

Parents' Use of Inductive Discipline: Relations to Children's Empathy and Prosocial Behavior

Julia Krevans

Cuyahoga Community College

John C. Gibbs

Ohio State University

KREVANS, JULIA, and GIBBS, JOHN C. *Parents' Use of Inductive Discipline: Relations to Children's Empathy and Prosocial Behavior*. *CHILD DEVELOPMENT*, 1996, 67, 3263–3277. Relations between parents' discipline, children's empathic responses, and children's prosocial behavior were examined in order to evaluate Martin Hoffman's claim that children's empathy and empathy-based guilt mediate the socialization of children's prosocial behavior. 78 sixth and seventh graders (138–172 months in age), their mothers, and teachers completed multiple measures of Hoffman's constructs. Results were largely consistent with theory. Parents' use of inductive as opposed to power-assertive discipline was related to children's prosocial behavior. Children of inductive parents were more empathic; and more empathic children were more prosocial. Moreover, children's empathy was found to mediate the relation between parents' discipline and children's prosocial behavior. Few relations were obtained for children's guilt indices, but post hoc analyses yielded theoretically consistent results. Contrary to expectations, parents' use of statements of disappointment was the component of the inductive discipline score which was most strongly related to children's prosocial behavior.

Martin Hoffman's (1970, 1982, 1983, 1984) theory of the effects of parental discipline on children's prosocial behavior has been influential for a quarter of a century. Hoffman's theory takes as established that inductive discipline is linked to prosocial behavior (and more generally, moral internalization) and accounts for this relation by positing that empathy plays a key role. Specifically, because other-oriented inductions direct the child to consider how his behavior has affected others, their use in the discipline encounter is seen as eliciting and cultivating empathy and empathy-based guilt. These emotions can in turn motivate prosocial behavior in subsequent social situations. Alternative disciplinary styles, love withdrawal and power assertion, are not positively associated with children's prosocial behavior because they do not elicit children's empathy. Indeed, power assertions

such as coercion or threats of punishment are posited to promote self-focused concerns with external consequences, which can in turn reduce prosocial behavior.

The present study evaluated the theory's central tenet that empathy plays a mediating role in the relation between parental discipline and children's prosocial behavior. Despite a renewal of interest in the mediators of socialization (e.g., Feldman & Weinberger, 1994; Kochanska, 1993) and continued interest in the determinants and consequences of children's empathy (Eisenberg & Strayer, 1987), studies have not directly evaluated this hypothesis. Component relations (discipline–prosocial behavior, discipline–empathy, empathy–prosocial behavior) of Hoffman's hypothesis, however, have been examined and critiqued in both methodological and substantive terms.

This article was based on a doctoral dissertation submitted by the first author to Ohio State University. Portions of this research were presented at the 1991 biennial meeting of the Society for Research in Child Development in Seattle. The authors wish to thank teachers, parents, and students for their participation as well as the following school administrators for their assistance: James Fodor, Chris Townley, Lynn Artl, Wayne Greene, Jerry Brodsky, Rex Morgan, Gorden Gerber, James Cipolletti, Sister Lois Peterson, Josephine Dodge, and Richard Koenig. We also gratefully acknowledge the assistance of Mark Barnett, Jim Burke, Brenda Bryant, Eric Dlugokinski, Philip Clark, Nancy Eisenberg, Stephanie Gibbs, Martin Hoffman, Dinah Meyer, Janet Strayer, Gerald Winer, and Carolyn Zahn-Waxler. Requests for reprints should be sent to Julia Krevans, Cuyahoga Community College, Western Campus, 11000 Pleasant Valley Road, Parma, OH 44130.

Inductive Discipline—Prosocial Behavior

The use of predominantly inductive discipline and/or the avoidance of predominantly power assertive discipline have generally been found to be at least moderately related to children's prosocial behavior (e.g., Dlugokinski & Firestone, 1974; Hoffman & Saltzstein, 1967; Zahn-Waxler, Radke-Yarrow, & King, 1979), although the robustness of the relation is a matter of some controversy. Some reviewers (e.g., Maccoby & Martin, 1983) have been impressed by the corroboration of findings across varying methodologies, whereas others (Brody & Shaffer, 1982; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983) have noted weaknesses and some nonsignificance among the results. Radke-Yarrow et al. (1983) argued that the context provided by more general features of the parent-child relationship might modify the effect of parental discipline on children's prosocial behavior. More recently, Grusec and Goodnow (1994) have argued that any effects of specific types of parental discipline are variable across a variety of contextual factors.

Studies of disciplinary style—prosocial behavior relations have been hampered by methodological limitations. Disciplinary style and other key constructs have often been assessed with measures that are of questionable reliability and validity (e.g., Bar-Tal, Nadler, & Blechman, 1980; Hoffman & Saltzstein, 1967), attributable to the use of few items and the failure to aggregate across multiple measures of constructs (see Cook & Goldstein, 1993; Schwartz, Barton-Henry, & Pruzinsky, 1985). These measurement limitations might account for at least some of the weaknesses observed among previous results (see also Brody & Shaffer, 1982). However, there are little relevant data.

Measures of other-oriented induction have had particular limitations. Hoffman and Saltzstein's (1967) measure of parental discipline specified child misbehavior only in terms of parent-child conflict (backtalk, non-compliance, etc.). Ironically, this type of misbehavior is *least* likely to elicit inductive discipline from parents (Trickett & Kuczynski, 1986). Moreover, insofar as the parent is the distressed—and displeased—other to whom the child's attention is directed by inductions used in parent-child conflict, the distinctiveness of other-oriented induction from love withdrawal is compromised (see also Dlugokinski & Firestone, 1974; Maccoby & Martin, 1983; Shoffiett, 1971). Hoffman (1970) suggests that love withdrawal is

at best weakly related to children's moral internalization. He also links love withdrawal to children's psychoanalytic guilt (anxiety in response to unacceptable impulses), which he suggests is inhibitory and should therefore lead to less prosocial behavior. Thus to the extent that measures of parental induction (such as Hoffman and Saltzstein's measure) emphasize parent-child conflict, one would expect correlations with children's prosocial behavior to be attenuated.

Another limitation is the inclusion (e.g., Dlugokinski & Firestone, 1974; Hoffman & Saltzstein, 1967) of statements of parental disappointment (e.g., "I never would have expected you to do that") among exemplars of other-oriented induction. Parental statements of disappointment do meet Hoffman's (1970) crucial theoretical criteria for other-oriented induction: since parents are at least secondary victims of the child's misbehavior, statements of disappointment orient the child toward his victims and could be argued to elicit empathy (for the parents) in the child. Nonetheless, the literature identifies differences between parental statements of disappointment and other disciplinary statements classified as other-oriented induction. These might well have consequences for the child. In an early paper, Hoffman (1963) suggested that statements of disappointment were distinctive in that they made parents' positive expectations for the child salient. Subsequent commentary (e.g., Shoffiett, 1971) focused on the salience of parental disapproval and suggested that parental statements of disappointment should be classified as love withdrawals.

Parental Discipline—Empathy

Support also has been found for the parental discipline—empathy relation, although again with some methodological limitations. Hoffman's (1982) theory identifies two empathy dimensions as critical features of the empathy construct: (a) empathic responsiveness, that is, the frequency and generality of empathic responses; and (b) maturity of empathy, that is, the sophistication of the cognitions which inform the child's emotional response to others. Children's sympathy, a relatively mature form of empathy, was related to parents' use of other-oriented socialization practices across disciplinary and nondisciplinary contexts, although parental discipline was not assessed separately (Eisenberg et al., 1992; Miller, Eisenberg, Fabes, Shell, & Gular, 1989). White, Walsh, and Gibbs (1988) found parents' use of inductive discipline to be related to children's empathic responsiveness, but the finding

could have been attributable to shared method variance (discipline and empathy were both measured through child self-report).

Empathy-Prosocial Behavior

The literature on the empathy-prosocial behavior relation provides consistent findings. Children's empathic responsiveness and maturity have been found to be related to their prosocial orientations (Eisenberg & Miller, 1987; Strayer & Schroeder, 1989). Of particular relevance to Hoffman's theory are the few studies which have included controls for extrinsic incentives. As a theory of moral internalization, Hoffman's theory is most specifically concerned with relations between empathy and prosocial behavior in the absence of extrinsic incentives (i.e., altruism). Although researchers obviously cannot control for all possible extrinsic incentives, they (e.g., Lennon, Eisenberg, & Carroll, 1986) have identified contexts in which the presence of extrinsic incentives is minimized (e.g., private vs. public donations) and have found that empathy-prosocial behavior relations are enhanced in these contexts.

Guilt

According to Hoffman, not only empathy, but also empathy-based guilt (wherein the child not only empathizes with the victim's distress but is aware of his responsibility for it) mediates the relation between parental discipline and children's prosocial behavior. Empathy-based guilt is distinguished from psychoanalytic guilt which, as noted above, Hoffman (1970) describes as anxiety based and inhibitory. Children's guilt has been found to relate both to parents' use of induction (Eisikovits & Sagi, 1982; Hoffman & Saltzstein, 1967) and to children's helpfulness (Chapman, Zahn-Waxler, Cooperman, & Iannotti, 1987), but no evidence was provided that *empathy-based guilt* was specifically measured. With few exceptions (e.g., Zahn-Waxler, Kochanska, Krupnick, & McKnew, 1990), this distinction with respect to the guilt construct has not been made in the empirical literature.

Summary and Hypotheses

In contrast to previous studies, the present study examined all of the basic variables and relations of Hoffman's theory in order to evaluate the theory's empathy mediation hypothesis. In doing so we hoped to shed new light on how parents teach children to care for others as well as to advance the assessment of Hoffman's theory as an account

of the process. To remedy previous methodological limitations, we used methods and measures developed in recent socialization and empathy research. The study's participants were sixth and seventh graders (to ensure that they had the ability to complete assessments), their mothers, and their teachers. Multiple measures of all main variables were obtained. Children provided several measures of empathy. Children and teachers provided measures of children's prosocial behavior which were designed to minimize the salience of extrinsic incentives. The children and mothers both provided data on maternal and paternal disciplinary practices. We supplemented parent-child conflict situations on the Hoffman and Saltzstein discipline measure with discipline situations involving transgressions against peers or nonparent adults since the latter are more likely to elicit parental reasoning (Trickett & Kuczynski, 1986) and thus other-oriented inductions. Additionally, we computed a set of relatively modified or pure other-oriented induction scores by excluding parental statements of disappointment.

From Hoffman's theory, we derived the following hypotheses: (a) that parents' use of inductive as opposed to power assertive discipline would be positively related to children's prosocial behavior; (b) that parents' use of inductive as opposed to power assertive discipline would also be positively related to children's empathy, defined in terms of empathic responsiveness and maturity of empathy; and (c) that the relation between parental discipline practices and children's prosocial behavior would be reduced when the effects of children's empathy were controlled. The empathy-mediation hypothesis was also studied in terms of the related emotion of empathy-based guilt. Furthermore, measures of parental discipline were examined with the expectation that stronger relations would emerge when aggregated measures were used. The modified other-oriented induction measure was also expected to yield relatively strong findings since parental statements of disappointment, possibly a form of love withdrawal, would be excluded.

Method

Subjects

A flyer which offered families \$12 for participating in a psychological study was distributed at 10 Northeastern Ohio junior high and middle schools. Eighty-four percent of families who expressed interest in the study agreed to participate after learning

3266 Child Development

about the nature of the study. One family learned the study's hypothesis prior to participation and was therefore eliminated. The remaining 78 families were not atypical with respect to parents' discipline practices or children's empathy. Means and variances of several parental discipline and empathy indices were compared to statistics from the entire seventh grade of one school district (White et al., 1988), and no differences were found across samples.

The 34 boy and 44 girl participants were between 138 and 172 months in age, with a mean of 147.5 months (12 years, 3.5 months). While families ranged from lower to upper class, as assessed with the Revised Index of Occupational Status (Stevens & Featherman, 1981), most were middle class (75% of the occupational status scores fell between 31 and 51). Most families included both biological parents. However, 15% were single parent families, and 10% included the child's biological mother and her new partner. Five families did not include a female caregiver who had known the child since birth. Because children from these families had discontinuous experiences and because there were not enough of these families to form a subgroup, these families were eliminated from analyses which related the parenting indices to child measures.

The children nominated teachers to rate their social behavior. The 57 child-selected teachers were probably positively biased. However, since the bias was at least consistent for all students rated, it seems likely that the effect of teacher bias on analyses was minimized (see also Gibbs et al., 1986).

Procedures

Two assessment sessions were held at the children's school. During the first session, the parent completed consent forms, then the parenting questionnaires, and finally a demographic fact sheet. In a separate room, the child completed all assessments which required special equipment or individual administration. During a second session, the child completed paper-and-pencil measures and participated in a behavioral assessment of prosocial tendencies. Within the limits set by practical concerns, child measures were administered in randomized order.

Teachers received packets of rating forms after all participants at their school had been tested. Each teacher completed several rating measures for from one to five students with the order of rating measures

varied randomly across teachers. Teachers returned rating forms in a sealed envelope addressed to the experimenter and were assured that their ratings would be kept confidential.

Measures

Parental discipline.—Mothers and children completed a modification of Hoffman and Saltzstein's (1967) parental discipline questionnaire. Our modification presented respondents with six descriptions of child misbehavior: two were Hoffman and Saltzstein's (1967) original parent-child conflict vignettes and four (adapted from Dlugokinski & Firestone, 1974; Hoffman & Saltzstein, 1967; White et al., 1988) described antisocial behavior directed against peers or other adults. Mothers described how they would respond if their child (the participating child) engaged in each child misbehavior, first with an open-ended reply and then by using lists of 10–14 discipline exemplars which followed each misbehavior description. The lists of exemplars included (a) other-oriented inductions, that is, discipline which directs the child to attend to his or her victims' perspectives (e.g., "Point out how his friend must feel," and "Tell him I never expected to hear that sort of thing from him"); (b) power assertions, that is, discipline which attempts to change the child's behavior through use of the parents' power over the child (e.g., "Tell him that he'll be punished for what he's done"); and (c) love withdrawals, that is, discipline which withholds parental approval or attention from the child (e.g., "Ignore him for a while").

Mothers selected the three discipline exemplars which they used most frequently and ranked them with respect to frequency of use. Mothers also selected and ranked the discipline exemplars with respect to their use by the child's other caregiver (typically the child's father, but sometimes a grandmother or the mother's friend). The child-report version of the questionnaire did not require open-ended descriptions and was worded from the child's perspective but was in other respects identical to the mother-report version.

Several types of scores were derived from the mothers' and children's rankings of discipline exemplars. *Six-item scores* were computed by averaging rankings for each type of discipline across the six child misbehaviors. Scores indexed mothers' use of power assertion, other-oriented induction,

and love withdrawal; and the second caregiver's use of power assertion, other-oriented induction, and love withdrawal both as reported by mothers and as reported by children. *Twelve-item scores* were created by aggregating across parents (mother vs. other caregiver) to yield three mother-reported discipline scores (power assertion, induction, and love withdrawal) and three child-reported parental discipline scores. *Net scores* (Eisikovits & Sagi, 1982) were created by subtracting the 12-item power assertion scores from the 12-item induction scores. Net scores indicated the extent to which parents used inductive as opposed to power-assertive discipline. The use of net scores in the present study was justified by strong negative correlations between power assertion and inductive discipline scores, $r(70) = -.62, p < .01$, for mother-report scores; $r(74) = -.68, p < .01$, for child-report scores. Finally, a set of *modified six- and 12-item inductive discipline scores* were computed: The initial set of other-oriented induction scores (see above) were computed in accordance with Hoffman and Saltzstein's procedures. When computing the modified other-oriented induction scores, exemplars which expressed parental disappointment (i.e., communications that the parent is unfavorably surprised and/or that more is expected of the child, e.g., "Tell him I never expected to hear that sort of thing from him") were not scored as exemplars of other-oriented induction.

The internal consistencies of the six-item scales were fairly low, particularly for mothers' reports. The corrected split-half coefficients ranged from .68 to .40 for scores based on mothers' reports and from .81 to .47 for scores based on children's reports. When scores were aggregated across parents to create 12-item scores, the split-half coefficients increased. For example, whereas the reliabilities of six-item child-reported power assertion scores were .78 and .80, the reliability of the 12-item aggregate child-reported power assertion score was .85. Reliabilities of the 12-item scores ranged from .85 to .65, with the exception of reliabilities for love withdrawal scores and mother-reported modified induction scores which were lower (.47 to .56, and .55, respectively). The reliability coefficients for the 24-item net scores were .79 for the mother-report net score and .89 for the child-report net score.

Data relevant to evaluating the ecological validity of the discipline questionnaire were obtained by comparing mothers' initial

open-ended responses to each misbehavior vignette with their questionnaire responses. The open-ended responses were coded for the occurrence of the different types of discipline (e.g., power assertion) by an independent coder. Intercoder reliability was above .84 for all codes except love withdrawal for which it was .50, perhaps due to its low frequency. We computed the proportions of the mothers' distinct disciplinary responses that were power assertions, love withdrawals, etc. Proportion scores based on mothers' open-ended responses were all positively and significantly correlated with the corresponding closed-ended questionnaire scores, with r s ranging from .28 to .37 ($N = 70-72$). There were no positive correlations between mothers' proportion scores and noncorresponding closed-ended scores.

Nurturance.—Mothers also completed Hoffman and Saltzstein's (1967) 17-item self-report measure of parental nurturance (Cronbach's alpha = .65).

Prosocial behavior.—Five measures were selected with the goal of assessing altruism as opposed to hedonistically motivated prosocial behavior.

The *first* measure, shortened version of Hartshorne, May, and Maller's (1929) portrait measure, provided teachers with four verbal portraits of children which varied with respect to degree of altruistic orientation. The most altruistic portrait described a child who would help regardless of the sacrifice involved, as a result of a sincere desire "to promote the happiness and welfare of everyone." The least altruistic portrait described a child who "would expect to be rewarded for helping." Hartshorne et al. (1929) reported that five teachers matched portraits to 129 children with a test-retest reliability of .84. They also reported positive correlations between the portrait measure and several other measures of children's prosocial behavior.

The *second* measure used teachers' ratings of children's helpfulness as the basis for the assessment. Evidence (Barnett & Thompson, 1985; Eisenberg, Cameron, Pasternack, & Tyron, 1988) suggests that, when teachers assess children's willingness to help others, they are influenced by the intrinsic or extrinsic nature of children's motivation and not just how often children help. The Barnett and Thompson (1985) prosocial behavior rating scale described eight opportunities to help a peer. Teachers used five-point rating scales to rate the likeli-

3268 Child Development

hood that the child would help in each situation. The Cronbach's alpha coefficient was .95.

The *third* and *fourth* measures were two single item scales adapted from Bar-Tal et al. (1980). The originals were peer nomination scales which asked students to list the classmates who would be most likely to (a) share a sandwich with a classmate who forgot to bring lunch and (b) help a sick classmate with homework. Bar-Tal et al. (1980) reported that these behaviors were good indicators of a prosocial orientation. In the present study, teachers rated the likelihood that children would perform each of the two prosocial acts along five-point scales.

The *fifth* measure of prosocial behavior was a behavioral assessment (Dlugokinski & Firestone, 1974). Each child was promised a bonus of \$1 and received 10 dimes during the second session. At the end of the second session, the child listened to a story about a child from a disadvantaged country (which served as the stimulus for an empathy assessment, as will be described below). The child was then given an opportunity to donate bonus money to UNICEF, a charity which helps children who, like the one in the story, live in disadvantaged countries. In order to reduce extrinsic motives for helping, an illusion of anonymity was created. Children were left alone to make their decision and were asked to put a sealed donation envelope in a collection bag whether or not they actually made a contribution. Several donation envelopes were kept in the collection bag in order to enhance the credibility of the helping opportunity. The size of the child's donation served as the index of prosocial behavior.

Empathy.—We measured both maturity of empathy and empathic responsiveness. Two measures assessed the maturity of empathy variable.

1. One *maturity of empathy measure* was a self-reported sympathy measure adapted from Eisenberg and her colleagues (Eisenberg, Fabes, et al., 1988; Eisenberg, Schaller, et al., 1988). According to Hoffman (1984), sixth and seventh graders are most likely to vary in their capacity for the most mature form of empathy, sympathy for a person's life situation. Thus, a stimulus story was designed to assess sympathy for a person's life situation. The story, adapted from Eisenberg, Schaller, et al. (1988), described a child who was happy, yet clearly faced a difficult life situation as a result of the pov-

erty of her community. After listening to the story, respondents described their feelings on 12 rating scales which were organized into four factor scores (Eisenberg, Schaller, et al., 1988). Children's scores on the sympathetic concern factor served as the mature empathy index. Since the immediate context of the story was happy, research participants who scored high in sympathetic concern demonstrated empathic sensitivity to the implications of the less immediate aspects of the story character's life situation. A filler story and filler questions were also presented in order to minimize demand effects.

2. The second *maturity of empathy measure* was the Empathy Continuum System (Strayer, 1989). Five 2–4-min stimulus film clips and two filler film clips were shown. The stimulus film clips portrayed the fear of children approaching an old house, anger between two children, the sadness of a child after a punishment, the happiness of a child at the circus, and the challenging life of a handicapped child. A semi-structured interview was used to elicit children's views about (a) the film characters' emotions, (b) their own emotions in response to the films, and (c) the reason for their emotional response. Children's answers were recorded, transcribed, and scored. Match scores indicated the degree of similarity between the film character's emotions and the child's emotional response to the film. When there was at least a minimal degree of match, a level score was assigned on the basis of the nature of the thinking which informed the child's empathy. The lowest level score was given to responses which did not include an awareness of the film character who had elicited the emotional response (e.g., "I felt scared because it was a scary night"). Higher scores were given when children were aware of the character's situation, the character's emotions and—at the highest level—the character's perspective (e.g., "I was sorry for her, because I would feel terrible if I were younger and my dad did that to me"). Match scores and level scores were combined (see Strayer, 1989) to form the Empathy Continuum Score which ranged from 0 to 19. Interrater agreement was 97% for the match scores and 84% for the level scores ($N = 25$).

3. Bryant's (1982) Index of Empathy for Children and Adolescents served as a measure of *empathic responsiveness*. Bryant (1982) reported evidence consistent with the validity of the scale. However, the scale was criticized (Eisenberg & Strayer, 1987) for the

heterogeneity of its items. Four had more to do with attitudes toward the display of emotions than with empathy (e.g., "People who hug and kiss in public are silly") and were therefore eliminated in the present study. Cronbach's alpha was .74.

Guilt.—Two measures of guilt were used. Chapman et al.'s (1987) guilt measure consisted of stories, with accompanying photographs, in which a child observed others in distress (e.g., the protagonist aggressively seeks a turn on a friend's bicycle and that friend gets hurt). The Hoffman and Saltzstein (1967; Hoffman, n.d.) measure presented longer stories about a child who had harmed another (e.g., an older child does not help a lost little boy and later learns that the boy was struck by a car.) Six of the eight Chapman et al. stories and one of the two Hoffman and Saltzstein stories served as guilt measures in the present study. We also presented eight stories which focused on self-esteem and achievement themes in order to reduce demand effects. Research participants were asked to infer the central character's thoughts and feelings in response to all stories and were asked to provide endings to the Hoffman and Saltzstein (1967) story and three filler stories. The Chapman et al. (1987) guilt score was the number of times guilt was attributed to a central character (interrater reliability: $r(22) = .94$). Hoffman and Saltzstein's (1967) maximal guilt score was the level of the strongest expression of guilt. The terminal guilt score was the level of guilt expressed at the end of the response. The original seven-point global scale was replaced with a four-point scale and detailed scoring criteria in order to achieve acceptable levels of interrater agreement (76% for maximal guilt and 72% for terminal guilt, $N = 25$). The total guilt score was the sum of maximal and terminal guilt scores (Hoffman & Saltzstein, 1967).

Results

Relations between Measures of the Same Variable

Correlations between different measures of the same variable were examined for additional evidence of convergent validity. In addition, significantly correlated measures were aggregated in order to maximize the reliability and validity of indices for each variable (Rushton, Brainerd, & Pressley, 1983; Schwartz et al., 1985) and to reduce the number of indices included in the regression analyses which were used to test the mediation hypotheses.

Correlations between mothers' and children's reports of parental discipline practices were significant, $r(63) = .37, p < .01$, for the net score, $r(63) = .31, p < .01$, for the inductive discipline score, and $r(63) = .38, p < .01$, for the power assertive discipline score. Thus total scores which reflected both mothers' and children's perspectives on parental discipline were computed by standardizing scores and then averaging across the two types of respondents. The standardized alpha coefficients for the three scores were .87 for the total net score, .75 for the total inductive discipline score, and .80 for the total power assertive discipline score. Love withdrawal scores were not aggregated because the correlation between mother- and child-report versions of the love withdrawal score was not significant, $r(63) = .19, p < .10$.

All correlations between pairs of prosocial behavior measures were significant. Correlation coefficients ranged from .69 ($df = 72, p < .01$) to .23 ($df = 64, p < .05$) and averaged .46. Thus prosocial behavior scores were also standardized and aggregated. The standardized alpha coefficient for the total prosocial behavior score was .85 ($N = 66$).

Correlations among the three measures of empathy were fairly low but significant, $r_s = .42-.23, df = 75-73, p < .05$. The three measures of empathy were standardized and aggregated following the argument detailed in Rushton et al. (1983) that the aggregation of even weakly correlated measures of the same variable improves validity. The standardized alpha was .61.

Correlations between Parental Discipline and Children's Prosocial Behavior and Empathy

Parental discipline indices were significantly related to parents' education, child's age, and child's sex. However, only child's sex was also significantly related to dependent variables, specifically, children's prosocial behavior and children's empathy (girls evidenced greater prosocial behavior and empathy, $r(73) = .28, p < .05$, and $r(75) = .28, p < .05$, respectively). Thus controls for sex differences were included in analyses which related parental discipline practices to children's prosocial behavior and children's empathy. The partial correlations are presented in Table 1.

The total parental discipline net score was positively related to children's total prosocial behavior score, $r(67) = .34, p < .01$. Thus, parents who used inductive as op-

TABLE 1
CORRELATIONS BETWEEN PARENTAL DISCIPLINE SCORES AND CHILD MEASURES

PARENTAL DISCIPLINE	CHILDREN'S PROSOCIAL AFFECT AND BEHAVIOR			
	Total Empathy ^a	Hoffman and Saltzstein Guilt ^b	Chapman et al. Guilt ^b	Total Prosocial Behavior ^a
Total net score .....	.41**	-.07	.14	.34**
M-R ^c net score .....	.44**	-.09	.22*	.38**
C-R ^d net score .....	.30**	.02	.00	.18
Total power assertion	-.33**	.12	-.10	-.31**
M-R love withdrawal	-.15	-.13	.02	-.10
C-R love withdrawal .....	.02	.10	.15	-.06
Total induction .....	.41**	-.01	.01	.31**
M-R modified induction .....	.32**	.00	.13	.15
C-R modified induction .....	.25*	.05	.07	.18
Total disappointment .....	.33**	-.06	.06	.34**
M-R disappointment .....	.27*	.03	.19	.38**
C-R disappointment .....	.26*	-.08	-.12	.12
M-R nurturance .....	.37**	.16	-.01	.15

NOTE.— $N = 63-73$.

^aCorrelations are partial correlations with sex controlled.

^bZero-order correlations since sex is unrelated to children's guilt.

^cM-R refers to mothers' report.

^dC-R refers to child's report.

* $p < .05$, one-tailed.

** $p < .01$, one-tailed.

posed to power-assertive discipline had children who were more prosocial. Parents' use of inductive discipline, as indexed by the total induction score, was also positively related to their children's prosocial behavior, $r(67) = .31$, $p < .01$; and parents' use of power-assertive discipline was negatively related to their children's prosocial behavior, $r(67) = -.31$, $p < .01$. Parents' use of love withdrawal was not related to children's prosocial behavior nor to any of the other child variables (see Table 1). Thus, results of the correlation of love withdrawal with child variables will not be discussed further.

The partial correlation between the total parental discipline net score and children's total empathy was significant, $r(69) = .41$, $p < .01$. Thus, parents who used inductive as opposed to power-assertive discipline had children who were relatively empathic. The correlation was still obtained when the parental discipline scores and children's empathy scores were each derived from different informants; mother-report based discipline net scores were significantly related to children's empathy, $r(63) = .44$, $p < .01$. Relations between parental discipline measures and the individual measures of children's empathy were consistent with the main findings. Empathy Continuum scores, self-

reported sympathy scores, and Bryant's empathic responsiveness scores were each positively and significantly related to total parental discipline net scores, $r(69) = .27$, $p = .01$, $r(68) = .34$, $p < .01$, and $r(68) = .33$, $p < .01$, respectively. Further, as with the main findings, the individual empathy scores were positively related to parental discipline net scores which were based solely on mothers' reports, $rs(65-73) = .44-.25$, $p < .05$.

Relations between Children's Empathy and Prosocial Behavior

A third set of partial correlations was used to determine whether children who were prone to experience empathy were more likely to behave prosocially. Again, children's sex was controlled. Children's total empathy scores were positively related to their total prosocial behavior scores, $r(71) = .40$, $p < .01$. Partial correlations between individual measures of empathy and children's prosocial behavior were all also positive and significant, $rs(74-72) = .37-.23$, $p < .05$.

The Mediation Hypotheses

The hypothesis that children's empathy would mediate the relation between parental discipline practices and children's prosocial behavior was tested with a series of re-

TABLE 2
REGRESSION ANALYSES: TEST OF THE MEDIATION HYPOTHESIS

Regression Equation	Beta	<i>t</i>	<i>p</i>
Predicting children's empathy from parental discipline:			
Total empathy = Parental discipline + Child's sex + Constant			
Parental discipline Beta .....	.407	3.66	<.01
Predicting children's prosocial behavior from parental discipline and children's empathy:			
Total prosocial behavior = Parental discipline ^a + Child's sex + Constant			
Parental discipline Beta .....	.305	2.57	<.05
Total prosocial behavior score = Total empathy + Parental discipline ^a + Child's sex + Constant			
Total empathy Beta .....	.367	2.96	<.01
Parental discipline Beta .....	.155	1.26	n.s.

NOTE.—*N* = 69.

^aThe total net score (inductions minus power assertions) was used.

gression analyses (see Table 2). Children's sex served as a control variable in each analysis. In the first analysis, the total parental discipline net score was the independent variable, and children's total empathy was the dependent variable. The parental discipline score predicted children's empathy, $\beta = .407$, $t(66) = 3.66$, $p < .01$. Children's prosocial behavior was the dependent variable in the second analysis. The parental discipline net score also predicted children's total prosocial behavior scores, $\beta = .305$, $t(66) = 2.57$, $p < .05$. The third analysis included both total parental discipline net scores and children's total empathy scores as predictors of children's total prosocial behavior scores. Consistent with the mediation hypothesis (see Barron & Kenny, 1986), the relation between parental discipline and children's prosocial behavior was reduced when the effect of children's empathy was controlled. When both the total parental discipline net score and the children's total empathy score were included as predictors of children's prosocial behavior, the beta weight associated with children's empathy differed significantly from zero, $\beta = .367$, $t(65) = 2.96$, $p < .01$, but the beta weight associated with the parental discipline net score was reduced and was no longer significant, $\beta = .155$, $t(65) = 1.26$, N.S.

Correlates of Children's Guilt

Children's Hoffman and Saltzstein (1967) guilt scores and their Chapman et al. (1987) guilt scores were each correlated with parental discipline scores, children's total

prosocial behavior scores, children's total empathy scores, and children's scores on the individual measures of empathy. Since Chapman et al. guilt scores were highly truncated in range (most scores were either 0 or 1), the scale was dichotomized (0 = a score of 0, 1 = a score of 1 or greater) and point biserial correlations were computed.

Children's Chapman et al. guilt scores were positively related to children's prosocial behavior, $r(73) = .32$, $p < .01$, and to parents' use of inductive as opposed to power-assertive discipline, as indexed by the mother-report version of the parental discipline net score, $r(65) = .22$, $p < .05$. However, correlations between children's Chapman et al. guilt scores and the other parental discipline indices were not significant (see Table 1). Similarly, although children's Chapman et al. guilt scores were positively correlated with children's scores on Strayer's (1989) Empathy Continuum, $r(72) = .26$, $p < .05$, the guilt scores were not related to children's scores on the other two empathy measures nor to children's aggregate empathy scores. The Hoffman and Saltzstein (1967) measure had no correlates.

It was possible that findings consistent with Hoffman's theory would have emerged had the Chapman et al. (1987) measure allowed us to discriminate between children's empathy-based guilt and other sorts of guilt experienced by children. Post hoc analyses were designed to circumvent this measurement limitation through the identification of subsamples of children for whom high Chapman et al. scores were especially likely

3272 Child Development

to reflect empathy-based guilt and children whose high guilt scores reflected other sorts of guilt. First, we examined relations between guilt and prosocial behavior for high versus low empathy children. Variation in Chapman et al. guilt scores in the context of high empathy quite possibly reflected variation in empathy-based guilt, whereas variation in guilt scores in the context of low empathy could not reflect variation in empathy-based guilt. Thus if it was empathy-based guilt which motivated children's prosocial behavior, one would expect a correlation between children's guilt and prosocial behavior for empathic children only. The data were consistent with this expectation. The effect of the interaction between children's Chapman et al. guilt scores and their total empathy scores on their prosocial behavior was examined. The incremental R -squared associated with the interaction term was significant, $R^2 = .045$, $F(1, 62) = 4.09$, $p < .05$. The sample was then divided into thirds (Cohen & Cohen, 1983) on the basis of children's total empathy scores. The partial correlation between children's guilt and their prosocial behavior was only significant for children who were high in empathy, $r(21) = .60$, $p < .01$, $r(22) = .06$, N.S., and $r(22) = .20$, N.S., for high, moderate, and low empathy groups, respectively.

Our second analysis examined the relation between parental discipline and empathy-based guilt using a strategy suggested by Zahn-Waxler et al. (1990). We divided children into three groups on the basis of the sort of parental discipline that they experienced. Hoffman's theory predicts that, for those children who experience a predominance of inductive parental discipline, high guilt scores will reflect the high levels of empathy-based guilt promoted by other-oriented inductions. Thus one would expect guilt and empathy to covary among these children. In contrast, when parents use relatively little other-oriented induction, children, if they experience guilt, should not experience empathy-based guilt. Thus one would expect little correlation between empathy and guilt for children of less inductive parents. The data were consistent with these expectations. The incremental R -squared associated with the effect of the interaction between parental discipline net scores and children's total empathy scores on children's Chapman et al. guilt scores was significant, $R^2 = .060$, $F(1, 65) = 4.30$, $p < .05$. Partial correlations between children's total empathy scores and Chapman et al. guilt scores

(with sex controlled) were significant only when parents had high parental discipline net scores, that is, when parents used a highly inductive approach to discipline, $r(23) = .49$, $p < .01$. Correlations were not significant for children whose parents obtained moderate or low net scores, that is, less inductive parents, $r(21) = .03$, N.S., $r(22) = .04$, N.S., respectively.

Methodological Issues: Parental Discipline Indices

Regarding the effects of aggregation, we found that the average partial correlation between six-item inductive discipline scores and children's total prosocial behavior score was .24, and the average partial correlation between six-item power assertion scores and children's prosocial behavior was $-.23$, whereas the average partial correlation between parental discipline aggregates which were based on 24 or more items and children's total prosocial behavior scores (when computed without regard to the direction of the correlation) was .31. Further, whereas 63% of the partial correlations which involved six-item scores were significant, 80% of the correlations which involved aggregate scores were significant.

We next examined the correlations between the modified other-oriented induction scores (parental expressions of disappointment deleted) and child measures. Correlations between the modified other-oriented induction score and children's empathy (see Table 1) were no stronger than those obtained when the original other-oriented induction scores were used. Correlations with children's total prosocial behavior scores were relatively weak, $r(61) = .15$, N.S., for the mother-report score and $r(65) = .18$, $p < .10$, for the child-report score. Since mother- and child-report scores were not significantly related, $r(62) = .16$, $p < .10$, an aggregate modified induction score was computed for comparative purposes only. Not even the aggregate score was significantly related to children's prosocial behavior, $r(67) = .19$, $p < .10$.

In order to investigate why parents' expressions of disappointment enhanced rather than reduced relations between parental induction and child prosocial behavior, we computed disappointment scores. The scores were derived from mothers' and children's rankings of response options which described the parent as expressing disappointment with the child. The index provided a comparison for the modified

TABLE 3
CORRELATIONS BETWEEN PARENTING MEASURES

Parental Discipline	1	2	3	4	5	6	7
1. Net score .....	...	-.88**	-.19	.92**	.80**	.36**	.34**
2. Power assertion	-.90**	...	-.14	-.62**	-.52**	-.28**	-.25*
3. Love withdrawal	-.19*	-.11	...	-.44**	-.36**	-.24*	-.34*
4. Induction .....	.93**	-.68**	-.41**	...	.89**	.33**	.35*
5. Modified induction .....	.88**	-.64**	-.40**	.95**	...	-.11	.27*
6. Disappointment .....	.32*	-.24*	-.10	.33**	.02	...	.25*
7. Maternal nurturance ^a .....	...	...	...	...	...	...	...

NOTE.— $N = 70-76$. Correlations above the diagonal relate scores based on mothers' reports. Correlations below the diagonal relate scores based on children's reports.

^aChildren did not report on maternal nurturance.

* $p < .05$, one-tailed.

** $p < .01$, one-tailed.

other-oriented induction index. The disappointment indices measured parents' use of statements of disappointment only; the modified other-oriented induction indices measured parents' use of more obviously other-oriented inductions only.

The scores were correlated with other measures of parenting as well as with child measures. Results (Table 3) indicated that parents' tendency to express disappointment was negatively (and not positively) related to their use of love withdrawal, $r(70) = -.24$, $p < .05$, for mothers' reports and $r(74) = -.10$, N.S. for children's reports. In this and other respects, disappointment scores behaved similarly to the modified other-oriented induction scores. For example, with reference to parent measures, both related negatively to power assertion and positively to parents' nurturance (Table 3). Furthermore, both related positively to children's empathy (Table 1). However, unlike the modified other-oriented induction score (see above), disappointment scores were significantly correlated with children's prosocial behavior, at least when assessed by mothers' reports, $r(67) = .34$, $p < .01$, $r(63) = .38$, $p < .01$, $r(65) = .12$, N.S., for aggregate, mother-report, and child-report scores, respectively.

Discussion

The findings of the present study were largely consistent with Hoffman's socialization theory and provide important new support for it. The results of previous research were replicated and extended: (a) parents who used predominantly inductive discipline as opposed to power assertion had children who were relatively prosocial; (b) children's empathy predicted their prosocial

behavior; and (c) parents who relied on induction as opposed to power assertion had children who were relatively empathic. Most important, the present study extended support for Hoffman's theory through a test of his mediation hypothesis. Our regression findings were consistent with Hoffman's claim that an inductive as opposed to power-assertive approach to discipline promotes prosocial behavior in children because it promotes the development of children's empathy. These results are likely to be replicable and not attributable to common method variance insofar as the variables were assessed with multiple data sources (e.g., parental discipline scores based on mothers' reports were related to children's empathy scores based on children's reports).

The results of the present study did not initially support theoretically derived predictions concerning children's guilt. According to Hoffman's theory, it is specifically children's empathy-based guilt which mediates the relation between parental discipline and children's prosocial behavior. Thus measures that discriminate empathy-based guilt are necessary to test Hoffman's theory. The results of the present study suggest that neither Hoffman's own measure of children's guilt (Hoffman & Saltzstein, 1967), nor Chapman et al.'s (1987) measure of children's guilt are adequate measures of empathy-based guilt. Post hoc analysis did yield findings consistent with Hoffman's theory. When parents relied on inductive as opposed to power-assertive discipline, their children's scores on the Chapman et al. guilt measure were correlated with empathy scores. Further, it was only among children high in empathy, and therefore capable of empathy-based guilt, that guilt predicted

3274 Child Development

children's prosocial behavior. This post hoc support must be considered suggestive. A number of artifacts can complicate the interpretation of moderator effects such as these (Barron & Kenny, 1986). However, the guilt findings, taken together, do point to the importance of Hoffman's distinction between types of guilt and to the need to develop and validate measures of empathy-based guilt.

Improved measures of guilt would also help clarify the effects of parents' use of love withdrawal. Because parental love withdrawal plays a minor and ambiguous role in Hoffman's theory, we made no specific predictions about its relation to child variables. Nonetheless, it is of interest that parental love withdrawal was unrelated to our measures of children's guilt. It seems likely that the guilt measures were not only poor measures of empathy-based guilt but were also poor measures of psychoanalytic guilt (see Zahn-Waxler et al., 1990). Better guilt measures are needed to investigate relations between love withdrawal and children's psychoanalytic guilt.

The present results also point to the need for renewed attention to the assessment of parental discipline practices. The internal consistency of our six-item measures—measures similar to those used in previous research (e.g., Dlugokinski & Firestone, 1974; Hoffman & Saltzstein, 1967)—was moderate and even low in some cases. The reliability of measurement was improved through the aggregation of six-item measures across parent (mother and other caregiver) and respondent (mother and child). The inclusion of fathers' perspectives on parental discipline in addition to mothers' and children's perspectives might well result in further increases in reliability (see Schwartz et al., 1985). In addition to improving reliability, the aggregation of measures increased the magnitude and consistency of correlations between parental discipline and children's prosocial behavior. Continued improvement of parental discipline measures seems likely to lead to further increases in the robustness of socialization findings.

Conversely, the lack of robustness observed in previous findings would seem to be at least partially attributable to the limited reliability of parental discipline measures and not exclusively to variation in discipline effectiveness across context. Research has identified child variables that moderate the effectiveness of discipline

practices (Kochanska, 1994). Co-occurring parental practices may also moderate discipline effectiveness. Of special interest is Hoffman's (1983; cf. Damon, 1995) own claim that effective induction presupposes that the parent has made optimal use of power assertion and love withdrawal (enough to ensure that the child is attending to and taking the parents' message seriously, but not so much as to engender interfering emotions). Other moderator variables have been suggested (e.g., Grusec & Goodnow, 1994; Radke-Yarrow et al., 1983), and further research may demonstrate their influence on discipline effectiveness. However, it is hazardous to speculate about moderator effects on the basis of weaknesses in the parental discipline literature inasmuch as methodological limitations might well have attenuated findings (cf. Brody & Shaffer, 1982).

Efforts to improve Hoffman and Saltzstein's (1967) measure of parental induction were less successful. Modified induction scores were computed in which parents' statements of disappointment were not scored as inductions; yet the improved match between measure and theory led to a weaker rather than stronger correlation with children's prosocial behavior. This weaker effect may have been an artifact of the fewer response options for the modified induction measure. Interestingly, even though the modification procedure reduced the reliability of the modified as compared to original scores, correlations between the modified other-oriented induction scores and children's prosocial behavior approached significance. However, it is important to note that our index of parents' use of disappointment, although not any more reliable than the modified induction index, was significantly, and substantially, correlated with children's prosocial behavior. In other words, parents' statements of disappointment made a stronger contribution to children's prosocial behavior than did more explicitly other-oriented inductions.

This finding raises questions about the nature of parental disappointment and its relation to other types of psychological discipline. Our results were not consistent with an initial expectation (cf. Maccoby & Martin, 1983; Shoffiett, 1971) that parents' statements of disappointment, as parent-oriented inductions, might be classified as love withdrawals. Rather, disappointment is more similar to other-oriented induction and should probably be considered a part of an inductive approach to discipline. The two

types of discipline correlate similarly with other parenting variables (e.g., negatively with power assertion and positively with nurturance). Further, they are similar in that both seem to cultivate the child's empathy. Parents' statements of disappointment, like other-oriented inductions, include references to another's hurt feelings and, also like other-oriented inductions, are associated with relatively high levels of empathy among children.

Nonetheless, the present results suggest that parents' statements of disappointment merit distinct theoretical attention. Statements of disappointment go beyond other-oriented induction to communicate the parents' confidence in the child's capacity for better behavior. The relatively strong correlation between parental disappointment and the child's prosocial behavior could reflect the effects of an additional mediational process. Specifically, parental disappointment may not only cultivate the child's empathy but may also induce a prosocial self-concept. Consistent with this interpretation are research findings (Barnett, 1987; Larrieu & Mussen, 1986) that link parental practices that enhance children's self-esteem to children's prosocial tendencies.

Along these lines, it is of historical interest that Hoffman (1963) initially identified parental statements of disappointment, not other-oriented inductions, as the type of psychological discipline which promotes a prosocial type of moral internalization. According to Hoffman, statements of disappointment communicated that the child was "capable of living up to an ideal" (1963, p. 311) and thus provided children with an internal basis for good conduct—a positive ego ideal. He contrasted parental disappointment with a second type of psychological discipline which he termed "ego-attacks." Hoffman later (1970) abandoned the distinction between disappointment and ego attacks, included parents' statements of disappointment with other-oriented inductions, and contrasted other-oriented inductions with love withdrawals as the key antecedent of empathy-based moral internalization. During the ensuing decades, reviewers (e.g., Grusec & Goodnow, 1994; Maccoby & Martin, 1983) have repeatedly called for more refined distinctions between types of psychological discipline. The results of the present study suggest a refinement of psychological discipline into three categories; love withdrawal, other-oriented induction, and parental disappointment. This refine-

ment might well provide new insights into the socialization process.

Finally, an important qualification should be noted: relations established in the present study might well reflect repeated reciprocal transactions between parent and child. Child-effects interpretations are of special relevance in the current context since Bell's (1968) introduction of the child effects critique was directed in part at the research support for Hoffman's theory. There is no specific child-effects theory which provides an alternative to Hoffman's theory as an interpretation of the present findings. Speculatively, however, it may be that parents are more likely to use inductive discipline in response to prosocial children and that it is this relation which is mediated by the child's empathy. From this perspective, the mediation results would have to be interpreted as meaning that children's empathy elicits inductive discipline from parents and also promotes children's prosocial behavior. Thus, the parents' discipline choice would not be a response to the child's prosocial behavior per se, but to the child's underlying empathy. Although this direction of effect could be claimed to be the primary one, both parent-to-child and child-to-parent effects are likely to contribute to contemporaneous correlations (Hoffman, 1975, 1994; Wahler, 1990).

In conclusion, the significance of the study's results was twofold. First, inductive discipline as historically measured was found to include distinct components of discipline, other-oriented induction and disappointment, that have distinct consequences for children. Second, provisional but critical support was found for Hoffman's empathy-mediation hypothesis. A finding that the relation between parents' discipline practices and children's prosocial behavior was unchanged when empathy indices were held constant would have discouraged further research stimulated by Hoffman's theory. It would have meant, whatever the reasons for the relation between parents' inductive style of discipline and children's prosocial behavior, the relation could not be attributed to parents' promotion of empathy as Hoffman claims. Thus, the present study established a precondition for further attention to Hoffman's theory of empathy as a key mediator in moral internalization.

References

- Barnett, M. A. (1987). Empathy and related responses in children. In N. Eisenberg & J.

3276 Child Development

- Strayer (Eds.), *Empathy and its development* (pp. 146–163). New York: Cambridge University Press.
- Barnett, M. A., & Thompson, S. (1985). The role of perspective-taking and empathy in children's Machiavellianism, prosocial behavior and motive for helping. *Journal of Genetic Psychology*, *146*, 295–305.
- Barron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Bar-Tal, D., Nadler, A., & Blechman, N. (1980). The relationship between Israeli children's helping behavior and their perception of parents' socialization practices. *Journal of Social Psychology*, *111*, 159–167.
- Bell, R. Q. (1968). A reinterpretation of the direction of effects in studies of socialization. *Psychological Review*, *75*, 81–95.
- Brody, G. H., & Shaffer, D. R. (1982). Contributions of parents and peers to children's moral socialization. *Developmental Review*, *3*, 31–75.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development*, *53*, 413–425.
- Chapman, M., Zahn-Waxler, C., Cooperman, G., & Iannotti, R. (1987). Empathy and responsibility in the motivation of children's helping. *Developmental Psychology*, *23*, 140–145.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression analysis for the behavioral sciences, second edition*. Hillsdale, NJ: Erlbaum.
- Cook, W. L., & Goldstein, M. J. (1993). Multiple perspectives on family relationships: A latent variables model. *Child Development*, *64*, 1377–1388.
- Damon, W. (1995). *Greater expectations: Overcoming the culture of indulgence in America's homes and schools*. New York: Free Press.
- Dlugokinski, E. L., & Firestone, I. J. (1974). Other-centeredness and susceptibility to charitable appeals: Effects of perceived discipline. *Developmental Psychology*, *15*, 128–137.
- Eisenberg, N., Cameron, E., Pasternack, J., & Tyron, K. (1988). Behavioral and sociocognitive correlates of ratings of prosocial behavior and sociometric status. *Journal of Genetic Psychology*, *149*, 5–15.
- Eisenberg, N., Fabes, R. A., Bustamante, D., Mathy, R. M., Miller, P. A., & Lindholm, E. (1988). Differentiation of vicariously induced emotional reactions in children. *Developmental Psychology*, *24*, 237–246.
- Eisenberg, N., Fabes, R. A., Carlo, G., Troyer, D., Speer, A. L., Karbon, M., & Switzer, G. (1992). The relations of maternal practices and characteristics to children's vicarious emotional responsiveness. *Child Development*, *63*, 583–602.
- Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, *101*, 91–119.
- Eisenberg, N., Schaller, M., Fabes, R. A., Bustamante, D., Mathy, R., & Rhodes, K. (1988). The differentiation of personal distress and sympathy in children and adults. *Developmental Psychology*, *24*, 766–775.
- Eisenberg, N., & Strayer, J. (1987). Critical issues in the study of empathy. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 3–13). New York: Cambridge University Press.
- Eisikovits, Z., & Sagi, A. (1982). Moral development and discipline encounters in delinquent and nondelinquent adolescents. *Journal of Youth and Adolescence*, *11*, 217–232.
- Feldman, S. S., & Weinberger, D. A. (1994). Self-restraint as a mediator of family influences on boys' delinquent behavior. *Child Development*, *65*, 195–211.
- Gibbs, J. C., Clark, P. M., Joseph, J. A., Green, J. L., Goodrick, T. S., & Makowski, D. G. (1986). Relations between moral judgment, moral courage, and field independence. *Child Development*, *57*, 185–193.
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*, *30*, 4–19.
- Hartshorne, H., May, M. A., & Maller, J. B. (1929). *Studies in the nature of character: Vol. 2. Studies in service and self-control*. New York: Macmillan.
- Hoffman, M. L. (1963). Childrearing practices and moral development: Generalizations from research. *Child Development*, *34*, 295–318.
- Hoffman, M. L. (1970). Moral development. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology* (Vol. 2, pp. 457–557). New York: Wiley.
- Hoffman, M. L. (1975). Moral internalization, parent power and the nature of parent-child interaction. *Developmental Psychology*, *11*, 228–239.
- Hoffman, M. L. (1982). Development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 218–231). New York: Academic Press.
- Hoffman, M. L. (1983). Affective and cognitive processes in moral internalization: An information processing approach. In E. T. Higgins,

- D. Ruble, & W. Hartup (Eds.), *Social cognition and social development: A sociocultural perspective* (pp. 236-274). New York: Cambridge University Press.
- Hoffman, M. L. (1984). Empathy, its limitations and its role in a comprehensive moral theory. In W. M. Kurtines & J. L. Gerwitz (Eds.), *Morality, moral behavior and moral development* (pp. 283-302). New York: Wiley.
- Hoffman, M. L. (1994). Discipline and internalization. *Developmental Psychology*, *30*, 26-28.
- Hoffman, M. L. (n.d.) *Criteria for scoring guilt severity*. Unpublished manuscript, New York University.
- Hoffman, M. L., & Saltzstein, H. D. (1967). Parent discipline and the child's moral development. *Journal of Personality and Social Psychology*, *5*, 45-57.
- Kochanska, G. (1993). Toward a synthesis of parental socialization and child temperament. *Child Development*, *64*, 325-347.
- Kochanska, G. (1994). Children's temperament, mothers' discipline, and security of attachment: Multiple pathways to emerging internalization. *Child Development*, *66*, 597-615.
- Larrieu, J., & Mussen, P. (1986). Some personality and motivational correlates of children's prosocial behavior. *Journal of Genetic Psychology*, *147*, 529-543.
- Lennon, R., Eisenberg, N., & Carroll, J. (1986). The relations between nonverbal indices of empathy and preschoolers' prosocial behavior. *Journal of Applied Developmental Psychology*, *7*, 219-224.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. Mussen (Ed.), *Handbook of child psychology* (Vol. 4, pp. 1-101). New York: Wiley.
- Miller, P. A., Eisenberg, N., Fabes, R. A., Shell, R., & Gular, S. (1989). Mothers' emotional arousal as a moderator in the socialization of children's empathy. In N. Eisenberg (Ed.), *New directions for child development* (No. 44, pp. 65-83). San Francisco: Jossey-Bass.
- Radke-Yarrow, M., Zahn-Waxler, C., & Chapman, M. (1983). Children's prosocial dispositions and behavior. In P. H. Mussen (Ed.), *Handbook of child psychology* (Vol. 4, pp. 469-546). New York: Wiley.
- Rushton, J. P., Brainerd, C. J., & Pressley, M. (1983). Behavioral development and construct validity: The principal of aggregation. *Psychological Bulletin*, *94*, 462-469.
- Schwartz, J. C., Barton-Henry, M. L., & Pruzinsky, T. (1985). Assessing child-rearing behaviors: A comparison of ratings made by mother, father, child and sibling on the CRPBI. *Child Development*, *56*, 462-469.
- Shoffiett, G. P. (1971). *The moral development of children as a function of parental moral judgements and child-rearing practices*. Unpublished doctoral dissertation, George Peabody College for Teachers.
- Stevens, G., & Featherman, D. L. (1981). A revised socioeconomic index of occupational status. *Social Science Research*, *10*, 364-395.
- Strayer, J. (1989). What children know and feel in response to witnessing affective events. In C. Saarni & P. Harris (Eds.), *Children's understanding of emotions* (pp. 259-289). New York: Cambridge University Press.
- Strayer, J., & Schroeder, M. (1989). Children's helping strategies: Influences of emotion, empathy, and age. In N. Eisenberg (Ed.), *New directions for child development* (No. 44, pp. 85-105). San Francisco: Jossey-Bass.
- Trickett, P. K., & Kuczynski, L. (1986). Children's misbehaviors and parental discipline strategies in abusive and nonabusive families. *Developmental Psychology*, *22*, 115-123.
- Wahler, R. G. (1990). Who is driving the interactions? A commentary on "Child and parent effects in boy's conduct disorders." *Developmental Psychology*, *26*, 702-704.
- White, M. M., Walsh, B. W., & Gibbs, J. C. (1988). *Relations between parents' discipline techniques and empathy in preadolescents*. Unpublished manuscript, Ohio State University, Columbus.
- Zahn-Waxler, C., Kochanska, G., Krupnick, J., & McKnew, D. (1990). Patterns of guilt in children of depressed and well mothers. *Developmental Psychology*, *26*, 51-59.
- Zahn-Waxler, C., Radke-Yarrow, M., & King, R. (1979). Child-rearing and children's prosocial initiations toward victims of distress. *Child Development*, *50*, 319-330.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.