlations. Each method utilized dealt with a set of hypotheses.

When analysis of variance and regression were used to test Hypotheses a, b, and c, it was generally found that with the mothers' data exposure and the external orientation were significant predictors of the childrens' antisocial predispositions in general. In the children's case, the internal orientation was found to be a potent and significant negative contributor to the child's antisocial predispositions, and to a lesser extent exposure in some occasions and the external orientation in others.

The hypothesized differences among subgroup means were tested by t-tests. These results were generally in agreement with the regression and analysis of variance results, and rendered partial support to Hypothesis d in most comparisons.

It was generally found that with the contingent correlation analyses the data support Hypotheses e and f in the mothers' case, although the results were not statistically significant in general.

Hypotheses e and f were disconfirmed by the observed results in the children's case, and they were not statistically significant. The patterns of correlations observed was contrary to that expected.

The results above represent an interesting set of complementary data. The inconsistencies require that explanations be attempted, and this will be done in the discussion chapter.

CHAPTER IV

SUMMARY AND DISCUSSION

Summary

The present study dealt with the role of different modes of parent-child interaction as mediators of children's modeling of television antisocial portrayals. This type of research is innovative in that it attempts to explain the mechanisms by which children model the behaviors they witness on the television screen. Past research has been mainly concerned with the modeling process per se without further consideration for the social conditions that facilitate or inhibit it.

Some research has been done that deals with parental and adult mediation of children's television learning, but these research efforts have mainly been concerned with mediation during television exposure or with regard to it. This study argues that there are enduring patterns of parental behaviors that in turn affect the children's internalization of values or behavioral norms. Both parental and children's orientations have been shown to be related, and in this study it has been argued that parental and children's orientations should act as mediators of the children's display of predispositions modeled after negative television examples.

More specifically, two main orientations of parent-child interactions with regard to social situations have been identified, namely, an internal and an external orientation.

The parental internal orientation is composed of a set of behaviors that tend to focus the attention of the child on the consequences of his/her behaviors on others. This is an inductive form of child rearing where affection is the norm and is accompanied by reasoning, explanation, and appeals to self evaluation on the part of the child. Internally oriented parents have been expected to lead their children towards the internalization of moral values which comprises consideration for the welfare of others, self evaluation, reparation of wrongdoings, and guilt feelings after transgressions occur.

The parental external orientation is constituted of power assertive techniques which emphasize the external consequences of the behavior for the child with little consideration for others. External punishments or rewards have been found to teach the child to expect extrinsic consequences for his/her behaviors, be they positive or negative. An externally oriented child may behave in socially desirable ways when there is the possibility of some external rule enforcement. External rewards sensitize the child to behave in socially desirable ways for the sake of social recognition or material rewards but little internal satisfaction is achieved.

The main difference between the two types of orientations was said to be that the internal orientation in parents provides the children with the necessary cognitive structure for evaluating his/her social behaviors. Externally oriented parents do not provide cognitive resources upon which the child can rely when social decisions have to be made.

The theoretical contribution of this study has been to extrapolate the results of parent-child interaction research to the instance of television modeling of four antisocial behaviors--physical aggression, verbal aggression, theft and deceit. The child who has been provided with cognitive resources for evaluating his/her social behaviors should be able to discount antisocial television portrayals to a larger extent than a child who is externally oriented.

The internally oriented child should be less influenced by negative television examples than the child who bases his/her social behaviors on external considerations.

The first task attempted was to construct a pilot instrument to tap the internal and the external dimensions or parent-child interaction modes. A pretest instrument administered to children rendered two clear separate dimensions, one external and one internal, when the items were factor analyzed. In the design of a final study the parental items were administered to the mothers and the children's orientation items were presented to the children. When all parental and child items were factor analyzed the two dimensions that

emerged discriminated between parents and children but not between the internal and the external orientations. When factor analyzed separately, the parental and the children's data showed in each case to be decomposable into the two expected internal and external orientations. Given this finding, the proposed hypotheses were separately tested for the parental and the children's data.

Six hypotheses were tested in this study. Three hypotheses dealt with the main effects expected from the internal and external orientations and exposure to antisocial television portrayals. The next hypothesis predicted the relative magnitude of antisocial predispositions in children for different subsamples defined by the internal and external orientations and antisocial television exposure. The last two hypotheses were concerned with the contingent relationships between exposure to antisocial television exposure and the child's antisocial predispositions at different intersections of the internal and external orientations of parents and children. Below, each of the hypotheses tested will be reintroduced and the evidence encountered for each one will be summarized.

H_a : The more exposure to antisocial portrayals on television, the more antisocial behavioral predispositions will be displayed by children.

Exposure to antisocial television portrayals had a significant independent effect on the children's antisocial predispositions with the mothers' and the children's reports. Specifically, with the mothers' data, exposure had an

independent effect on physical and verbal aggression and deceit. With the children's data, antisocial television exposure had a significant contribution on physical and verbal aggression. All statistically significant coefficients were in the predicted direction.

H_b : The more externally oriented the parents and the children, the more antisocial behavioral predispositions will be displayed by children.

The external orientation of parents had a significant independent effect on physical and verbal aggression and deceit as reported by the mother; however, with the children's data, the external orientation of children only had a significant contribution on the children's physically aggressive predispositions. All significant coefficients were in the expected direction.

H_c : The more internally oriented the parents and the children, the less antisocial behavioral predispositions will be displayed by children.

The children's internal orientation was found to be the most powerful negative predictor of antisocial predispositions. The children's internal orientation showed high negative partial regression coefficients with antisocial predispositions towards physical and verbal aggression, theft, and deceit. The mothers' data, on the other hand, only rendered one statistically significant negative coefficient with deceit.

Since exposure to television theft did not correlate or predict theft predispositions, it was deleted from further analysis, since no mediation effects were possible where there

was no initial television modeling.

Hypothesis a was said to be supported with both the mothers' and the children's data. Hypothesis b was supported in general with the mothers' data but not with the children's. Hypothesis c was supported with the children's data but not with the mothers'. None of the two and three-way interactions among the independent variables were found to be statistically significant.

$$H_d: \bar{x}_4 > \bar{x}_3 = \bar{x}_2 > \bar{x}_1 > \bar{x}_8 > \bar{x}_7 = \bar{x}_6 > \bar{x}_5$$

Where $\bar{x}_1 - \bar{x}_8$ were the means in each of the following cells:

		INTERNAL ORIENTATION			
E X P O S U R E		LO		HI	
		EXTERNAL ORIENTATION		EXTERNAL ORIENTATION	
		LO	HI	LO	HI
LO		\bar{x}_1	\bar{x}_2	\bar{x}_5	\bar{x}_6
HI		\bar{x}_3	\bar{x}_4	\bar{x}_7	\bar{x}_8

The cell means were the average amount of each of the three antisocial predispositions--physical aggression, verbal aggression and deceit.

With both sets of data, parents and children, it was consistently found that highly internally oriented children, who watch small amounts of antisocial television, and whose parents and themselves are low in their external orientation display the least amount of antisocial predispositions when

compared to other children. Also the children highest in antisocial predispositions were those low in the internal orientation and high in antisocial television exposure and the external orientation. Other subsample comparisons were generally found to follow the predicted patterns but just a few were statistically significant. Hypothesis d was said to be partially supported by the data.

$$H_e: r_2 < r_A < r_3 \quad \text{and}$$

$$H_f: r_2 \leq r_1 \leq r_3$$

$$r_2 \leq r_4 \leq r_3$$

where r_A was the overall correlation between exposure to antisocial portrayals on television and antisocial predispositions in the child. $r_1 - r_4$ represented contingent correlations at the following intersections of the internal and the external orientations of both parents and children:

		INTERNAL ORIENTATION	
		LOW	HIGH
EXTERNAL ORIENTATION	LOW	r_1	r_2
	HIGH	r_3	r_4

Those highly internally oriented parents who were low in their external orientation had children for whom the correlation between exposure to antisocial behaviors on television and their display of antisocial predispositions was the lowest when compared with all the children and with other subsamples. The children who showed the highest correlation

between exposure and predispositions were those whose parents were highly externally oriented and low in their internal orientation. With the children's orientations, the pattern of findings was opposite to the hypothesized expectations. Almost none of these contingent correlation comparisons were found to be statistically significant. This finding was replicated when no three-way interactions were found to be statistically significant with regression analyses or analyses of variance. Hypotheses e and f were inferentially rejected in favor of the null.

Discussion

The discussion of the results of this study will first focus on the dimensionality of parent-child interaction modes and then on the independent and mediational effects of parental and child orientations. To finalize, some suggestions for future research, limitations of this study and some concluding remarks will be presented.

Dimensions of Parent-Child Interaction Modes

The pretest data obtained from children regarding their parents' and their own orientations showed that when data are collected from the same respondents the expectations regarding the emergence of two overall dimensions of internal and external parent-child orientations were fully corroborated. This finding encourages the most recent theoretical formulations in the literature dealing with the internalization of moral principles (Lickona, 1976; and DePalma and Foley, 1975).

On the other hand, when data were collected from parents and children separately parent-child dimensions failed to appear with both sets of data; however, the internal and external dimensions did emerge for parents and children separately. These results suggest that either the mothers and children perceive things differently or that for other reasons they prefer to report dissimilar perspectives about a common phenomenon.

That different people perceive objects or events in dissimilar forms is not a new observation. "Lewin argued that the phenomena to which the psychologist should direct his attention are what the individual subjectively perceives, not what the observer perceives as the 'objective reality'" (Shepherd, 1964, p. 24). This notion is similar to Weick's (1969) enactment process: "The human creates the environment to which the system adapts. The human actor does not react to an environment, he enacts it" (p. 64). If human subjectivity is crucial for the understanding of psychological phenomena, it is not surprising to find that parents and children differ in their reports about the same phenomenon, or about phenomena that are supposed to be related.

Future research on parent-child interactions may well benefit from collecting all relevant information from the subjects of direct interest, be they parents or children. Children who perceive their parents to be oriented in a certain direction do perceive themselves to be oriented in

a similar direction. However, the association between parental perceptions of their orientation and children's perception of their reactions is not as consistent.

The research literature does not specify the degree of association between the two internal and external dimensions. This research has shown that the external and internal orientations do not lie on a continuum, they tend to be somewhat positively correlated with parental orientation reports ($r=.36$, $p \leq .001$), and mildly associated with the children's report of their orientations ($r=.13$, $p \leq .05$). What these associations suggest is that parents that are concerned about what their children do, do more of everything in order to guide their social behaviors, and that children who are socially active tend to be oriented in both directions to some extent.

Another contribution of this study to the parent-child interaction literature regarding the internalization of moral guidelines is that parental and children's reactions to positive social situations are consistent with the orientations derived from responses to negative situations. Past research has been mainly concerned with reactions to transgressions. In this study, based on scarce literature, positive social situations were presented to mothers and children and their reactions were assessed. Parents who internally respond to their children's transgression do also internally respond to their children's prosocial or positive behaviors.

Externally oriented parents with regard to transgressions were found to at the same time be externally oriented regarding positive acts. The children's data showed the same consistency regarding their internal and external orientations across positive and negative situations. Future research may well benefit from incorporating positive situations in order to more fully account for the internalization of standards in children.

Independent and Mediational Effects

The role of parent-child interaction modes in mediating the children's modeling of antisocial television portrayals was found to be negligible in this study. However, some indications of a possible inhibiting effect due to the internal orientation and some enhancing effect on the part of the external orientation of parents was suggested by the data. Future research utilizing larger samples may more definitely unveil these patterns.

It was of utmost importance to observe that television antisocial exposure has a moderate and very consistent effect on the children's antisocial predispositions regardless of parental or children orientations. Television as a pervasive agent of socialization showed to be as important as externally oriented parental practices in directly contributing to antisocial predispositions in children.

Given the demonstrated independent effect of television exposure it can be said that among all the sources of

socialization of children in modern society television is one more "significant other" (Woelfel and Hernandez, 1972) for the child. Television along with other media, parents, siblings, teachers and peers may account for the complete socialization of children. Different interactions of the child with significant forces in his/her environment may do little to alleviate the pervasive influence of the television medium. The mediation impact of other socialization forces besides parents still has to be demonstrated. Parents were considered here due to their constant social proximity to the child and due to the potential that parents represent for modifying the social environment of the child.

Parental and children orientations were demonstrated to contribute to different extents to the children's anti-social predispositions. However, regardless of whether or not parents use inductive or power assertive socialization techniques, or whether children have internalized moral guidelines or not, television and its fare of socially undesirable portrayals teach the seemingly unintended lesson that the way to solve problems is through aggression and deceitful behavior.

Future research should clearly look for other modifiable aspects of the children's environment for attenuating negative television exposure effects. It might be that the only answer to the problem of antisocial television modeling consists of constant surveillance and company at the time

that antisocial television programs are aired (Atkin and Greenberg, 1977). It might also be necessary for broadcasters to reconsider their position in view of these findings. If there is little that parents can do to alleviate negative television effects, broadcasters and producers may find themselves undertaking a major responsibility regarding the examples they provide to the youth.

Parents, on the other hand are not exempt of responsibility since this study showed that parents do contribute to their children antisocial predispositions if they are externally oriented in their child's rearing practices. It is not television alone that is the cause of social illnesses. If parents provide an example of power assertion when dealing with their children they will learn the lesson independently of what television does.

Children who by some means have internalized moral values are less likely to behave antisocially but the effect of such internalization was found to be independent of television exposure. So, when controlling for the moral development of the child, television exposure to antisocial portrayals enhances the children's antisocial predispositions. If there had been a significant interaction between the children's internal orientation and exposure, one might have concluded that the more the internalization of moral values by children, the less the contributing effect of television exposure. No such interaction was encountered in our analyses. Children benefit from internalized guidelines but if they watch negative

television examples, they seem to be willing to copy them.

The question is now raised with regard to the differential effects found for parental and children orientations. Why should the external orientation in parents predict the antisocial predispositions in children and not so the internal orientation? In the first place, the external orientation in parents consists of behaviors similar to those expressed in the children's antisocial attitudes. Parents who hit and yell provide a direct example of antisocial behavior (Bandura, 1973). On the other hand, inductive or internally oriented parents provide an example of reasoning and explanation that might be reflected in the prosocial attitudes of children, but prosocial predispositions were not studied here. The parental internal orientation was expected to provide a cognitive structure for the children's evaluation of their social behaviors, but it was observed that the relationship between the internal orientation reactions of parents and their children was low and fell short of statistical significance ($r=.11$, $p=.053$). Future research that includes prosocial attitudes or behaviors as the dependent variable may reveal that internally oriented parents also serve as models for their children's positive behaviors.

Second, it may be that verbal exhortations by parents are modeled as verbal endorsements by children, and that motor behaviors by parents are modeled in the same behavioral category. Children who hear some preaching from their parents may

model their verbal behavior and motorically imitate what the parents do. Since here it was found that the internal and external orientations of parents are moderately related ($r=.36$, $p \leq .001$), it wouldn't be farfetched to say that since parents that do more of one thing also do more of the other, their children match their behaviors both ways. Overtly, the children express antisocial predispositions for problem resolution and they may verbally reason and explain as their parents do. Bryan (1975) reports that "children who had witnessed a non-giving model would preach charity but, in fact, practice selfishness. In effect, then, hypocritical children had been produced" (p. 104). In this research it was not investigated whether children model their parents' expressions of concern or reasoning and explanation. At this point the evidence provided by this study suggests that it may be the case that children say what they hear and do what they observe.

Why should children be influenced by their own internal orientation and not by their externalized expectations? The components of the children's internal orientation are behaviors that indicate guilt reactions, consideration for others, reparation and self evaluations. A child who is likely to experience anxiety after transgressions was expected to be less antisocial than a child who does not experience inner conflict. This expectation was confirmed and it can be argued that according to the theory (Aronfreed, 1968b) internally produced anxiety is more long lasting and potent in inducing

the child to refrain from antisocial behavior than external considerations.

Not only should the children's external orientation be less effective than internalized values in reducing antisocial predispositions. An externally oriented child should have been found to be more willing to behave antisocially since worries regarding external consequences should be less enduring (Aronfreed, 1969, p. 313) than the anxiety produced by internalized principles. It was found that among the antisocial behaviors investigated here, only physical aggression was at all predicted by the child's focus on external considerations. Children may in general worry about external consequences regardless of their internalization of moral values. The correlation found between the external and internal orientation of the children was indeed low ($r=.13$, $p \leq .05$). When transgressions do occur, or in its case, when positive behaviors take place the fear of discovery might be a function of the specific contingencies of the situation, e.g., the actual possibility of discovery in a certain circumstance.

At this point the theoretical perspective that guided this investigation should be reconsidered to incorporate the results of this study and to guide future investigations. Although parental practices are related with the children's orientations, they do not underlie common factors. Parental practices contribute to the children's socialization, but other influences in the social environment of the child should

be considered. Television exposure might not only be an influence on the children's antisocial predispositions, but it may in turn serve as a source for the children's acquisition of internal controls. In this sense, multiple influences might be considered as determinants of the children's acquisitions of internal controls.

The present research suggested that parental externalized practices and television exposure are two contributors to negative attitudes. On the other hand, the children's degree of internalization of moral values was shown to independently reduce those antisocial predispositions.

With external parental practices and television exposure a modeling effect has been supported. With the children's internalization of moral standards a more cognitively mediated type of effect has been shown. What needs to be investigated now is the nature of the antecedents of internalization in children. Clearly, the relationship between parental practices and the children's internalization of moral standards has not been found to be substantial enough in this study or in the past (Hoffman, 1970, p. 291).

This investigation was initiated under the basic premise that children who have internalized moral standards should be less likely to model antisocial television examples. Child psychologists may want to consider the findings of this research in order to reevaluate the theory behind the socialization of moral values in children.

Research regarding television effects may benefit from having encountered that television has an independent effect on the children's display of negative behavioral predispositions. Parents will be well advised to consider that television is not the only source of negative behaviors in their children. Broadcasters may want to take into consideration that parental socialization practices do not seem to change the likelihood of television effects on children.

Suggestions for Future Research

Future research should consider the possibility that parental or child orientations may enhance television modeling of positive or desirable television examples. It might well be that parent-child interaction modes effectively interact with television exposure in such a way that low doses of external considerations and high internally oriented parents and children enhance modeling of socially acceptable television portrayals. Parents who guide their children to be internally oriented may cue their children to selectively focus on the virtues of prosocial television content. In certain television contexts, children may find models who are suggestive of opportunities for giving form to their internalized moral values. Prosocial television examples may channel the internalized orientations of children. The child may find the examples of prosocial television to be a model for expressing their internalized convictions.

For television research purposes it might be profitable to continue exploring the conditions under which parent child orientations underlie common factors. If data are collected from parents regarding their practices and their children's reactions, and if data are collected from children regarding their parents' practices and their own reactions it may be found that when all data are collected from the perspective of one of the participants in parent-child interactions two clear dimensions appear. If this is found to be the case in future replications, the results of this research may be altered and more definitive evidence for the role of parent-child interaction modes in mediating children's learning from antisocial television portrayals may be obtained.

Further attempts at validating parent-child interaction data should be carried out. Siblings might be asked to report on parental practices regarding the child of interest in the family. Also siblings can be asked about the response orientations and the social behaviors of the child of interest. Perhaps of more importance would be the collection of data from mothers and fathers independently. In this study mothers were asked to report for themselves and their husbands and were asked to generalize. This type of measurement might not have reflected what we call parental practices. Obtaining both sets of data can provide for different analyses which might untangle the effect of both parental sources of influence.

On the other hand, children might be asked to report on their mothers' and fathers' practices separately. In this study the child was asked to report about what both his/her parents in combination might do.

If all the data suggested above are collected, the analyses would become more complex but may render clearer insights into the process under study by separating sources of influence and at the same time providing more valid observations.

Limitations

The data for this study were collected from interviews and questionnaires. Verbal reports of behavior may not completely reflect the interactions that take place in the home or family environment. The reader should be cautioned that since no observational data were collected and since the convergent validation of a key portion of the instrument was generally low, the research results may deviate from the actual phenomena that the research attempted to analyze. On the other hand, the reader should also be aware that observational data are not free of validity problems. Most methods for collecting observational data are obstrusive to some extent and the behavior of parents and children can also be influenced by the presence of an observer or a recording instrument.

The results of this study are also limited by its associational nature. We obtained indications of the degree of

predictability and relationship between and among measures but in no sense can it be said that the evidence supports a causal relationship. The theoretical statements presented do give indications about causality. However, the analysis was done with data collected at one point in time. In order to establish causality the temporal order of the variables under consideration has to be demonstrated and this was not done here. Longitudinal data collected from parents and children may help in assessing the causal flow indicated by the theory.

The socioeconomic status of parents and children in this study was not utilized. Past research indicates that parental orientations or disciplinary practices are related to their socioeconomic status (Aronfreed, 1961). The relative contribution of the socioeconomic class of the respondents should be considered in order to assess the degree of independence between parental practices and class. If their contributions are relatively independent both sets of antecedents may be considered as separate predictors. If their contribution is shared, the social class conditions that promote different disciplinary practices should be studied.

The main focus of this study was to investigate the potential role of parental practices and children's responses to social situations in mediating negative television effects; the roles of peers, siblings, teachers and other socialization agents were ignored. The deletion of alternate socialization agents limits the conclusions that can be derived from

this study. As children grow older different socialization agents increase in impact on their social behavior and moral considerations.

The distributions of reports of disciplinary practices by parents and the children's reactions to social behaviors were skewed. Although the analytic methods used in this research are robust, alternate methods for diminishing the skewness of the distributions should be considered. One way of achieving this is by expanding the range of the scales utilized, e.g., "Out of ten times that John lied to you, how often would you consider spanking him?" Less skewed distributions should allow the researcher to place more confidence on parametric statistical analyses like those conducted here.

Another limitation of this study is the implicit bias in calling a set of behaviors "antisocial." Although behaviors such as yelling, hitting, stealing and cheating are considered antisocial by a large segment of society, some of those behaviors are encouraged and found positive in some situations, e.g., "if somebody hits you, you should hit back." The value judgment implied in the selection of "antisocial" behaviors may affect the nature of the analysis and conclusions that can be drawn from this research.

Conclusions

Although some indications were found that parent-child orientations may partially account for what the children model from television portrayals, the overall results of this study

indicated that television exposure is in itself a consistent and independent contributor to the children's favorable attitudes towards the negative behaviors they watch on television.

The task of further clarifying the determinants and the nature of children's internalization of moral standards belongs to child psychologists. However, this task cannot be disassociated from research dealing with television effects if scientists, policy makers, broadcasters and the public are to understand the broader context in which television effects take place.

Studies of this type are unlikely to give definitive answers to complex questions in an initial attempt. The bases upon which to build have been explored here.

REFERENCES

REFERENCES

- Adkins, Dorothy C., Frank C. Payne and J. Michael O'Malley
 1974 Moral Development. In F.M. Kerlinger and J.B. Carroll, editors, Review of Research in Education, Vol. 2. Itasca, Ill.: F.E. Peacock Publishing, Inc.
- Allinsmith, W.
 1960 The Learning of Moral Standards. In D.R. Miller and G.E. Swanson, editors, Inner Conflict and Defense. New York: Holt, Rinehart and Winston.
- Aronfreed, J.
 1961 The Nature, Variety, and Social Patterning of Moral Responses to Transgression. Journal of Abnormal and Social Psychology, Vol. 63, No. 2, pp. 223-240.
- 1968 Aversive Control of Socialization. In William J. Arnold, editor, Nebraska Symposium on Motivation. Lincoln, Neb.: University of Nebraska Press.
- 1968b Conduct and Conscience: The Socialization of Internalized Control over Behavior. New York: Academic Press.
- 1969 The Concept of Internalization. In D.A. Goslin, editor, Handbook of Socialization Theory and Research. Chicago: Rand McNally College Publishing Company.
- 1976 Moral Development from the Standpoint of a General Psychological Theory. In T. Lickona, editor, Moral Development and Behavior Theory, Research and Social Issues. New York: Holt, Rinehart and Winston.
- Atkin, Charles K.
 1972 Statement at Hearings before the Subcommittee on Communications of The United States Senate, March 24.
- Atkin, C.K. and W. Gantz
 1974 Children's Response to Broadcast News: Exposure Evaluation and Learning. Paper presented at the meeting of the Association for Education in Journalism, San Diego, Ca., August.

- Atkin, C.K. and B.S. Greenberg
 1977 Parental Mediation of Children's Social Behavior Learning from Television. Paper presented at the annual convention of the Association for Education in Journalism, Madison, Wisconsin, August.
- Ball, S. and G.A. Bogatz
 1972 Summative Research of Sesame Street: Implications for the Study of Preschool Children. In A.D. Pick, editor, Minnesota Symposia on Child Psychology, Vol. 6. Minneapolis, Minn.: University of Minnesota Press.
- Bandura, Albert
 1973 Aggression: A Social Learning Analysis. Englewood Cliffs, N.J.: Prentice Hall.
 1977 Social Learning Theory. Englewood Cliffs, N.J.: Prentice Hall.
- Bandura, A. and R.H. Walters
 1959 Adolescent Aggression. New York: Ronald Press.
- Barcus, F.E.
 1969 Parental Influence on Children's T.V. Viewing. Television Quarterly, 8: 63-73.
- Bechtel, R.B., C. Achelpohl and R. Akers.
 1972 Correlates Between Observed Behavior and Questionnaire Responses on Television Viewing. In E.A. Rubinstein, G.A. Comstock, and J.P. Murray, editors, Television and Social Behavior, Vol. IV: Television in Day-to-Day Life: Patterns of Use. Washington, D.C.: U.S. Government Printing Office, pp. 274-344.
- Bruning, J.L. and B.L. Kintz
 1968 Computational Handbook of Statistics. Glenview, Ill.: Scott, Foresman and Co.
- Bryan, James H.
 1975 You Will be Well Advised to Watch What We Do Instead of What We Say. In D.J. DePalma and J.M. Foley, editors, Moral Development: Current Theory and Research. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Burton, R.V., Maccoby, E.E. and W. Allinsmith
 1961 Antecedents of Resistance to Temptation in Four-Year-Old Children. Child Development, 32: 689-710.

- Chaffee, Steven H.
1976 Comparing Television to other Agencies of Socialization. Memorandum to the Ford Foundation, September.
- Chu, G.C. and W. Schramm
1967 Learning from Television: What the Research Says. Washington, D.C.: National Association of Educational Broadcasters.
- DePalma, D.J. and J.M. Foley (Eds.)
1975 Moral Development: Current Theory and Research. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Eswara, Harogadde S.
1968 An Interpersonal Approach to the Study of Social Influence: Family Communication Patterns and Attitude Change. Unpublished Ph.D. dissertation, University of Wisconsin.
- Feshbach, S.
1972 Reality and Fantasy in Filmed Violence. In J.P. Murray, E.A. Rubinstein and G.A. Comstock, editors, Television and Social Behavior, Vol. 2. Television and Social Learning. Washington, D.C.: Government Printing Office.
- Fink, Edward L. and James J. Noell
1972 On the Representation of Interaction Effects in Multiple Regression: A Note on Portes' 'On Class Consciousness.' Unpublished manuscript, Department of Communication, Michigan State University, East Lansing, Michigan.
- Greenberg, B.S., C.K. Atkin, N.G. Edison and F. Korzenny
1977 Pro-Social and Anti-Social Behaviors on Commercial Television in 1975-76. Department of Communication, Michigan State University. Report to the Office of Child Development, HEW, Washington, D.C., February.
- Pro-Social and Anti-Social Behaviors on Commercial Television in 1976-77. Department of Communication, Michigan State University. Report to the Office of Child Development, HEW, Washington, D.C., forthcoming.
- Greenberg, B.S., P.M. Ericson, and M. Vlahos
1972 Children's Television Behavior as Perceived by Mother and Child. In E.A. Rubinstein, C.A. Comstock and J.P. Murray, editors, Television and Social Behavior, Vol. 4. Television in Day-to-Day Life: Patterns of Use. Washington, D.C.: Government Printing Office, pp. 359-409.

- Grinder, R.E.
1962 Parental Childrearing Practices, Conscience and Resistance to Temptation of Sixth-Grade Children. Child Development, 33: 803-820.
- Hannenman, Gerhard J. and Herbert S. Dordick et. al
1975 The Family Hour: A Solution in Search of a Problem. A Research Study of Los Angeles TV Viewers' Response to the Family Hour. Summary. Center for Communications Policy Research of the Annenberg School of Communications. Los Angeles: University of Southern California.
- Henry, Jules
1971 Pathways to Madness. New York: Random House.
- Hicks, D.J.
1968 Effects of Co-observer's Sanctions and Adult Presence on Imitative Aggression. Child Development, 38: 303-309.
- Hoffman, Martin L.
1970 Moral Development. In Paul H. Mussen, editor, Carmichael's Manual of Child Psychology. New York: John Wiley and Sons, Inc.
- 1975 Moral Internalization, Parental Power, and the Nature of Parent-Child Interaction. Developmental Psychology, 11(2): 228-239.
- Hoffman, M.S. and H.D. Saltzstein
1967 Parent Discipline and the Child's Moral Development. Journal of Personality and Social Psychology, Vol. 5, No. 1, pp. 45-57.
- Kerlinger, Fred N. and Elazar J. Pedhazur
1973 Multiple Regression in Behavioral Research. New York: Holt, Rinehart and Winston.
- Leifer, A.D. and D.F. Roberts
1972 Children's Responses to Television Violence. In J.P. Murray, E.A. Rubenstein, and G.A. Comstock, editors, Television and Social Behavior, Vol. 2: Television and Social Learning. Washington, D.C.: Government Printing Office, pp. 43-180.
- Leifer, A.D., N.J. Gordon, and S.B. Graves
1974 Children's Television: More Than Mere Entertainment. Harvard Educational Review, 44: 213-245.

- Lickona, Thomas
 1976 Critical Issues in the Study of Moral Development and Behavior. In Thomas Lickona, editor, Moral Development and Behavior Theory, Research, and Social Issues. New York: Holt, Rinehart and Winston.
- Lyle, J. and H.R. Hoffman
 1972 Children's Use of Television and Other Media. In E.A. Rubinstein, G.A. Comstock, and J.P. Murray, editors, Television and Social Behavior, Vol 4. Television in Day-to-Day Life: Patterns of Use. Washington, D.C.: Government Printing Office, pp. 129-256.
- McLeod, J.M., C.K. Atkin, and S.H. Chaffee
 1972 Adolescents, Parents and TV Use: Adolescent Self-Support Measures from Maryland and Wisconsin Samples. In G.A. Comstock and E.A. Rubinstein, editors, Television and Social Behavior. Vol. 3, Television and Adolescent Aggressiveness. Washington, D.C.: Government Printing Office, pp. 173-238.
- McLeod, J.M. and S.R. Chaffee
 1972 The Construction of Social Reality. In James T. Tedeschi, editor, The Social Influence Processes. Chicago: Aldine-Atherton.
- McLeod, J.M., S.H. Chaffee and H.S. Eswara
 1966 Family Communication Patterns and Communication Research. Paper presented to the Theory and Methodology Division, Association for Education in Journalism Convention. Iowa City, Iowa, August.
- McLeod, J.M., S.H. Chaffee, and Daniel Wackman
 1967 Family Communication: An Updated Report. Paper presented to the Theory and Methodology Division, Association for Education in Journalism. Boulder, Colorado.
- Nunnally, Jum C.
 1967 Psychometric Theory. New York: McGraw Hill.
- Overall, J.E. and C.J. Klett
 1972 Applied Multivariate Analysis. New York: McGraw Hill.
- Reiss, David
 1971 Varieties of Consensual Experience. 1. A Theory for Relating Family Interaction to Individual Thinking. Family Process, March, Vol. 10, No. 1: 1-27.

- Rummel, R.J.
1970 Applied Factor Analysis. Evanston, Ill.: Northwestern University Press.
- Saltzstein, Herbert D.
1976 Social Influence and Moral Development: A Perspective on the Role of Parents and Peers. In Thomas Lickona, editor, Moral Development and Behavior Theory, Research and Social Issues. New York: Holt, Rinehart and Winston.
- Sears, R.R., E.E. Maccoby, and H. Levin
1957 Patterns of Child Rearing. Evanston, Ill.: Peterson and Co.
- Sears, R.R., L. Rau and R. Alpert
1965 Identification and Childrearing. Stanford: Stanford University Press.
- Shepherd, C.R.
1964 Small Groups: Some Sociological Perspectives. San Francisco, California: Chandler Publishing Company.
- Staub, Ervin
1975 To Rear a Prosocial Child: Reasoning, Learning by Doing and Learning by Teaching Others. In David J. DePalms and J.M. Foley, editors, Moral Development: Current Theory and Research. Hillsdale, N.J.: Lawrence Erlbaum Associates, Publishers.
- Staub, E. and H.K. Feinberg
Personality, Socialization, and the Development of Prosocial Behavior in Children. In D.H. Smith and J. Macauley, editors, Voluntary Action Research, Lexington Press, in press.
- Stone, Vernon A. and Steven H. Chaffee
1970 Family Communication Patterns and Source - Message Orientation. Journalism Quarterly, 47: 239-246.
- The Surgeon General's Scientific Advisory Committee on Television and Social Behavior
1972 Television and Growing Up: The Impact of Televised Violence. Maryland: National Institute of Mental Health.
- Tolley, H.
1973 Children and War: Political Socialization to International Conflict. New York: Teachers College Press, Columbia University.

Walling, James I.

1976 The Effect of Parental Interaction on Learning
from T.V. Communication Education, Vol. 25.

Weick, K.E.

1969 The Social Psychology of Organizing. Menlo
Park, California: Addison-Wesley.

Woelfel, J. and D. Hernandez

1972 Media and Interpersonal Effects on Attitude
Formation and Behavior. Unpublished manuscript,
University of Illinois at Urbana.

character. In a stable environment, under what circumstances will an evolutionary process approach a limit? With respect to what properties and to what extent does evolution maximize? What kind and degree of randomness is needed to make evolution operate? What is the role of levels of organization (hierarchies) in evolution? It has been argued that there has not been time for evolution to produce its results by chance, and countered that evolution proceeds hierarchically, producing small compounds from atoms, large compounds from small compounds, and so on up to organs and organisms. Such questions should be investigated by simulation and also formulated quantitatively, at least in ideal form.

These are all questions to be studied by computer scientists and biologists, rather than philosophers. But the answers should give rise to conceptual and foundational problems in the philosophy of science. Some teleological or maximizing theories are equivalent to mechanical explanations, for example, Snell's law and the law of least time. Does this equivalence hold in biology, for example, for the evolution of natural species? What is the relation of maximization in evolution to maximization in utility theory, game theory, and economics? What kind or kinds of relevant quantitative measures of complexity can be assigned to organisms and computers and their abilities, so that the information processing powers of different organisms and computers can be meaningfully compared and so that development in evolution, learning, and computational ability can be measured quantitatively?

I'll close my remarks by connecting this last suggestion to the rationalist-empiricist controversy. Suppose we have an automaton-like account of evolution beginning with physics, proceeding through chemistry, biochemistry, the origin of life, and biology, and ending with modern men and their genetic programs of, say, 3000 years ago. Suffix to this the subsequent history of science up to today. The whole process has produced modern science. How much of science is attributable to evolution up to 1000 B.C., and how much to subsequent history? How much of man's present complexity is due to evolution, and how much to learning from the environment?

The rationalist would hold that in fact innate ideas and principles were produced by evolution and existed in man's genetic program 3000 years ago. More strongly, he might maintain that innate ideas are necessary for science in the sense that there has not been time for modern science to develop in 3000 years without such a head start. In contrast, the empiricist would hold that evolution only produced a very general learning program, and

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