AN INQUIRY INTO THE DEVELOPMENT OF MORAL INTENTIONALITY

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ABSTRACT

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MORAL INTENTIONALITY

By

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The present study represents an attempt to account for the change from damage-based to intention-based moral judgments that has been well-documented in children. Bandura has suggested that this change may be a reflection of differential modeling and reinforcement by adults. An alternative cognitive-perception theory, proposed in the present study, is that this change reflects the child's increased ability to accurately perceive the use of moral intentionality by others. Forty children from each of grades one, three, and six were tested on several tasks that measured the ability to use or perceive intentionality. The children's mothers responded to a questionnaire designed to assess how they treated the children in situations involving intentions and damage. The major results were: The mothers indicated that their response to their children is mainly determined by the child's intentions, although damage has some influence. There was little relation between the extent to which mothers reported

intentional responding to their children and the children's level of intentionality. There was a consistent negative relation between amount of punishment mothers reported they would give and intentionality in their children. The response patterns of two-thirds of the children conformed to the predictions of the cognitive-perception theory, but the response patterns of one-third did not. It was concluded that Bandura's theory did not very well account for the results and that the cognitive-perception theory merits further investigation.

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A THESIS

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To my mother

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INTRODUCTION

A well-known finding in child psychology is the tendency of younger children to make moral judgments on the basis of amount of damage, while older children use intentions as the criterion of moral responsibility (e.g., Bandura and McDonald, 1963; Boehm and Nass, 1962; Cowan et al., 1969; Gutkin, 1972; Hebble, 1971; Johnson, 1962a; Piaget, 1965). Piaget, the first modern psychologist[1] to study the phenomenon of intentionality as it has come to be known, tried to explain the damage-based morality of the younger child both in terms of what he considered to be spontaneous attributes of the young child's thought, and in terms of the sort of socialization experienced by the child. According to Piaget, the thought of the young child is characterized by realism and egocentrism. Realism is the spontaneous tendency of the child to regard the content of his mind as a separate, objective feature of the external world. Thus the child whose thinking is dominated by realism considers dreams

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[1] Although Piaget generally is considered the first to have studied this phenomenon, Johnson (1962b) has pointed out that M. Schalenberger looked at problems of this type at the end of the nineteenth century.

". . . as an objective reality, as a sort of ethereal, rarefied picture floating in the air and fixed before our eyes" (Piaget, 1965, p. 187).

In the moral sphere the young child is a realist too. He regards moral commands as external to his mind or to that of others. Moral rules are considered ". . . a necessary condition of the universe. What, then, do intentions matter?" (Piaget, 1965, p. 187).

The young child's egocentrism reveals itself in his inability to distinguish the subjective from the objective, his point of view from that of another. Since he is egocentric the young child makes moral judgments on the basis of damage because he is incapable of looking at the behavior of another person from the other's point of view. Thus he is incapable of taking the other's intentions into account. Realism is actually an aspect of egocentrism since like egocentrism it, too, concerns the failure to make accurate distinctions between objective and subjective categories.

Piaget subsumed the socialization experiences which he believes lead to damage-based judgments under the concept of "adult constraint."

Piaget observes that young children are forced to obey many adult commands (e.g., not to lie, not to break things) which they do not really understand. These commands thus remain external to the child and yet he develops an exaggerated respect for them which is

manifested by a literal application of the adult's moral commands. One result of this literalism (which again is an example of realism) is the child's emphasis on damage rather than on intentions. Furthermore, Piaget points out that by their example adults emphasize to children the importance of damage as a moral criterion. "The average housewife . . . will be more angry over fifteen cups than over one, and independently, up to a point, of the offender's intentions. Broadly speaking, then, one may say that it is not only the externality of the adult command in relation to the child's mind that produces the effects we are discussing, it is the example of the adult himself" (Piaget, 1965, pp. 133-134). Thus Piaget believes that the natural tendencies of the child toward a damage-based morality are strengthened through the operation of adult constraint.

In accounting for the intentionality of the older child, Piaget does not seem to consider it necessary to appeal to spontaneous attributes of the child's thought. Here he restricts himself to socialization factors. Piaget believes that it is the experience of cooperation, especially with peers, which results in intention-based judgments. "It is cooperation which leads to the primacy of intentionality, by forcing the individual to be constantly occupied with the point of view of other people so as to compare it with his own" (Piaget, 1965, p. 190). By cooperating with others, then, the

child overcomes his egocentrism by learning to take the point of view of others into account, and thus comes to understand the importance of intentions.

In summary, Piaget considers that damage-oriented morality is due both to intrinsic and spontaneous attributes of the child's mind (realism and egocentrism) and to the effect of "adult constraint" (the externality of adult commands and the concern that adults themselves show for damage). The morality of intention is achieved through the experience of cooperation with peers.

It is worth nothing that Piaget believes that interaction with others is an important determinant of intellectual maturation in general. According to Flavell, "One of Piaget's firmest beliefs . . . is that thought becomes aware of itself, able to justify itself, and in general able to adhere to logical-social norms of noncontradiction, coherence, etc., and that all these things and more can emerge only from repeated interpersonal interactions . . . in which the child is actually forced again and again to take cognizance of the role of the other" (Flavell, 1963, pp. 156-157). Thus Piaget's explanation of the development of intentionality in terms of interaction with others is congruent with his explanation of the development of cognition in general.

Another process which Piaget holds to be central to the development of mature thinking, centration and decentration, also seems

implicated in the development of intentionality. (See Crowley, 1968, for a statement of this view). Centration is the fixation on one aspect of a situation to the exclusion of other important features. The result is that mistakes in judgment occur. Decentration is the ability to move from one feature to other features and back again. The result is that correct judgments are made. In the well-known conservation of liquid quantity problem, the child is shown two identical containers (A and A') each filled with the same amount of water. Then the contents of A' are poured into another container (B) which is taller and narrower than the other two. The child is then asked if A and B now contain equal amounts of water. The non-conserving child will center on the heights of the container (and ignore the widths) and reply that B contains more than A. Alternately, he will center on the widths (and ignore the heights) and reply that A contains more than B. In order to make the correct conserving response, Piaget has postulated that the child has to decenter and take both dimensions into account simultaneously.

The development of the ability to use intention can be viewed in this light. If the child centers on the immediately obvious damage-factors he will miss the importance of the intentions. In order to take intentions into account, he must be able to decenter from the damage and consider the intentional aspects of the situation.

A very different interpretation of moral intentionality is given by Bandura (Bandura, 1969; Bandura and McDonald, 1963). Although Bandura has not committed himself to a detailed and explicit statement concerning the acquisition of moral intentionality, his view seems to be that children acquire such judgments through imitating judgments of adult models, who then reinforce the children for making similar judgments themselves. Essentially Bandura seems to believe that younger children tend to use damage and older children tend to use intentions in making moral judgments because these are the sorts of judgments that they have observed important models (parents, teachers, peers) make. Unlike Piaget, Bandura does not refer to spontaneous attributes of the mind of the young child in trying to account for moral judgment nor does he consider that the child's moral judgments are the result of his interpretation or construction of his experiences, as does Piaget. That is, Piaget entertains the idea that the child's moral ideas may at some point develop in opposition to what he has directly learned from his parents or others (Piaget, 1965, p. 138) while Bandura assumes that any attitude or behavior found in the child can be traced to his reinforcement history and to his history as an observer and imitator of models. To Bandura, then, the child is essentially a passive copier and recipient of environmental input. In Piaget's view the child uses the input from the environment actively to construct his own point of

view. Thus Piaget speculates that the child gradually comes to realize the compelling nature of moral intentionality from experiences of cooperation with peers. In Bandura's view the peer-group may indeed be an important influence in causing the child to adopt intentionality but only insofar as the peers provide reinforcement for and modeling of intentional judgments which the child can then imitate.

Although Piaget and Bandura certainly have very different theories of moral development (which reflect the very different positions taken by these two theorists in general) it also needs to be emphasized that there are points of agreement between them. Specifically, under the topic of "adult constraint" Piaget suggests an explanation of damage-based morality that is very similar to Bandura's explanation of the same phenomenon in terms of modeling.

Intrigued by the role that models and reinforcement might play in determining the sort of moral judgments children make, Bandura and McDonald performed an experiment ". . . to demonstrate that . . . children's moral orientations can be altered and even reversed by the provision of appropriate social models" (1963, p. 275). This study showed that children who in a pre-test make predominantly one type of judgment (whether damage-based or intentional) switch predominantly to judgments of the opposite type if provided with adult models who make judgments opposite to those

made by the child in the pre-test. These investigators concluded that "the utility of Piaget's stage theory of morality is . . . limited by the finding that children's judgmental responses are readily modifiable, particularly through the utilization of adult modeling cues" (Bandura and McDonald, 1963, p. 280). Bandura and McDonald seem to be implying (although this is not clearly stated in their paper) that the facts of the development of moral intentionality are much more easily and parsimoniously explained by the concepts of social reinforcement and imitation than by Piaget's concepts. If this is indeed Bandura's position on this topic then it must be pointed out, as in fact Cowan et al. (1969) took pains to do, that Bandura and McDonald's experiment does not say anything directly about how moral intentionality is acquired in natural settings. This research shows that children's judgments can be altered by the influence of adult models under laboratory conditions. The study does not show that modeling and imitation is necessarily the mechanism which causes children to make damage-based judgments first and then later to make judgments based on intentions.[2]

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[2] Lovaas' work on operant conditioning of speech in autistic children represents a comparable case. Although Lovaas (Lovaas et al. 1966) has shown that formerly mute autistic children can be taught the rudiments of language through operant conditioning, this does not indicate that operant conditioning is in fact the mechanism through which language is normally acquired.

Furthermore, the extent to which the children's beliefs have been changed as opposed merely to their statements about moral problems is still an open question on the evidence of the Bandura and McDonald research. As behaviorists, Bandura and McDonald characteristically do not consider the possible importance of this distinction between overt action and inner belief. However, the distinction seems to us to be a real one, and as Cowan et al. (1969) have observed, the possibility that the children were merely conforming to social pressure, and not changing their beliefs about moral issues at all, should be seriously considered.

In their replication and critique of Bandura and McDonald's work, Cowan et al. (1969) suggested that the predominance of damage-based judgments among younger children seems to argue against the importance of adult modeling for the acquisition of such judgments since ". . . adults presumably do not provide pervasive models of, or reinforcement for, lower level [damage-based] responses" (Cowan et al., 1969, p. 263). Bandura replied by noting that in his opinion, "It would . . . come as no surprise to find that parents are more inclined to take intentions into account in judging their children's behavior as they advance in age" (Bandura, 1969, p. 279).

At this point, then, the social learning and imitation theory of moral judgment of Bandura seems to conflict directly with the theory of moral judgment advanced by Piaget and accepted by Cowan

in which ". . . the child must resolve a moral dilemma by progressively constructing his own ethical position" (Cowan et al., 1969, p. 261). Bandura, a social learning theorist, offers as an explanation for the change from damage-based to intentions-based morality, differential reinforcement and modeling in which parents through appropriate modeling and reinforcement behavior first teach children to pay attention to damage and later teach them to pay attention to intentions. Cowan, who is associated with a cognitive-developmental position, has looked at the same sequence of child behavior and concluded that reinforcement and modeling by parents could not account for it.

The tension generated by these two different interpretations of the same facts inspired Gutkin and Falvey (1971) to undertake a study intended to resolve or at least illuminate the disagreement. In this study, 32 mothers (half with 3 to 5 year old children, and half with 10 to 12 year old children) were presented with four stories about situations involving damage and intentions. In two of the situations the child caused a good deal of damage, while acting from good intentions, and in the other two situations the child caused little or no damage while acting from bad intentions. The mothers were asked to write what they would do and say to their child if he got into these situations, and to state how naughty they would consider him. According to the theory advanced by Bandura the mothers

of the younger (3 to 5 year old) children ought to report that they stress damage and down-play intentions, while the mothers of the older (10 to 12 year old) children ought to report that they stress intentions and down-play damage. Cowan has suggested that mothers of children of any age probably stress intentions. Contrary to what Bandura's theory would seem to predict, the two measures used in this study (naughtiness of the child as judged by the mother, and amount of punishment given), did not show that mothers of younger children stress damage while mothers of older children stress intentions. Instead mothers of both age-groups consistently stressed intention over damage. Gutkin and Falvey concluded that their data were not consistent with Bandura's explanation of the acquisition of moral judgments.

The present study represents an attempt to answer the same question that motivated the Gutkin and Falvey study: How do children change from damage-based to intentional judgments? The present study will attempt to answer this question by addressing itself to four goals. First, it will attempt to replicate the findings of the Gutkin and Falvey study. Second, it will relate these findings based on mothers' self-reports to the intentionality judgments of their children. Third, the present study will examine Bandura's theory of the development of moral intentionality in relation to the data

gathered here. Fourth, an alternative to Bandura's theory will be considered. This alternative theory is elaborated below.

Bandura has suggested that what changes in the interactions between parent and child relevant to moral intentionality is the parental input. He has postulated that the parents of younger children stress damage while the parents of older children stress intention. The children then are assumed simply to imitate the parental judgments they have heard when making such judgments themselves. Assuming for the sake of the development of the argument that this formulation is not entirely correct, perhaps what changes in the relevant parent-child interactions is the child's perception and comprehension of what the parents are stressing. Perhaps as suggested in the Gutkin and Falvey study parents do consistently reinforce both younger and older children for intentional judgments and provide models for these types of judgments. However, the children may not always accurately perceive and comprehend what the parents are doing. It seems possible that those children who make damage-based judgments simply do not have cognitive structures that are capable of perceiving and comprehending an intentional explanation even when provided with one. At this stage in his development the child would not be expected to produce an intentional judgment of his own as he is not yet capable even of understanding one produced by someone else. As the child becomes more mature cognitively, he begins to really "hear"

for the first time the intentional judgments that his parents have been making all along. Only after this development has taken place would the child begin to make intentional judgments of his own. There might be a time lag between the first comprehension of the use of intentionality in others and the first use of intentionality by the child himself.

Figure 1 shows the model that is being postulated here for the development of intentionality in children. The elements in this model are a child who accidentally causes some damage, and a parent who reacts to this event. At Time 1 the child acts so as to accidentally cause damage. The damage itself which is probably accompanied by loud noise, or other violent, unexpected stimuli captures the child's attention. In other words, he centers on the damage, at Time 2. At Time 3 the parent reacts first with anger, for material damage, even when accidentally caused, is usually upsetting and frustrating. The parent's anger serves to make the child pay even more attention to the damage at Time 4. At Time 5 the parent reacts again to the situation. By now she has had some time to think and so realizes that the damage was only an accident and hence that the child is not blameworthy. So the parent explains to the child that she is not angry, that it wasn't really his fault, and that sometimes accidents happen and so on. But at Time 6 when the child reacts to the second, intentional part of the parent's message, it is already

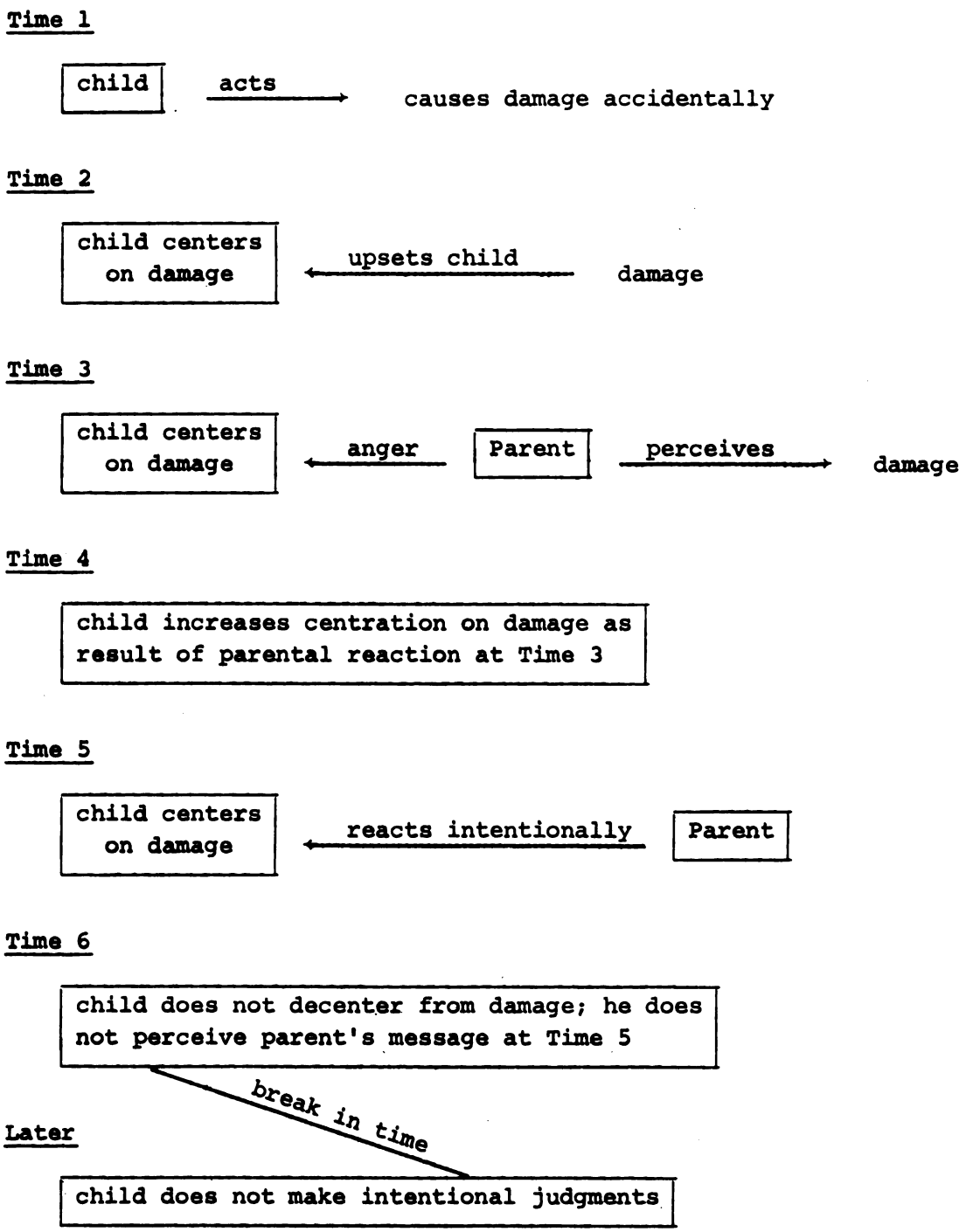


Fig. 1.--Model for Development of Intentionality Through Parent/Child Interaction.

too late. The young child's attention is already so thoroughly centered on the damage that he cannot decenter and pay attention to the intentional message of the parent. So what the young child learns from this transaction is that it is very bad to break things, regardless of intentions, and this is what he will tell you if you ask him.

The model postulates that older children are exposed to a similar situation. The only difference is that older children are assumed to develop the ability to decenter from the damage to the parental message about the importance of intentions. Perhaps the older child's increased ability to inhibit an impulsive response, which is well documented (White, 1965), accounts for this postulated ability to decenter from damage and focus instead on intentions.

An attempt was made to test both Bandura's account of the development of moral intentionality and the account proposed in the cognitive-perception model outlined above. Two different tasks were administered to the children subjects. The Intentionality Task was simply a set of story-pairs of the sort that have traditionally been used to assess moral intentionality. The Perception Task consisted of individual stories of the same sort as those used in the intentionality story-pairs. Each individual story was followed by the response of a mother in which intention was stressed more than damage. The children were asked if the mother was angry and then to explain why she was (or was not) angry.

The mothers of the children who participated in the study were asked to respond to individual stories of the sort used in the Intentionality Task story-pairs. They were asked to rate how naughty they would consider their child if he did what was described in each story, to explain why they made this rating, and to write down what they would do and say to the child.

The following hypotheses were advanced:

1. There will be little or no relation between the children's level of intentionality (as measured on the Intentionality Task and on the Perception Task) and the extent to which the mothers report they would respond to their children intentionally (as measured by their responses to the items for mothers). If the results conform to this prediction, this could be interpreted as indicating lack of support for Bandura's account of intentionality.

2. The pattern of responding for the children will indicate they must be able to perceive the use of intentions by others (as measured on the Perception Task) in order to make intentional judgments themselves (as measured on the Intentionality Task). More specifically, it is predicted that the ability to use intentions oneself will depend on the ability to accurately explain the intentional basis for the emotional reaction of

another, which will in turn depend on the ability to accurately perceive the emotion of the other. If this predicted relation is found it could be interpreted as indicating support for the cognitive-perception model of intentionality.

The details of the experimental design and method are described in the next section.

METHOD

Subjects

Forty children (20 boys and 20 girls) from each of grades one, three, and six served as subjects. In addition, the mother of each of these 120 children was asked to participate.

Children's Instruments

The children were tested on two instruments, the Intentionality Task and the Perception Task.

The Intentionality Task consisted of four story-pairs of the sort that have traditionally been used in the assessment of moral intentionality. Three of the story-pairs were taken from the set developed by Bandura and McDonald (1963). The remaining story-pair was written by the investigator and previously used in other research (Gutkin, 1972). Appendix A contains the four story-pairs used in the Intentionality Task.

The four story-pairs of the Intentionality Task were presented to the children in four maximally different orders. Within

each grade and sex, approximately an equal number of children were tested in each of the four orders.

Note that each story-pair consists of one story about a child who causes high damage while acting from good intentions (G-H), and another story about a child who causes low damage while acting from bad intentions (B-L). In order to insure that the order of stories within a story-pair did not influence the results, each S received half of the story-pairs with the G-H story appearing first and half of the story-pairs with the B-L story appearing first. Across Ss each story-pair appeared in each order (G-H first and B-L first) an equal number of times.

Thus each of the four orders referred to above appeared in two different forms. In the first form the first and third story-pairs in the order appeared with the G-H story preceding the B-L story within a story-pair, while the second and fourth story-pairs appeared with the stories within each story-pair in the opposite order. Form two reversed this sequence; here story-pairs one and three appeared with story B-L preceding G-H within each story-pair and story-pairs two and four showed the opposite pattern. Thus there were eight different arrangements in which the Intentionality Task items were presented. See Appendix B for a tabular presentation of the orders in which Intentionality Task items appeared.

The investigator read and tape recorded each of the story-pairs in the Intentionality Task. Story-pairs were presented to subjects on tape.

Two other story-pairs from the set developed by Bandura and McDonald were used in the Perception Task. Here each individual story in a story-pair was administered separately so that the Perception Task consisted of four items. Each of the items of the Perception Task was presented on tape. There were two parts to each Perception Task item. First there was the story itself. This was followed by the response of a hypothetical mother to the incident described in the story. The first part of each Perception Task item was read and tape-recorded by the investigator. The second part was read and tape-recorded by a woman acting the role of the mother.

Appendix C shows the four Perception Task items that were used. For the two Perception Task items that involve good intentions and high damage (G-H items) the mother's response consisted of three statements about the damage followed by three statements that stress the mother's understanding that the child did not intend harm, that it was just an accident, and so forth. The last statement of each G-H item was a request from the mother to the child to help restore whatever harm had been done.

The mother's response to a G-H item was designed to indicate an awareness of both the damage and intentional elements with much

greater stress being placed on the intentional aspects of the situation. Previous research has indicated that this is in fact how most mothers say they would respond to these situations (Gutkin and Falvey, 1971).

For the two Perception Task items that involve bad intentions and low damage (B-L items) the mother's response consisted of three statements referring to the (small) amount of damage that occurred or to the good fortune that more serious damage was not caused. This was followed by three statements about the mother's anger because of the child's bad intentions and her decision to punish him because of the bad intentions that led him to do what he did. Here as with the G-H items the aim was to provide a response that indicated an awareness of both the damage and intentional elements with much greater stress being placed on the intentional aspects.

The four Perception Task items were presented in four maximally different orders. Within each grade and sex, approximately an equal number of children were tested in each order.

Procedure for Testing Children

Each child was tested individually. E (the investigator) brought each S into the testing room which was equipped with two tape recorders. E read the following directions to S: "I'm interested

in learning about how children think. I'm going to play you some stories on this tape recorder (pointing to appropriate machine). Then I'll ask you some questions about each story. When you answer you'll talk into the microphone here so we can make a recording of what you say on this tape recorder (pointing to appropriate machine). Now, one thing I want you to remember is that I don't think there are any right or wrong answers to these questions. I want to know what you think. So you tell me what you think each time and that will be fine. Are there any questions?"

Testing began with either the Intentionality Task followed by the Perception Task or vice versa. Within each grade-by-sex cell, half of the subjects received the tests in one order, and half received them in the other order. The orders in which items were presented were approximately evenly distributed across the two task orders.

At the end of each Intentionality Task item E asked the S "Who do you think was worse, _____ (name of the first child) or _____ (name of the second child)?" Then E asked, "Why do you think _____ was worse?" The child's answers were tape-recorded and also written down by E verbatim. If the S's response was unclear E asked further questions until he understood what S meant. E's questions were recorded as well as S's responses.

At the end of each Perception Task item E asked the S "What did the mother say?" and prompted S to recall as much of the mother's response as he could. Then E asked, "Was the mother angry?" Finally E asked, "Why was the mother angry?" (or "Why wasn't the mother angry?") depending on how S had answered the first question. The S's responses to these questions were tape-recorded. The responses to the second and third questions of the Perception Task were written down verbatim by the E as well.

The four Perception Task items were presented in four different orders. A given subject received both the Intentionality Task items and the Perception Task items in the same order (arbitrarily designated 1 through 8 for the Intentionality Task items and 1 through 4 for the Perception Task items). Thus a subject who received the Intentionality Task items in order 1 also received the Perception Task items in order 1 and so on. (Intentionality Task orders 5 through 8 were paired with Perception Task orders 1 through 4 respectively since there were only four Perception Task orders.) Since there were 20 subjects within each sex-by-grade cell and eight item orders it was not possible to exactly equate subjects across orders.

Mothers' Instrument

The mother of each child in the study was contacted at the beginning of the project. In the initial letter (see Appendix D) she was informed briefly of the project, asked if it would be alright to test her child, and also told that later on a short questionnaire would be sent to her, if she agreed to participate. A few mothers indicated that they did not wish to participate in the project, or that they did not wish to have their children tested. For the rest, testing of the children was begun. When all the children had been tested, their mothers were sent the questionnaires. Enclosed with the questionnaire was the letter that appears in Appendix E.

Four story-pairs from the set written by Bandura and McDonald formed the basis of the items that were given to the mothers. Two of these story-pairs were the same as those used in the Perception Task and the other two were ones not previously used in this study. Mothers responded to one story from a story-pair at a time. In this way the Mother's Instrument was similar to the Perception Task.

The items for the Mothers' Instrument were re-written so that they referred directly to the child (with age specified) of the mother being studied. There were four different types of items. These four different types resulted from pairing each of two values of intention (good or bad) with each of two values of damage (high

or low). Thus there were items in which the child acted from good intentions and caused high damage (G-H items), items in which he acted from good intentions and caused low damage (G-L items), items in which he acted from bad intentions and caused high damage (B-H items) and items in which he acted from bad intentions and caused low damage (B-L items). Appendix F shows the items that make up the Mothers' Instrument.

The four story-pairs of the Mothers' Instrument consisted of eight separate stories. Each of these eight stories appeared in a high damage form and in a low damage form, making a total of 16 items altogether. Each mother received four items from this set of 16. The four items that a particular mother received were selected such that each of the four different types (G-H, G-L, B-H, B-L) was represented once, and each of the four different story-pairs was represented once. Thus for a given mother a particular story-pair could appear only in conjunction with one of the four story-types. Across mothers, four different story-pair/story-type combinations were used so that a given story-pair appeared equally often in each of the four different story-types. Within each of these four different story-pair/story-type combinations, four different orders in which the items actually appeared in the booklets were used. Appendix G summarizes in tabular form the 16 different arrangements and orders in which the mothers' items were presented. These 16 different

combinations were distributed approximately evenly over each group of 40 mothers whose children were in each of the three grade levels.

The Mothers' Instrument was prefaced by the page of instructions that appears in Appendix H. Following each item two questions appeared. The first question was, "What would you say to your child in this situation? Put your answer below. Write the actual words you would use and describe what you would do." The second question was, "How bad do you think the child's behavior was in this story? Circle one of the four choices below." The four choices were not naughty (1), somewhat naughty (2), naughty (3), and very naughty (4). At the end of the fourth story in each booklet a third question appeared. The mothers were asked to turn back to the first story in the booklet and look at the answer they gave for question two. Then they were asked, "Why did you give this answer? . . . explain why you gave this answer." The mothers were then instructed to repeat this procedure for each of the items, each time explaining their answers to question two. It was also pointed out that they did not need to give long answers to this question, a sentence or two would be fine.

Several weeks after the Mothers' Instruments had been mailed out, the follow-up letter found in Appendix I was sent to all mothers.

Preparation of the Data

The responses of the children to the Intentionality Task and to the second and third questions of the Perception Task were both tape-recorded and written down by E. E's written records of the children's responses were checked against the tape (in some cases against a typed transcript of the tape) and corrected when necessary.

Dependent Measures for Children

Three measures were derived from the corrected written record of the children's responses. The first measure was based on the Intentionality Task. For each Itentionality Task item the child's response was scored as damage-based (1), transitional (1.5), or intentional (2). These scores were summed across the four stories for each S to yield a single measure which could vary between 4 and 8. This measure will be referred to as the Intention Scale.

The Perception Task yielded two measures. The first, called the Anger Scale was based on the question, "Was the mother angry?" The mother was considered angry in the two B-L items and not angry in the two G-H items. The children received a score of 2 for each item in which their judgment was in agreement with the above standard. They received a score of 1 for each item on which their judgment differed from the standard. The score on the Anger scale was

equal to the sum of each child's judgments across the four Perception Task items. Scores could range from 4 to 8.

The second Perception Task measure, called the Reason Scale was based on the question "Why was the mother angry?" (or "Why was the mother not angry?") depending on how the child had answered the previous question. Children's judgments were rated on the basis of whether they attributed the mother's anger or the lack of it to damage or to intention. For each item for which the child attributed the mother's emotion to intentional factors he received a score of 2. For each item on which the child attributed the mother's emotion to damage factors the child received a score of 1. The sum of these scores across the four items yielded the score on the Reason Scale for a given S which could vary between 4 and 8.

The children's answers to the first question of the Perception Task, "What did the mother say?," have not been analyzed and will not be discussed here.

Dependent Measures for Mothers

The Mothers' Instrument yielded five measures in all. The Naughtiness Scale was a simple objective measure. It consisted of the mother's ratings of the child's naughtiness on a four-point scale from not naughty (1) to very naughty (4).

The Punishment Scale was based on the mother's answers to question one of the Mothers' Instrument. The Punishment Scale was a four-point scale that rated how much punishment the mother had said she would administer. A score of 1 indicated that the mother would not punish the child at all and did not disapprove of the child for what he had done. A score of 2 was given if the mother gave no punishment but did scold the child or express some annoyance. A score of 3 indicated that the mother would administer moderate punishment such as slapping the child once, or sending him to his room for a while. A score of 4 was given if the mother would have used strong punishment such as spanking the child or depriving him of a major privilege such as making him stay in his room all day. Gutkin and Falvey (1971) have used this scale on data similar to that under consideration here with good results (inter-rater reliability of .90).

A third measure for mothers, called the Explanation Scale, was based on the mother's responses to question three of the Mothers' Instrument. Each response was scored as indicating an explanation based on intentions (2), on damage (1), or on both equally (1.5).

In addition the data from the Naughtiness Scale and the Punishment Scale were subjected to a further analysis. This analysis was designed to assess the extent to which a mother was basing her ratings or responses on the intent of the characters in the

stories. This measure was reported by Hebble (1971) who attributed it to Edith Neimark. Hebble referred to it as the Intent Judgment Quotient (IJQ) and it will be so designated here. The

$$IJQ = \left(\frac{\Sigma \text{ Scores on good intent stories}}{\Sigma \text{ Scores on bad intent stories}}\right) \times \left(\frac{\Sigma \text{ Scores on high damage stories}}{\Sigma \text{ Scores on low damage stories}}\right).$$

Hebble's explanation of the IJQ is both concise and clear and so will be quoted at length here: "The first ratio consisted of the sum of ratings assigned to all story variations involving good intent divided by the sum of ratings assigned to all story variations involving bad intent. If a S's ratings were determined solely by damage, the value of the first ratio would by unity. If, on the other hand, ratings were affected by intent, then the ratio would be less than 1. The greater the importance of intent, the lower the numerical value of the ratio.

"The second ratio consisted of the sum of the ratings assigned to all story variations involving heavy [i.e. high] damage divided by the sum of ratings assigned to all story variations involving light [i.e. low] damage. Here again, if judgment were determined solely by intent, the expected value of the ratio would be unity. If damage were the main determinant of ratings, the value of the ratio would exceed unity. The greater the role of damage, the higher the value of the ratio.

"For a S who was basing his ratings on intent, the product of these two ratios would be less than 1. The product would be approximately equal to 1 if S gave equal weights to intent and damage, and it would be greater than 1 if he gave greater weight to damage than to intent. In other words, the magnitude of the IJQ was inversely related to the extent to which a S based his judgment on intent . . ." (Hebble, 1971, p. 1207).

For both the Naughtiness Scale and the Punishment Scale IJQ ratios were computed according to the method described by Hebble above.

RESULTS

Rating of the Data

The items of the Intentionality Task were rated by the investigator only. This procedure was felt to be justified due to the investigator's previous success in obtaining a high degree of inter-rater reliability with such data (Gutkin, 1972).

The two measures based on the Perception Task, the Anger Scale and the Reason Scale required a rater. The investigator and one other judge made these ratings. The other rater was trained on rating guides and on data taken from the 120 subjects in the sample. Twenty-four subjects (four boys and four girls from each of the three grades) provided data which was used to train the second rater.

After the training procedure both the investigator and the second rater made independent ratings on the remaining 96 subjects. For the Anger Scale there was 99% agreement between the two raters. There was 98% agreement between them for the Reason Scale. The ratings of the investigator were used in all subsequent analyses. His ratings for the 24 subjects who were used in the training of the second rater were also used and these 24 subjects were included in all subsequent analyses.

Of the 120 mothers who had questionnaires mailed to them, only 51 filled them out and returned them. Nineteen of the mothers who returned the questionnaire had first grade children, 15 had third grade children, and 17 had sixth grade children.

Since less than half of the mothers responded to the questionnaire the question is raised of how representative were the responses of those mothers who did return the questionnaire. No information was available on those mothers who failed to respond. However, there was information on all of the children in the sample, including both the group whose mothers returned the questionnaire and the group whose mothers failed to do so. By comparing these two groups of children perhaps something can be inferred about the characteristics of the two groups of mothers. The means for the Anger Scale, the Reason Scale, and the Intention Scale of the 51 children whose mothers returned the questionnaire were not significantly different from the means on these measures of the 69 children whose mothers did not return the questionnaire. Thus it can be concluded that the two subsamples of children did not differ significantly on the relevant measures of intentionality. From this it can be inferred that the mothers of these two groups of children probably did not differ on the relevant dimensions either and that the responses of the 51 mothers who did return the questionnaire were probably representative of the sample as a whole.

Two of the measures of the Mothers' Instrument required rating by a judge, the Punishment Scale and the Explanation Scale. The same rater who served as the second rater for the children's data also made the second ratings on the mothers' data. She was trained by rating guides and by practicing on eight of the returned questionnaires.

The investigator and the second rater each independently rated 41 questionnaires. The correlation between the ratings of the two raters for the Punishment Scale was .86.

The Explanation Scale proved to have little discriminative power. One rater scored 91% of the responses as indicating intentional explanations. The other rater scored 86% of the responses in this way. Thus this measure, for which there was near unanimity in the responses given by subjects, did not appear useful and was dropped from all subsequent analyses.

Missing Data

There was a small amount of missing data. Three children were missing two scores each (because of unscorable responses) on the Reason Scale. These missing scores were estimated by using the mean of the grade-by-sex-by-order cell of that item for each subject with missing data.

One mother was missing one score on the Punishment Scale due to failure to give a scorable response. The mean of the entire sample on this item was used to estimate the missing score.

Summary of Major Findings

The main findings of the study were as follows: There was little relation between the extent to which mothers reported intentional responding to their children and the children's level of intentionality. This confirms hypothesis 1. The response patterns of two-thirds of the children conformed to the predictions of the cognitive-perception model, but the response patterns of one-third did not. This result provides some support for hypothesis two, but also some evidence that hypothesis two is not entirely right. Finally there was a consistent negative relation between amount of punishment mothers reported they would give and intentionality in their children. These findings were unexpected but of considerable theoretical significance in terms of Hoffman's ideas on moral development. The results of the study will now be presented in greater detail.

Children's Data

The correlations among the three children's measures are shown by grade and for the total sample in Table 1. For the total sample the three variables were all significantly correlated with each other, though the size of the correlations was rather small. Thus for the entire sample there was evidence that the three measures of intentionality were all somewhat related.

TABLE 1

CORRELATIONS AMONG CHILDREN'S VARIABLES

		RS	IS
AS			
1st Grade	N = 40	.516**	.096
3rd Grade	N = 40	.047	.274*
6th Grade	N = 40	.267*	-.003
Total	N = 120	.421**	.289**
RS			
1st Grade			-.051
3rd Grade			.114
6th Grade			-.039
Total			.224**

**p $\leq$ .01
*p = .05
AS = Anger Scale
RS = Reason Scale
IS = Intention Scale

The analysis of the correlations among the three children's variables by grade showed that the Anger Scale was significantly correlated with the Reason Scale for the first and sixth graders, but not for the third graders. The Anger Scale was significantly correlated with the Intention Scale for the third graders only, and the correlation between the Reason Scale and the Intention Scale was not large enough within any one grade to reach statistical significance.

The children's data were analyzed by a 2(sex) by 3(grade) by 2(task order) by 3(measures, Anger Scale, Reason Scale, and Intention Scale) analysis of variance with repeated measures. This analysis showed that there were significant main effects for grades ($F = 36.84$, $df = 2/108$, $p < .001$) and for measures ($F = 56.24$, $df = 2/216$, $p < .001$). There was also a significant interaction between grades and measures ($F = 6.35$, $df = 4/216$, $p < .001$) and between task order and measures ($F = 6.10$, $df = 2/216$, $p < .01$). None of the other variables, either singly or in combination, produced significant effects.

When the subjects are given composite scores for the three measures, the mean across the three measures for each grade are first grade, 6.328; third grade, 7.154; and sixth grade, 7.467. The eta associated with grades was .40. A Newman-Keuls test showed that all comparisons among the means of the three grades were significant

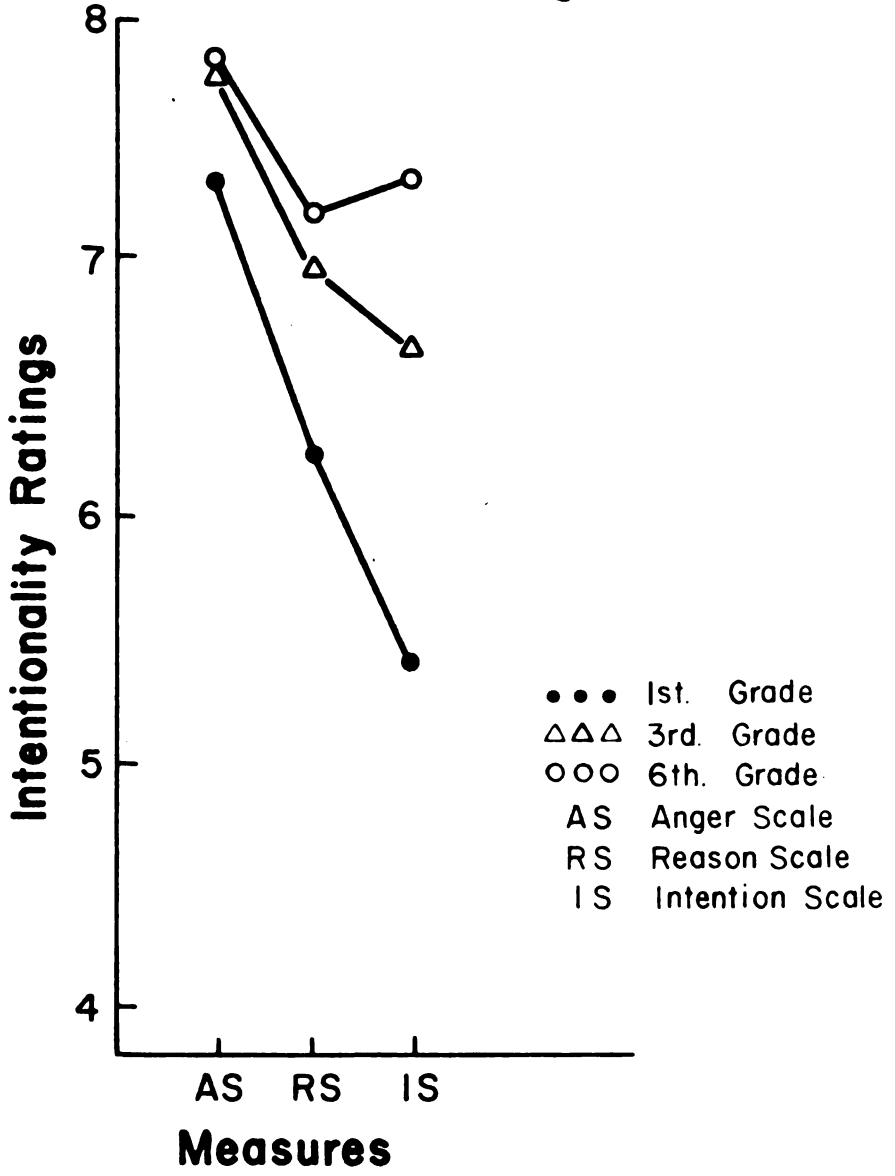
at the .05 level. Thus each higher grade had higher (more intentional) scores than the grade below it.

The means for the three measures were Anger Scale, 7.667; Reason Scale, 6.816; and Intention Scale, 6.467. The eta for measures was .42. The Newman-Keuls test showed that all comparisons among the three means for measures were significant at the .05 level. This analysis showed that the children performed most intentionally on the first part of the Perception Task (as measured by the Anger Scale), less intentionally on the second part of the Perception Task (as measured by the Reason Scale), and least intentionally on the Intention Task (as measured by the Intention Scale).

Figure 2 depicts the significant interaction between grades and measures. The eta for this interaction was .20. For both the first and the third grades, each of the three measures was significantly different from each of the others ($p = .05$ by Newman-Keuls test). The Anger Scale was significantly higher than the Reason Scale for all 3 grades. The Reason Scale was significantly higher than the Intention Scale for the first two grades only. The interaction between grades and measures reflects the failure of the sixth graders to respond to the Intention Task in the same way as the other two grades. Another way to look at this interaction is to note that the first graders were significantly lower than the third graders for each of the measures, but the third graders were

FIGURE TWO

Grades by Measures Interaction for Childrens Ratings



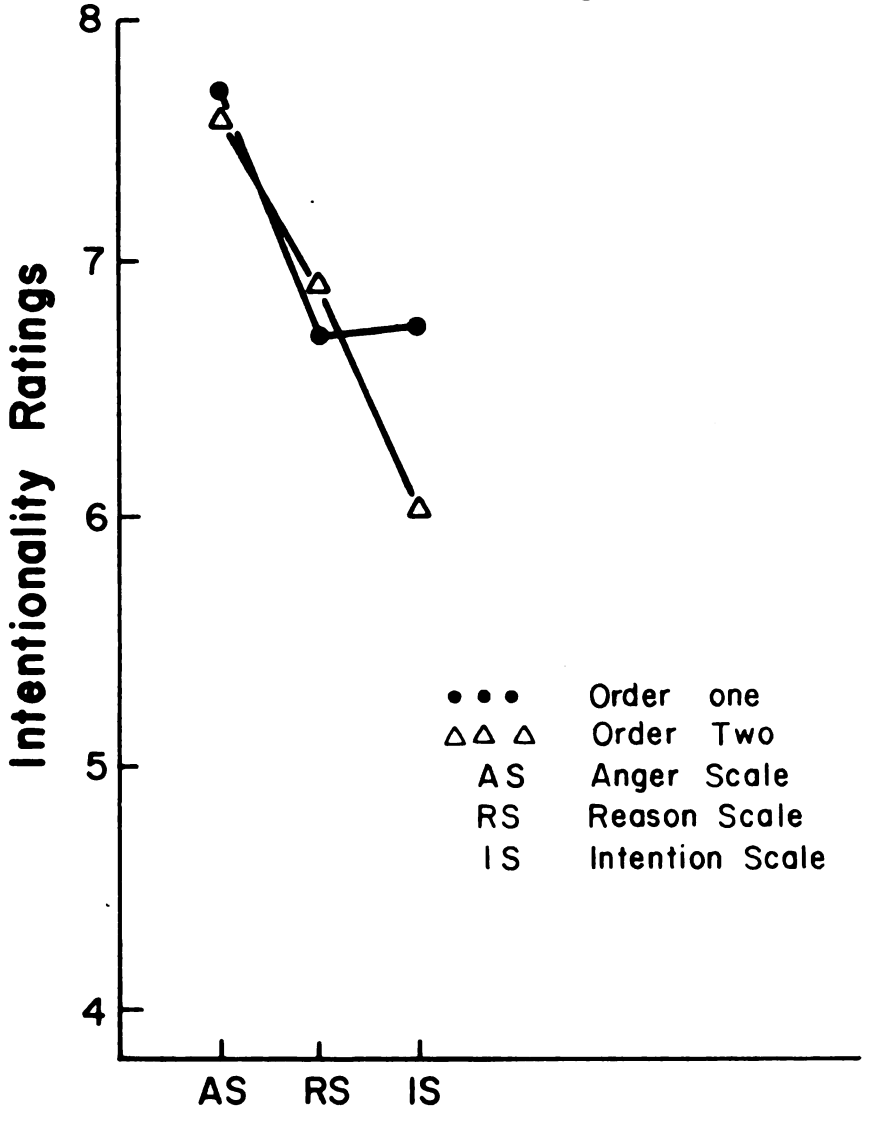
significantly lower than the sixth graders only for the Intention Scale (Newman-Keuls test, $p = .05$).

Figure 3 shows the interaction between task order and measures. The eta for this interaction was .14. Scores on the Intention Scale were significantly higher ($p = .05$ by Newman-Keuls test) in order 1 (when the Intention Task was presented first) than in order 2 (when the Perception Task was presented first). It was only in order two that scores on the Intention Scale were significantly lower than scores on the Reason Scale. In order 1 scores on the Intention Scale were actually higher (though not significantly so) than scores on the Reason Scale.

This interaction was in the opposite direction than that expected. One might expect that when the Perception Task was given before the Intention Task (order 2) scores on the Intention Scale would be higher as a result of the learning opportunity provided by the, presumably, easier Perception Task. Instead it seems that presenting the Perception Task first <u>decreased</u> performance on the Intention Task. One possible explanation of this finding is fatigue. When the Intention Task was presented second the subjects were already tired from having responded to the Perception Task so their performance on the Intention Task dropped relative to what it would have been had the Intention Task been presented first. The second Perception Task measure, the Reason Scale was also somewhat lower

FIGURE THREE

Task order by Measures Interaction for Childrens Ratings



(though not significantly so) in order 1 when the Perception Task was presented second compared to order 2 when the Perception Task was presented first. This finding bolsters the fatigue explanation, since it shows it working for both tasks.

One of the hypotheses under investigation here is that the ability to use the concept of intentionality correctly oneself depends upon the ability to understand when someone else is using the concept to explain how they feel about something, and that the ability to do this depends in turn on the ability to correctly perceive how the other person actually is feeling. Thus it is hypothesized that the ability measured by the Intention Scale is dependent on the ability measured by the Reason Scale which in turn is dependent on the ability measured by the Anger Scale.

The correlational analysis showed that these three variables were in fact all somewhat related. The analysis of variance showed that the Anger Scale was easiest, followed by the Reason Scale and that the Intention Scale was the hardest. Both of these analyses lend some support to the hypothesis under consideration here. A strong test of the hypothesis would require that the total score of a given subject on the four items of the Intention Scale should be equal to or less than his total score on the four items of the Reason Scale which in turn should be equal to or less than his total score for the four items of the Anger Scale. That is, the ability

to perform intentionally on the Intention Scale should depend on the ability to perform at least equally intentionally on the Reason Scale, which should depend on the ability to perform at least equally intentionally on the Anger Scale.

An analysis was performed on subjects individually to see how many had responded in accordance with the above predictions. Table 2A shows the number of subjects within each grade in each of the four response patterns that conformed to the predictions, and the number of subjects in each grade whose response patterns were deviant.

Seventy-eight (66.7%) of the subjects overall had response patterns that conformed to the sequence outlined above, while 39 (33.3%) had response patterns that did not fit the predicted sequence. (Three subjects with missing data were dropped from this analysis.)

Table 2B shows the breakdown of the response patterns of the deviant subjects in terms of where their responses went against the predicted outcome. It should be noted that in 36 of the 39 cases the deviation resulted in whole or in part from the failure of the Intention Scale and the Reason Scale to be related as predicted.

The above analysis is essentially a scalogram analysis. Given just one score for each subject, namely the sum for that subject across the three measures, an attempt was made to generate the

TABLE 2

NUMBER OF SUBJECTS PER GRADE IN RESPONSE PATTERNS

A. Number of Subjects Per Grade in Each Scale Type

Scale Types	1st Grade	3rd Grade	6th Grade	Total
1 (AS > RS > IS)	14	7	3	24
2 (AS = RS > IS)	9	10	8	27
3 (AS > RS = IS)	5	3	3	11
4 (AS = RS = IS)	0	4	12	16
Total Predicted Types (1 + 2 + 3 + 4)	28	24	26	78
5 Deviant Types	10	15	14	39

B. Number of Subjects in Each Deviant Response Pattern

Deviant Pattern	Number of Subjects
AS < RS	1
RS < IS	27
(RS < IS) and (AS < IS)	9
(AS < RS) and (AS < IS)	2
AS < RS < IS	0
Total	39

AS = Anger Scale
RS = Reason Scale
IS = Intention Scale

pattern of relationships among the three individual scores that would conform to the predicted sequence. In 66.7% of the cases the actual relationships fit those predicted by the scaling model. Thus the coefficient of reproducibility is .667. This represents a rather modest success at scaling. On the other hand it is far from a total failure. Two-thirds of the sample did behave as predicted. Although the one-third that did not cannot be dismissed, it seems that the idea that intentionality develops as predicted in the scaling model is worth further consideration.

Mothers' Data

Table 3 shows the intercorrelations of the four mothers' variables. Since the Intent Judgment Quotient for the Punishment Scale (IJQ/PS) and the Intent Judgment Quotient for the Naughtiness Scale (IJQ/NS) were derived from the individual punishment scores and naughtiness scores respectively, correlations between IJQ/PS and the Punishment Scale and IJQ/NS and the Naughtiness Scale are not independent and thus are not reported in the table.

Table 3 shows that there was a significant moderate correlation between the Punishment Scale and the Naughtiness Scale. This relation makes sense since the extent to which a mother judges a

TABLE 3

CORRELATIONS AMONG THE MOTHERS' VARIABLES

	PS	NS	IJQ/PS
PS	--		
NS	.358**	--	
IJQ/PS	--	.006	--
IJQ/NS	-.312**	--	.447**

**p < .01
N = 51
PS = Punishment Scale
NS = Naughtiness Scale

child as naughty ought to be related to the amount of punishment she gives him.

The two IJQ measures, IJQ/PS and IJQ/NS, also showed a significant moderate correlation. This finding, like the previously reported relation between the raw punishment and naughtiness data, is intelligible since the two variables are conceptually related.

The raw Punishment Scale was significantly negatively correlated with the IJQ/NS. This relation shows that mothers who punished their children more also tended to report they would respond more intentionally according to the IJQ/NS. Mothers who punished their

children less tended to report they would respond less intentionally according to the IJQ/NS. The smaller an IJQ score the more intentional the response pattern. Hence the negative correlation.

Each mother was tested on four stories. Each story was constructed by combining one of two levels of intention (good or bad) with one of two levels of damage (high or low). The performance of the mothers on the two scales under consideration here, punishment and naughtiness, was analyzed by a 2 (intention level) by 2 (damage level) analysis of variance with repeated measures.

The results of this analysis for the Punishment Scale showed a significant effect for intention ($F = 249.43$, $df = 1/150$, $p < .001$), a significant effect for damage ($F = 6.77$, $df = 1/150$, $p = .01$), and a significant effect for the interaction between these two variables ($F = 5.73$, $df = 1/150$, $p = .02$).

The means for the two levels of intention were 1.343 for good intention and 2.825 for bad intention. The eta associated with intention was .73. Thus there was a very strong tendency for the mothers to report that they would punish less in the stories with good intentions than in the stories with bad intentions.

The means for the two levels of damage were 2.206 for high damage and 1.962 for low damage. The eta associated with damage was .12. Thus there was a statistically reliable, though weak, tendency

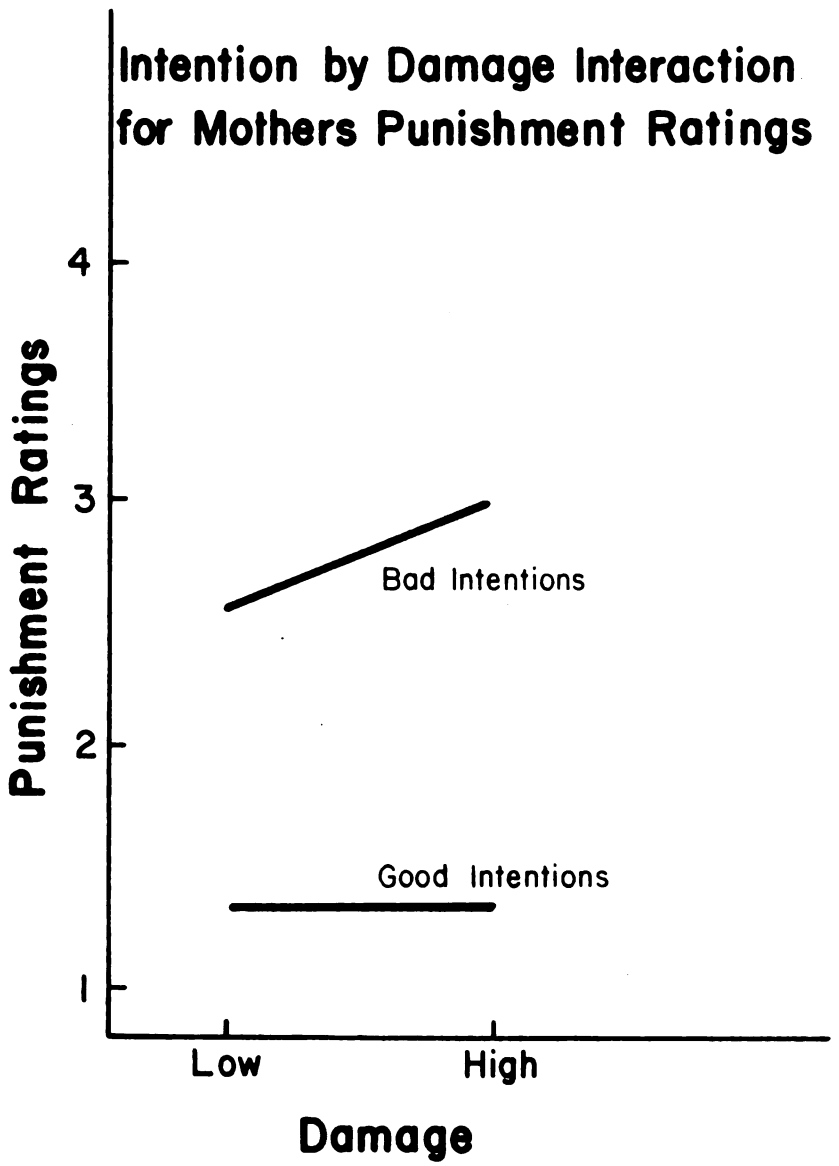
for the mothers to report that they would punish more in the stories with high damage than in the stories with low damage.

The analysis of the interaction between intention and damage modifies the last conclusion. This interaction is shown in Figure 4. The eta for the interaction was .11. The Newman-Keuls test showed that all comparisons were significantly different at the .05 level except for that between the G-H and G-L stories. As the graph shows the interaction was due to the level of damage having no influence for good intention stories, but exerting an influence for bad intention stories such that severity of reported punishment dropped when damage was low.

The results for the analysis of the naughtiness data parallels that for the punishment data. There were significant main effects for intention ($F = 348.69$, $df = 1/150$, $p < .001$), for damage ($F = 4.04$, $df = 1/150$, $p = .05$), and for the interaction of these two variables ($F = 5.55$, $df = 1/150$, $p = .02$). The naughtiness means for the two levels of intention were 1.103 for the good intention stories and 2.696 for the bad intention stories. The eta for intention was .77. Thus there was a very strong tendency for the mothers to judge the children as less naughty in the stories with good intentions than in the stories with bad intentions.

The means for the two levels of damager were 1.985 for the high damage stories and 1.814 for the low damage stories. The eta

FIGURE FOUR

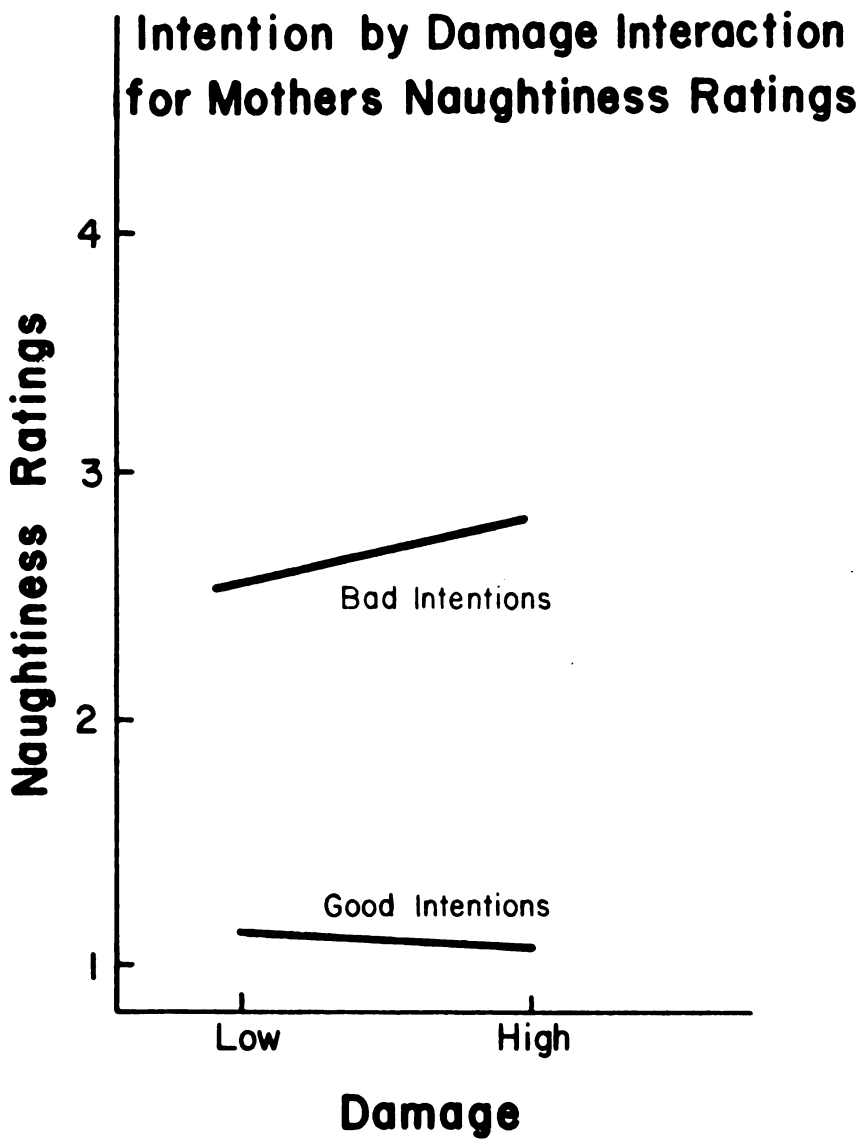

Intention by Damage Interaction
for Mothers Punishment Ratings
Punishment Ratings
4
3
2
1
Bad Intentions
Good Intentions
Low
High
Damage

for damage was .08. Thus there was a weak but statistically reliable tendency for mothers to judge children as naughtier in the high damage stories than in the low damage stories.

Again, as with the Punishment Scale, the analysis of the interaction modifies this conclusion. The interaction is shown in Figure 5. The eta for the interaction was .10. The Newman-Keuls test showed that all comparisons were significantly different at the .05 level except for that between the G-H and G-L stories. As the graph shows the interaction was due to the level of damage having no influence for good intention stories, but exerting an influence for bad intention stories such that ratings of naughtiness were lowered when damage was low.

Since both the punishment and naughtiness variables were rated on comparable 4 point scales with each level of the scale roughly equivalent for both variables, it is possible to ask how the two variables compare. A 2 (measures, punishment or naughtiness) by 2 (intention levels) by 2 (damage levels) analysis of variance was performed to answer this question. Some of the results generated by this analysis were redundant with those already discussed and so will not be mentioned again. However, this analysis did reveal a significant main effect for measures ($F = 8.60$, $df = 1/350$, $p < .01$). None of the interactions between measures and the other variables were significant.

FIGURE FIVE


Intention by Damage Interaction
for Mothers Naughtiness Ratings
Naughtiness Ratings
4
3
2
1
Bad Intentions
Good Intentions
Low
High
Damage

The mean for punishment was 2.084 and the mean for naughtiness was 1.899. The eta for this difference was .09. Thus there was a statistically reliable though weak tendency for the mean level of reported punishment to be greater than the mean rating for naughtiness across all story-types.

Relations between Children's and Mothers' Data

Table 4 shows the correlations among the mothers' data and the children's data by grade, sex, sex within grade, and for the entire sample of mother/child pairs.

The IJQ/PS and the IJQ/NS can both be taken as an indication of the extent to which a mother reported that she would respond to her child on the basis of intentions. Thus the correlations among these two mothers' variables and the three children's variables will provide an index of the extent to which there was a relation between mothers' self-reports concerning their intentionality level in dealing with their children, and the children's level of intentionality.

For the entire sample of mother/child pairs there was a significant positive correlation between the Anger Scale and IJQ/PS. This correlation indicates that there was a negative relation between the extent to which mothers reported they would respond to their children on the basis of intentions, and their children's accuracy

TABLE 4

MOTHER/CHILD CORRELATIONS FOR TOTAL SAMPLE AND FOR SEX, GRADE, AND SEX-BY-GRADE SUB-SAMPLES

Mothers' variables / Children's variables	PS	NS	IJQ/PS	IJQ/NS
AS				
1st grade boys	-.334	.371	.385	-.162
1st grade girls	-.552*	.047	.205	.376
Total 1st grade	-.378*	.019	.160	.224
3rd grade boys	.135	-.166	.666	-.305
3rd grade girls	.258	.000	-.019	.127
Total 3rd grade	.233	.025	.307	-.032
6th grade boys	.235	.193	.529	-.036
6th grade girls	.039	-.206	.208	.315
Total 6th grade	.233	-.125	.373	.237
Total boys	-.065	.297	.546**	-.142
Total girls	-.182	-.116	-.175	.264
Total sample	-.142	-.001	.267*	.154
RS				
1st grade boys	-.546*	.014	-.779**	-.356
1st grade girls	.081	-.504*	-.171	.346
Total 1st grade	-.083	-.429*	-.232	.227

3rd grade boys	-.876**	-.166	-.061	.591
3rd grade girls	-.367	.053	.306	.054
Total 3rd grade	-.505*	.000	.164	.162
6th grade boys	-.605	-.741*	-.469	.345
6th grade girls	.033	.256	.188	-.314
Total 6th grade	-.111	-.257	.070	.068
Total boys	-.747**	-.099	-.067	.135
Total girls	-.112	-.256	.021	.139
Total sample	-.333**	-.214	.008	.144
IS				
1st grade boys	-.573*	-.087	-.335	.146
1st grade girls	-.360	.066	.688**	.574*
Total 1st grade	-.275	.008	.215	.335
3rd grade boys	.112	-.862**	.688*	-.696*
3rd grade girls	-.036	.354	-.155	-.452
Total 3rd grade	-.003	-.038	.163	-.461*
6th grade boys	-.485	-.794*	-.590	.224
6th grade girls	-.582*	-.204	.367	.466
Total 6th grade	-.146	-.501*	.106	.288
Total boys	-.358*	-.288	.019	.085
Total girls	-.230	.002	.305*	.194
Total sample	-.281*	-.093	.206	.156

*p < .05
**p < .01

in assessing the emotions of the mother in the Perception Task. (Although the correlation between the Anger Scale and IJQ/PS was positive, small scores on the IJQ measures indicate intentional responding. Hence the actual relation indicated between IJQ/PS and the Anger Scale is negative). There was also a significant positive correlation between IJQ/PS and the Anger Scale for the sample of mother/son pairs.

None of the correlations between IJQ/NS and the Anger Scale either for the sample as a whole or for any of the sub-samples was statistically significant.

Neither of the two mothers' variables under consideration here (IJQ/PS and IJQ/NS) showed a significant correlation with the Reason Scale for the entire sample. There was a significant negative correlation between IJQ/PS and the Reason Scale for the first grade boys and their mothers. This correlation indicates that the extent to which the mothers of the first grade boys reported that they would respond to their children intentionally was positively related to the ability of the first grade boys to give intentional explanations of the emotions of the mother in the Perception Task. None of the correlations between IJQ/NS and the Reason Scale, either for the sample as a whole or for any of the sub-samples, was statistically significant.

Neither of the two mothers' variables under discussion here correlated significantly with the Intention Scale for the sample as a whole. There were significant positive correlations between IJQ/PS

and the Intention Scale for the first grade girls and their mothers, the third grade boys and their mothers, and for the entire sample of mother/daughter pairs. These correlations indicate that for these groups the extent to which mothers reported they would respond intentionally to their children was negatively related to the children's ability to make intentional responses on the Intention Task.

There were also significant negative correlations between IJQ/NS and the Intention Scale for the third grade boys and their mothers, and the entire third grade sample of mother/child pairs. There was a significant positive correlation between IJQ/NS and the Intention Scale for the first grade girls and their mothers. The negative correlation indicates that the extent to which the mothers of the third graders, and especially of the third grade boys, judged their children's naughtiness in terms of intentions was positively related to the children's ability to make intentional responses on the Intention Task. The positive correlation indicates on the other hand, that the extent to which mothers of the first grade girls judged their daughters in terms of intentions was negatively related to these girls' ability to make intentional judgments on the Intention Task.

The mothers' Punishment Scale did not show a significant correlation with the children's Anger Scale for the sample as a whole. However, there were significant negative correlations between these

two variables for the first grade girls and their mothers, and for the entire sample of first grade mother/child pairs. These negative correlations indicate that there was a negative relation between the amount of punishment that the mothers of the first graders, and especially of the first grade girls, indicated they would give to their children and these children's ability to accurately assess the emotion of the mother in the Perception Task.

There was a significant negative correlation between the Punishment Scale and the Reason Scale for the sample as a whole, and also for the first grade mother/son sample, the third grade mother/child sample as a whole, and the mother/son sample as a whole. These correlations indicate that for the entire sample of mother/child pairs and also for the subsamples specified above, the amount of punishment that mothers reported they would give to their children was negatively related to the ability of the children to give intentional explanations of the emotions of the mother in the Perception Task.

There was a significant negative correlation between the Punishment Scale and the Intention Scale for the sample as a whole, and also for the first grade mother/son sample, the sixth grade mother/daughter sample, and the entire sample of mother/son pairs. These correlations indicate that for the sample as a whole, as well as for the subsamples specified above, the amount of punishment mothers reported they would give to their children, was negatively related

to the children's ability to make intentional judgments on the Intention Task.

The correlations between the Naughtiness Scale and the Anger Scale were not statistically significant for the sample as a whole nor for any of the subsamples.

Although the correlation between the Naughtiness Scale and the Reason scale was not significant for the sample as a whole, there were significant negative correlations between these two variables for the first grade mother/daughter sample, the first grade mother/child sample, and the sixth grade mother/son sample. These correlations indicate that for the subsamples specified above the extent to which the mothers judged the children as naughty was negatively related to the children's ability to give intentional explanations of the emotions of the mother in the Perception Task.

The correlation between the Naughtiness Scale and the Intention Scale for the sample as a whole was also not significant. However, there were significant negative correlations between the two variables for the third grade mother/son sample, the sixth grade mother/son sample, and the sixth grade mother/child sample. These correlations indicate that for the subsamples specified above the extent to which the mothers judged the children as naughty was negatively related to the children's ability to make intentional judgments on the Intention Task.

DISCUSSION

The present study had four goals: to attempt to replicate the findings of the Gutkin and Falvey (1971) study, to relate mothers' self-reports to children's judgments of intentionality, to examine Bandura's account of the development of intentionality in terms of the data presented here, and to test a model for the development of moral intentionality in which the child's ability to perceive the use of intentions by others is assigned a key role. The discussion will focus on the extent to which the data enabled each of these goals to be achieved.

The present study successfully replicated the findings of the Gutkin and Flavey study. Both studies showed that the amount of punishment mothers reported they would give to their children, and the extent to which they would judge them as naughty, was very strongly related to the intentions exhibited by the child. The present study went beyond the first one in showing that a high level of damage in conjunction with the bad level of intention produced more reported punishment and higher naughtiness ratings than the low level of damage in conjunction with bad intention. Thus taking the two studies together, it appears that mothers report that their response to their

children in terms of punishment and judged naughtiness is largely determined by the child's intentions regardless of damage, but that the amount of damage also has some effect when combined with bad intentions.

This finding does not support Bandura's position on the acquisition of intentionality. According to Bandura's theory there must be a good number of mothers who are responding at some point to their children mainly on the basis of damage in order to account for their children's damage-based judgments. However, the strong tendency of mothers to report that they respond on the basis of intentions renders this account less tenable.

The findings on the relations among the three measures of intentionality in children and the two mothers' self-report measures on how intentionally they would respond to their children (IJQ/PS and IJQ/NS) were that in general there is little relation among these variables. Of 72 correlations computed, only 9 were large enough to reach statistical significance. There was only one significant correlation among these variables for the sample as a whole.

These findings go against the expectations raised by Bandura's explanation of the development of moral intentionality. According to Bandura's theory there should have been a strong relation among these variables such that the intention level that mothers reported they would use with their children would correlate highly with the

intentionality level of the children. The one significant correlation for the total sample is in the opposite direction from that predicted by Bandura's theory, showing that intentional responding by mothers is negatively related to children's accuracy in judging emotions.

In general the pattern of significant correlations for the subsamples was also not supportive of Bandura's theory. Five of these correlations for subsamples showed that there was a negative relation between a measure of intentionality in mothers and intentional responding by their children. There were three significant correlations for the subsamples that supported Bandura's theory by showing that there was a positive relation between the intention level that mothers reported they would use with their children, and the children's intentionality level.

An analysis of the sign of the correlations between IJQ/PS and IJQ/NS and the three children's variables also failed to support the expectations of Bandura's theory. According to this theory the sign of the correlations of the two IJQ measures with the children's variables should have been negative. Inspection of Table 4 shows that of the 36 correlations with IJQ/PS 25 were positive and only 11 were negative. For IJQ/NS, 27 correlations were positive and only 9 negative. Thus the correlations did not show a tendency to be in the direction predicted by Bandura's theory.

For the entire sample of mother/child pairs there was a negative correlation between the Reason Scale and the Punishment Scale and between the Intention Scale and the Punishment Scale. A similar significant relation was also observed in several of the subsamples for these variables. There was a significant tendency ($p < .01$ by sign test) for the correlations of the Punishment Scale with both the Reason Scale and the Intention Scale to be negative across subsamples. These relations show that total amount of punishment that mothers reported they would administer was negatively related to two measures of intentionality in their children. This finding fits nicely with some of Hoffman's theorizing on the development of moral judgment (Hoffman, 1970). Hoffman has concluded that higher levels of moral judgment in children such as those characterized by an internalized as opposed to an external conscience, are negatively related to what he calls power assertion by parents. One example or aspect of power assertion is the use of punishment as a discipline technique. The present study has shown that amount of punishment by parents relates negatively to intentional responding in children, which can be considered a higher form of moral judgment than damage-based responding. Thus this finding fits Hoffman's conclusion.

Hoffman's theoretical explanation of the observed relation between power assertion in parents and moral judgment in children is

relevant to the findings of the present study concerning the relation between amount of punishment by parents and moral intentionality of their children. Although Hoffman theorizes that there must be some arousal of the child in order to induce him to learn what the parent is trying to teach him in a discipline encounter, he also reasons that discipline encounters that include high levels of punishment may be too arousing for effective learning to take place. Hoffman goes on to suggest that under conditions of too high arousal the child confounds different aspects of the situation and thus becomes incapable of really understanding what he is being punished for. The net result is a cognitively more primitive response on the part of the child. Thus the negative relation between amount of punishment by parents and intentionality of judgments by children may reflect the inability of children who have been over-aroused by relatively high levels of punishment to utilize effectively all the cues in the situation. In the end they wind up confounding naughtiness with damage and thus make damage-based judgments.

The cognitive-perception model of the development of moral intentionality was supported by the response patterns of two-thirds of the subjects and disconfirmed for one-third. These results seem equivocal. They provide too much evidence in favor of the model to permit one to easily give it up and yet at the same time, too much

evidence against it to permit one to accept it in its present form. Further research seems called for.

There are several studies in the literature that provide evidence against the cognitive-perception model outlined above (Bandura and McDonald, 1963, Cowan et al., 1969, Crowly, 1968, Glasco, et al., 1970). In these studies it was found that very young children whose judgments were originally mostly damage-based could be induced to make intentional judgments after being exposed to appropriate models who made intentional judgments. Thus it seems that children who according to the perception model would be presumed to be incapable of perceiving and understanding intentional messages were able to perceive, understand, and imitate such messages when exposed to them.

The findings of the studies cited above pose serious difficulties for the cognitive-perception model. One possible line of defense that could be employed for the cognitive-perception model is to point out that the model assumes a certain amount of ambiguity on the part of the parents in the natural situation. Thus at Time 3 in the model (see Figure 1) the parent is assumed to get angry at the child, and only later to calm down and explain to the child not to worry, that it was only an accident, etc.

There is some evidence from the present study and from the Gutkin and Falvey study (1971) that this assumption is true. In the present study a punishment rating higher than 1 was assigned in

29.4% of the G-H cases. In the earlier study this percentage was 60%. Thus there was a sizable percentage of mothers who reported that they would at least get annoyed with their children when they caused damage even though they acted from good intentions. This annoyance could be enough to keep the young child confused about what the parent is really stressing.

In the modeling situations used by the investigators cited above there was no ambiguity. The adult models made clear-cut intentional responses without letting the damage elements interfere. Thus in this situation it might have been easier for the child to learn the concept of intentions than it would have been in the natural situation where he had to pick it out from a somewhat ambiguous message which often included damage-based elements.

Thus perhaps it is true, as Bandura would certainly predict, that if children were exposed only to intentional judgments and reactions they would never go through a damage-based phase. But since children probably tend to get exposed to somewhat mixed messages concerning the relative importance of damage and intentions, the ability of the child to clearly perceive these messages may be an important variable in determining his level of intentionality.

In another modeling study, Turiel (1966) found that the child's tendency to be influenced by models who presented moral arguments at different levels was dependent on the child's level of

moral judgment. Thus arguments one stage above the child's level proved to be more influential in changing the child's subsequent judgments than arguments one stage below or two stages above the child's original level. Turiel concluded that ". . . the effectiveness of environmental influences depends on the relation between the type of concept encountered and developmental level" (Turiel, 1966, p. 618). This conclusion is congruent with the cognitive-perception model of the development of moral intentionality proposed here. The cognitive-perception model assumes that the effectiveness of a model who presents intentional judgments will vary with the level of the child's ability to perceive and understand this judgment.

This assumption of the cognitive-perception model can be thought of as a specific example of a more general point made by Flanders in a review of studies on imitative behavior (Flanders, 1968). Flanders pointed out that in order for an observer to imitate the behavior of a model the observer must ". . . attend to, retain and comprehend the modeled behavior . . ." (Flanders, 1968, p. 330). The ability of a child to attend to, retain, and comprehend an intentional judgment may relate to developmental variables such as mental age. The effectiveness of modeling and reinforcement in producing desired behaviors may be limited by such developmental variables.

The present study has shown that the level of intentionality in children's judgments is not very well accounted for by the level of

intentionality with which their mothers reported they would treat the children. This finding suggests that the assumption that children's judgments of intention develop as a simple result of the modeling and reinforcement given by an important socialization agent such as the mother may not be correct. Although the attempt to specify a developmental variable that might account for the intentional level of the children (their ability to comprehend the concept of intention and to recognize when another uses it) was not clearly successful, this variable seems to merit further investigation in relation to moral judgment. Future research might try to measure the actual behavior of parents toward children in discipline situations involving damage rather than relying on hypothetical self-report data of the kind used in the present study.

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APPENDICES

APPENDIX A

FOUR STORY-PAIRS USED IN INTENTIONALITY TASK

1. Jerry's father is building a wooden table. Jerry sees that it is not finished. He decides to help his father by finishing the table. While he is working Jerry breaks one of the table's legs by accident.

   Tom's father is building a workbench. Tom decides to see if he can break it. He takes a hammer and hits it as hard as he can. He makes a little dent but the workbench is still okay.

2. Barbara decides she will clean her room and put her toys away so that her mother will not have so much work to do. Barbara put her big doll in her toy box, and then she put the wooden blocks in too. Barbara did not think the blocks would hurt the doll, but when she put the blocks in the toy box, they fell on the pretty doll and broke it all to pieces.

   Amy's mother asked her to clean up her room and put her toys away. Amy didn't want to do this. When her mother asked again, Amy got

mad, picked up a doll and threw it on the floor. When the doll hit the floor the doll's finger broke off.

3. Pam went grocery-shopping with her mother. Her mother has a lot of shopping to do and is getting tired from walking around the store. They are almost finished shopping, and her mother remembers that she needs a bottle of mustard which is at the back of the store. Pam says, "I'll get it for you, mother" and runs to get the bottle of mustard. As she is taking the bottle off the shelf, she drops it. The bottle of mustard falls to the floor and breaks.

   Kate is getting tired of sitting and waiting while her mother is shopping in the grocery store. So Kate runs up and down the aisles in the grocery store. The clerk tells her to slow down and be more careful. But Kate doesn't pay much attention to him. She starts to run again when he isn't looking. As she turns the corner, her hand hits a bottle of ketchup. The bottle of ketchup falls to the floor without breaking.

4. Chuck's friend is building a house with blocks. When Chuck sees his friend building the house, he helps his friend by bringing the blocks to him. The house is just about finished when Chuck

starts to get some more blocks, but as he gets up he trips and falls against the house, and it crashes down.

Harry asks one of the boys to play ball with him. But the boy says, "No, I'm going to build a tower out of blocks." This makes Harry mad at the boy. He decides he will try to knock down the boy's tower. Harry waits until the tower is just about finished and then he throws his ball at it. The ball hits the tower and knocks off one block.

APPENDIX B

ORDERS IN WHICH INTENTIONALITY TASK ITEMS APPEARED

1	2	3	4
G-H, B-L	B-L, G-H	G-H, B-L	B-L, G-H
1	2	3	4
B-L, G-H	G-H, B-L	B-L, G-H	G-H, B-L
4	3	2	1
G-H, B-L	B-L, G-H	G-H, B-L	B-L, G-H
4	3	2	1
B-L, G-H	G-H, B-L	B-L, G-H	G-H, B-L
3	1	4	2
G-H, B-L	B-L, G-H	G-H, B-L	B-L, G-H
3	1	4	2
B-L, G-H	G-H, B-L	B-L, G-H	G-H, B-L
2	4	1	3
G-H, B-L	B-L, G-H	G-H, B-L	B-L, G-H
2	4	1	3
B-L, G-H	G-H, B-L	B-L, G-H	G-H, B-L

APPENDIX C

FOUR PERCEPTION TASK ITEMS

1. G-H

Jane comes in from playing outside. She feels real tired so her mother tells her to take a rest. Jane didn't know her mother left her hat on the sofa. She walks over to the sofa, and plops down. When Jane lies down she squashes her mother's hat all out of shape. Jane's mother hears the noise and comes in to see what has happened. This is what she says:

Look what you've done to my new hat! I just bought it and now it's all messed up. That hat cost a lot of money. Well, don't worry about it though. It was just an accident that could happen to anyone. You didn't mean to hurt the hat. Here, give me the hat so I can fix it.

2. B-L

One day Alice's mother and father go visiting and Alice is all alone at home. She wants to see the things in the top of her parent's closet even though she has been told not to go up there.

She climbs up on a chair but as she is reaching for the things in the closet the mother's hat box falls down. The hat is not hurt though. Just then Alice's mother comes back and sees what has happened. This is what she says:

What's going on here? You could have ruined my new hat. You're sure lucky it didn't get hurt. You know you're not supposed to to messing around in my closet! How many times do I have to tell you not to go messing around in my closet? You go to your room and think it over.

3. G-H

John was in his room when his mother called him to dinner. John went down, and opened the door to the dining room. But behind the door was a chair, and on the chair was a tray with fifteen cups on it. John did not know the cups were behind the door. He opened the door, the door hit the tray, and all the fifteen cups fell over and broke. John's mother hears the noise and comes in to see what has happened. This is what she says:

What a mess! You broke all those cups. What will I do without them? But I really shouldn't blame you. I know it was just an accident which could happen to anyone. You didn't mean to break the cups. Here, help me sweep up now.

4. B-L

One day Ray tried to get some cookies out of the cupboard. He climbed up on a chair, but the cookie jar was still too high, and he couldn't reach it. While he was trying to get the cookie jar, he knocked over a cup. The cup fell down but it didn't break. Ray's mother hears the noise and comes in to see what has happened. This is what she says:

What have you knocked over here? You're messing up my kitchen by knocking things over! It's lucky that cup didn't break. You know better than to climb up on the chair to sneak cookies. How many times do I have to tell you not to sneak cookies? You go to your room now and no more cookies for 3 days!

APPENDIX D

INITIAL LETTER TO MOTHERS

Dear Mother of a Sycamore School Child:

As part of my work for my doctorate I am doing a study of children's thinking. I am trying to find out some of the ways that the thinking and beliefs of first, third, and sixth grade children differ on certain types of problems. I plan to question children individually during the school day. It will take about 10 to 15 minutes to question each child.

A second part of my study directly concerns you. I would like to ask you to respond to a short questionnaire on how you would treat your child in certain situations. This questionnaire takes about 15 minutes to fill out and can be answered by each mother in her home and returned by mail.

The results of this study as far as particular mothers of children are concerned will be kept strictly confidential and the anonymity of all participants will be respected. This research has been approved by the Psychology Department at Michigan State University, by the Holt Board of Education, by Mr. Craig, The Principal of the Sycamore School, and by your child's teacher. When the study is completed, all mothers will be sent a letter explaining it in greater detail.

I hope you will feel free to give permission to test your child and that you will also agree to fill out the questionnaire. If you do agree to participate then no response on your part to this letter is required. Within the next few weeks your child will be questioned and you will receive the questionnaire by mail. If you have questions about the research you can contact me for more information at the following numbers: _____.

If you do object to your child participating, or if you do not wish to participate yourself, please contact Mrs. Dodson, the secretary at the Sycamore School.

Thank you very much for your attention to this letter. It will be greatly appreciated if you and your child do participate.

Sincerely,

Daniel C. Gutkin
Graduate Student in Psychology

APPENDIX E

LETTER ENCLOSED WITH QUESTIONNAIRE

Dear Mother of a Sycamore School Child:

A few weeks ago you received a letter requesting your cooperation in my dissertation research project. The project is now underway at the Sycamore School and I am in the process of testing the children. As you may recall the letter mentioned that the mothers of the children would also be asked to fill out a short questionnaire. Your copy of the questionnaire is enclosed with this letter.

You will find instructions for filling out the questionnaire at the front of the enclosed booklet. I will appreciate it very much if you will fill out the questionnaire at your earliest convenience. You can return the questionnaire to me by mailing it back in the enclosed self-addressed envelope. Please try to be sure that you answer all questions and don't skip any. It is very important for my research that I get back complete questionnaires.

Thank you very much for your cooperation in permitting me to test your children and for your help in filling out the questionnaires. I do appreciate your help and realize that my research would not be possible without it. When I have completed the project I will send all participants a letter explaining the research and my findings.

Sincerely,

Daniel C. Gutkin
Graduate Student in
Psychology

APPENDIX F

MOTHERS' ITEMS

Item 1 G-H

You have asked your (first, third, or sixth) grade child to help sweep up in the playroom. While he (she) was sweeping he accidentally hit a table with the broom. Three ash trays that were on the table fell off and broke. You hear the noise and come in to see what has happened.

Item 2 G-L

You have asked your (first, third, or sixth) grade child to help sweep up in the playroom. While he (she) was sweeping he accidentally hit a table with the broom. An ash tray that was on the table fell off but it didn't break. You hear the noise and come in to see what has happened.

Item 3 B-H

You have asked your (first, third, or sixth) grade child to help sweep up in the playroom. But he (she) doesn't feel like it very much and acts pretty mad at you for asking him to sweep. Before you can stop him, he takes the broom and hits a table with it. Three ash trays that were on the table fell off and broke.

Item 4 B-L

You have asked your (first, third, or sixth) grade child to help sweep up in the playroom. But he (she) doesn't feel like it very much and acts pretty mad at you for asking him to sweep. Before you can stop him he takes the broom and hits a table with it. An ash tray that was on the table fell off but it didn't break.

Item 5 G-H

Your (first, third, or sixth) grade child was in his (her) room when you called him to dinner. He went down and opened the door to the dining room. But behind the door was a chair, and on the chair was a tray with fifteen cups on it. He did not know the cups were behind the door. He opened the door, the door hit the tray, and all the fifteen cups fell over and broke. You hear the noise and come in to see what has happened.

Item 6 G-L

Your (first, third, or sixth) grade child was in his (her) room when you called him to dinner. He went down and opened the door to the dining room. But behind the door was a chair, and on the chair was a tray with one cup on it. He did not know the cup was behind the door. He opened the door, the door hit the tray, and the cup fell down but didn't break. You hear the noise and come in to see what has happened.

Item 7 B-H

One day your (first, third, or sixth) grade child tried to get some cookies out of the cupboard. He (she) climbed up on a chair but the cookie jar was still too high and he couldn't reach it. But while he was trying to get the cookie jar, he knocked over a tray with fifteen cups on it. All fifteen cups fell down and broke. You hear the noise and come in to see what has happened.

Item 8 B-L

One day your (first, third, or sixth) grade child tried to get some cookies out of the cupboard. He (she) climbed up on a chair but the cookie jar was still too high and he couldn't reach it. But while he was trying to get the cookie jar, he knocked over a tray with one cup on it. The cup fell down but didn't break. You hear the noise and come in to see what has happened.

Item 9 G-H

Your (first, third, or sixth) grade child came in from playing outside. He (she) felt really tired so you told him to take a rest. Your child didn't know you left your hat on the sofa. He walked over to the sofa, and plopped down. When he lay down he squashed your hat all out of shape. You come in and see what has happened.

Item 10 G-L

Your (first, third, or sixth) grade child came in from playing outside. He (she) felt really tired so you told him to take a rest. Your child didn't know you left your hat on the sofa. He walked over to the sofa and plopped down. The hat is alright, even though he lay down on it. You come in and see what has happened.

Item 11 B-H

Your (first, third, or sixth) grade child has been told not to go up into your closet. One day before you can stop him (her) he climbed up on a chair and as he was reaching for the things in the closet, your hat box fell down and the hat got squashed all out of shape. You hear the noise and come in to see what has happened.

Item 12 B-L

Your (first, third, or sixth) grade child has been told not to go up into your closet. One day before you can stop him (her) he climbed up on a chair and as he was reaching for the things in the closet, your hat box fell down. The hat was not hurt though. You hear the noise and come in to see what has happened.

Item 13 G-H

It was almost supper time and you were very busy getting dinner ready. You asked your (first, third, or sixth) grade child to help by setting

the table. As he (she) was carrying the dishes to the table, a large dish slipped out of his hands, feel and broke. You hear the noise and come in to see what has happened.

Item 14 G-L

It was almost supper time and you were very busy getting dinner ready. You asked your (first, third, or sixth) grade child to help by setting the table. As he (she) was carrying the dishes to the table, a large dish slipped out of his hands, fell to the floor but didn't break. You hear the noise and come in to see what has happened.

Item 15 B-H

One morning you bought some ice cream for company. You have explained to your children that they may not eat it. But when you walk into the kitchen that afternoon you see your (first, third, or sixth) grade child sneaking some ice cream. When he realizes you are there he jumps and drops the large dish he was going to use for the ice cream. It falls to the floor and breaks.

Item 16 B-L

One morning you bought some ice cream for company. You have explained to your children that they may not eat it. But when you walk into the kitchen that afternoon you see your (first, third, or sixth) grade child sneaking some ice cream. When he (she) realizes you are there

he jumps and drops the large dish that he was going to use for the ice cream. It falls to the floor but does not break.

APPENDIX G

ORDERS IN WHICH MOTHERS' ITEMS APPEARED

1 story-pair one

2 story-pair two

3 story-pair three

4 story-pair four

1 G-H
2 G-L
3 B-H
4 B-L

First number indicates story-pair, second indicates story-type.

Thus, 1-4 means story-pair one, B-L

Orders

1-1	2-2	3-3	4-4
4-4	3-3	2-2	1-1
2-2	4-4	1-1	3-3
3-3	1-1	4-4	2-2
1-2	2-1	3-4	4-3
4-3	3-4	2-1	1-2
2-1	4-3	1-2	3-4
3-4	1-2	4-3	2-1
1-3	1-4	3-2	4-1
4-1	3-2	2-4	1-3
2-4	4-1	1-3	3-2
3-2	1-3	4-1	2-4
1-4	2-3	3-1	4-2
4-2	3-1	2-3	1-4
2-3	4-2	1-4	3-1
3-1	1-4	4-2	2-3

APPENDIX H

INSTRUCTIONS ENCLOSED WITH MOTHERS' INSTRUMENT

SYCAMORE RESEARCH QUESTIONNAIRE

I am interested in learning about how mothers discipline their children. This booklet contains descriptions of four situations that your child might get into. Read each story and then answer the questions that follow it. I am trying to learn what mothers really do, so try to write down what you would really do and say in each situation. You do not need to try to give answers that you think a "perfect mother" would give. Your own honest response will be fine. Please be sure to answer all the questions to each of the stories. It is very important for this research that you fill out the questionnaire completely. You do not need to write your names on the booklets. Your answers will remain anonymous. When you have completed the questionnaire you can mail it back to me in the enclosed self-addressed envelope.

THANK YOU VERY MUCH FOR YOUR HELP.

APPENDIX I

FOLLOW-UP LETTER TO MOTHERS

Dear Mother of a Sycamore School Child:

I am sending this letter to all of those who were participants in the research done in Sycamore School this past winter and spring. First of all I want to thank you for your cooperation. It is still too early to tell you of the findings but I hope to be able to do so as soon as the project is completed.

Several mothers have still not returned the form. Could I take this opportunity to request that you return it at your earliest convenience? I will be very grateful for your help in this matter as it is quite important for my research that I get back a sufficient number of the mothers' questionnaires.

If there are any questions I can answer, or if you have lost the form and would like another copy, please don't hesitate to call me at _____.

Thank you.

Sincerely,

Daniel C. Gutkin
Graduate Student