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Perceived Control Over Caregiving Outcomes: Implications for Child Abuse

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We predicted low perceived caregiver control over caregiving failure to be related to (a) coercive or abusive parenting and (b) affective reactions to "difficult" children. On the basis of a multidimensional scaling analysis of the Parent Attribution Test (Study 1), we constructed a scale (PCF) that assessed perceived balance of control over caregiving failure (attributed control to caregivers vs. attributed control to children). In Study 2, we found low PCF to predict abusiveness and nonabusive coerciveness among mothers in counseling at a child abuse agency. Additionally, we found low PCF to predict experienced annoyance/irritation among unrelated mothers interacting with children at relatively high risk for abuse (compared with their lower-risk siblings). We interpreted results as demonstrating the potential importance of low perceived control as a moderator of negative affect in response to difficult children.

The past few years have seen the emergence of an interest in the integration of the fields of social cognition and social development (e.g., Higgins, Ruble, & Hartup, 1983; Shantz, 1983). This rapprochement has been reflected in an increasing interest in the social cognitions that act to mediate children's responses to the social environment and in the social cognitions that mediate caregivers' responses to the behavior and characteristics of their children. The concern with reciprocal influences between children and their socializing environments that followed Bell's seminal article (1968) has expanded to include a concern with the ways in which both interactants *interpret* the actions of the other (Bell, 1979). In particular, attention is now being directed to the ways in which caregivers' interpretations of children's behaviors and capabilities influence their affective response and control strategies (Goodnow, 1985). In the present study, we were concerned with the role of perceived control as a moderator of maladaptive caregiving systems. We predicted that adult beliefs about the controllability of negative caregiving outcomes influence their affective responses to child behavior—in particular to child behavior that places demands or stress on the caregiving system.

The model of physical child abuse that we have proposed (Bugental, Mantyla, & Lewis, in press) involves a transactional system with several central components: (a) potentially stress-eliciting characteristics of the child, (b) perceived control of the caregiver, (c) experienced and expressed affect of the caregiver, and (d) child response to adult behavior. The "eliciting" characteristics of abused children may be conceptualized as either preceding or following from the experience of abuse. Some of the characteristics found to be more common among target children are more readily understood as preceding abuse (e.g., physical disabilities; de Lissovoy, 1979; Sherrod, O'Connor, Vietze, & Altemier, 1984), whereas other characteristics may occur either as cause or consequence (or as both) of coercive caregiving (e.g., unresponsiveness; Bugental, Blue, & Lewis, 1989; Oldershaw, Walters, & Hall, 1986; Trickett & Kuczynski, 1986). The focus of the present investigation, however, is on the moderating effects of caregiver cognitions on adult responses to children who are at elevated risk for abuse.

The observation that social cognitions act to qualify affective responses to stress has now been predicted and observed in the adult literature in a variety of settings. As Lazarus and his colleagues (Lazarus & Folkman, 1984) have documented, the individual's cognitive appraisal of a potentially stressful event has powerful implications for his or her emotional response to that event. Weiner and his colleagues have argued that the search for causal explanations is more likely when the individual is confronted with a situation that is aversive, unexpected, or ambiguous (or some combination of these), and very different emotional responses can be anticipated on the basis of the causal attributions that are invoked (Weiner, 1985; Wong & Weiner, 1981). Additionally, the attributional reformulation of the learned helplessness hypothesis (Abramson, Seligman, & Teasdale, 1978) has led to increasing interest in the adaptiveness (or maladaptiveness) of different types of causal beliefs in coping with uncontrollable or stressful life events. Therefore, it is reasonable to explore the ways in which social cognitions of caregivers influence their interpretation of and response to potentially problematic child behavior.

In the research reported here, we are particularly interested in the perceived controllability of negative caregiving outcomes. Those who attribute negative life events to their own controllable behavior have been found to have positive expectations for the future and to show more adaptive coping responses (Dweck, 1973; Taylor, 1982, 1983; Tennen, Affleck, & Gershman, 1986).

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Conversely, individuals who attribute negative life events to their own uncontrollable characteristics (i.e., those who engage in "characterological self-blame") can be expected to have more negative expectations and to cope less successfully with negative events (e.g., Bulman & Wortman, 1977; Janoff-Bulman, 1979; Taylor & Brown, 1988; Taylor, Lichtman, & Wood, 1984). As a caveat, it should be noted that high perceived control is more appropriately understood as an adaptive attribution under those circumstances where the individual can indeed have some effect. For example, Tennen, Affleck, and Gershman (1986) found that perceived control over the *recurrence* of negative events (events that were actually controllable) is associated with adaptive coping, whereas perceived control over the *sequelae* of negative events (actually uncontrollable) is not associated with adaptive coping.

Several research programs have turned their attention in the past few years to the role of causal inference by caregivers in their response to child behavior (e.g., Dix, Ruble, Grusec, & Nixon, 1986; Goodnow, 1985). For example, Bugental and her colleagues (Bugental & Cortez, 1988; Bugental & Shennum, 1984) have observed that adults with low perceived control respond with greater negative affect, helplessness, and elevated arousal to "difficult" children than do adults with higher levels of perceived control. Affleck, Allen, McGrade, and McQueeney (1982) demonstrated that perceived control also acts to mediate the initial response of parents to newborn children who pose particular difficulty: Mothers of seriously ill infants coped in a less adaptive fashion if they believed that the child's condition was outside of their own control but, conversely, was under the control of other people in their environment. We have argued (Bugental, 1987a; Bugental & Shennum, 1984) that the dimension of controllability has special features in mutually interdependent systems (such as caregiving systems). That is, the interactants in such systems will be concerned with the extent to which system outcomes are under the control of self or of the other (or of both), and, to the extent that they believe that they have a relatively low balance of control, they are more likely to be affectively reactive to the behavior of others. For example, if they have low perceived power to prevent negative events, they will respond with negative affect to the behavior of others that is potentially construable as a social threat (e.g., unresponsiveness on the part of others).[1] Clinical information on abusive parents reveals that, in fact, they do hold beliefs that suggest low perceived control (Morris & Gould, 1963; L. Young, 1964).

In the present study, our goal was threefold. First, we wanted to document that naive attributors do conceptualize the causes of caregiving outcomes in terms of a dimension of controllability. Second, we predicted that parental coerciveness or abusiveness would be related both to child characteristics and the adult's perceived balance of control. Third, we predicted that the immediate reaction of unrelated adults would be influenced both by the characteristics of the children and their own perceived control. To test this last prediction, related mothers and unrelated mothers were observed interacting with sibling pairs from families being seen in family counseling at a child abuse agency. In all cases, one child was more likely to be targeted for abuse or overdiscipline than the other child. Negative adult responses (long-term coerciveness of related mothers and short-term annoyance of unrelated mothers) were expected to reflect an interaction of the target status of the child (and the behaviors associated with that status) and the beliefs of adults with respect to the causes of *negative* caregiving outcomes. The most negative adult responses were anticipated in response to target children by adults who believed that they had relatively low control over caregiving failure.

Study 1

Method

In Study 1, we conducted analyses of the perceived dimensionality and the perceived meaning of items on the Parent Attribution Test (PAT). The original construction of the PAT (Bugental & Shennum, 1984) was based on maternal responses to open-ended attribution questions (i.e., questions that asked for causes of caregiving success and failure) and used theoretically based scoring of items. Revised scoring of the PAT was based on a multidimensional scaling (MDS) analysis of maternal responses to open-ended attribution questions. Dimensions that emerged from this analysis appeared to reflect the variables of controllability and social locus.[2] The PAT asks respondents to assign relative importance to different causes of caregiving success and failure. In the present investigation, we attempted to determine whether PAT items tap the same dimensional structure as suggested by our earlier analysis. Study 1 consists of the following three parts: (a) an MDS analysis of a free sort of PAT items, (b) an MDS analysis of paired comparisons ratings of PAT items, and (c) an analysis of the subjectively perceived meaning of PAT items.

Subjects

Undergraduate students were used as judges in this study in partial fulfillment of requirements for an introductory psychology course. In the first study, 40 subjects (20 men and 20 women) judged the similarity of caregiving outcome causes by completing a free sort of PAT items. In the second study, 80 subjects (40 men and 40 women) judged the similarity of PAT items by making paired comparisons of PAT items. In the third study, 90 subjects (55 women and 35 men) rated the perceived meaning of PAT items on different dimensions. All procedures were conducted individually.

Procedure

Free sort. A free sort of PAT items was carried out by the first group of subjects. Each of the 26 PAT items (e.g., "enjoying being with children," "being in a good mood") was placed on a separate piece of paper, and each judge was instructed to sort the items into similarity groupings (i.e., putting items in the same set if they seemed similar to each other). Subjects were asked to create as many groupings as they felt to be appropriate, even if a grouping consisted of a single item.

Paired comparisons. The second group of subjects was given 26 forms for paired-comparison ratings. On each form, one PAT item was randomly selected as the "target" item. Subjects were instructed to compare this item with the remaining 25 items. The comparison items were

[1] In this article, the focus of our interest is on attributions for caregiving failure rather than success. We expect that causal beliefs concerning negative outcomes are more relevant for relationships (or children) seen as having major problems. We would expect, however, that attributions for both success or failure are relevant for less disturbed relationships.

[2] Results of this earlier, unpublished multiple-dimensional scaling analysis are available from the authors on request.

placed in two random orders, with half of the subjects receiving Order 1 and half receiving Order 2. Similarity ratings for each comparison were made on a 7-point scale ranging from *very different* to *very similar.*

Meaning analysis. The third group of subjects rated a set of attribution items on 7-point scales representing the following dimensions: controllability, person compared with intentionality, extent of caregiver responsibility, stability, a characteristic of your world compared with child's world, and "good" compared with "bad" features of interaction.

Results and Discussion

Free-Sort MDS

Two symmetric similarity matrices for the PAT items were obtained separately for male and female subjects on the basis their free-sort groupings. The matrices were analyzed using Alternating Least Squares Scaling Algorithm (ALSCAL; Young & Lewyckyj, 1979; Young, Takane, & Lewyckyj, 1980), an individual-differences MDS technique. No systematic differences were found between male and female subjects in their free-sort groupings, and their responses were averaged. Two-, three-, and four-dimensional solutions were computed. Examination of the solutions showed that these solutions accounted for 30%, 40%, and 48% of the variance, respectively. Average values of stress for these solutions were .34, .25, and .20, respectively.

Although variability in the sorting strategies used by subjects contributed to the low goodness of fit in the configurations, the presence of two different dimensions was identified in all three solutions. The first of these was labeled *social locus* and was anchored with self-referent causes such as "you get along with children," compared with child-referent causes such as "child was stubborn." The second dimension was labeled *valence* and was anchored with positive causes such as "you enjoy being with children," compared with negative causes such as "you have trouble getting along with children." Although these dimensions were not uniform, indications of these same dimensions were found in the two-, three-, and four-dimensional solutions.

Paired-Comparison Analysis

Four similarity matrices for the PAT items were obtained separately for male and female subjects in Order 1 compared with Order 2 on the basis of their paired-comparison ratings. Because all items were compared twice with all other items, the similarity matrices were asymmetric. ALSCAL (Young & Lewyckyj, 1979; Young et al., 1980) was again used to analyze the four similarity matrices, with two-, three-, and four-dimensional solutions computed. Examination of the solutions showed that, averaged across the four matrices, these solutions accounted for 58%, 70%, and 74% of the variance, respectively. Average values of stress were .30, .22, and .20, respectively. An examination of the derived subject weights showed no systematic differences in subjects' paired-comparison ratings as a function of sex or as a function of item order.

The three-dimensional solution was preferred over the two-dimensional solution because of the decrease in stress and the substantial increment in the variance for which the former accounted. The four-dimensional solution had a lower stress value and accounted for slightly more variance than did the three-dimensional solution, but the improvement was not strong enough to justify the acceptance of an additional dimension. Consequently, the three-dimensional configuration was selected as the most effective solution. The first two dimensions obtained in this solution are shown in Figure 1. (The third dimension is not included because it reflects valence differences that were built into the test.)

Dimension 1 was interpreted as measuring social locus and contrasts self-referent causes such as "own ability," "own mood," and "own motivation," with child-referent causes such as "child was tired," "child's disposition," and "child's environment." The social locus dimension is consistent with the social locus dimension found in the free-sort analysis.

Dimension 2 was interpreted as measuring controllability. It contrasts causes such as "child likes adult," "you don't enjoy children," and "child is stubborn" with causes such as "neighbor's lack of advance preparation," "good physical environment," and "good luck." This dimension appears to contrast causes that are relatively controllable by self or child with causes that are relatively uncontrollable by self or child. To a lesser extent, it also measures "person versus environment" causes, but the fit is not as good. Causes on one side of the axis are all concerned with "person" causes such as "child is alert," "you enjoy children," and "child is tired," but the other side of the axis includes both "person" causes, such as "mood," and "environment" causes, such as "luck" or "physical environment."

Dimension 3 was interpreted as measuring *valence* and contrasts positive causes such as "own good luck," "child enjoys adults," and "own good mood" with negative causes such as "own bad luck," "using the wrong approach with the child," and "own bad mood." Dimension 3 is of less interest than the first two dimensions because the PAT is structurally created to measure the perceived causes of caregiving success ("good" items) and the perceived causes of caregiving failure ("bad" items). Therefore, its appearance as a dimension should be understood as simple confirmation that the perception of judges corresponded to our advance categorization of items.

Meaning Analysis

Average "meaning" ratings were correlated with stimulus coordinates obtained within the paired-comparison MDS. Correlations between bipolar meaning ratings of individual items and stimulus coordinates on the first two dimensions obtained within each MDS are shown in Table 1. Correlations are shown separately for PAT items that are concerned with potential causes of successful caregiving and PAT items that are concerned with potential causes of unsuccessful caregiving. It can be seen that Dimension 1 is most consistently related to the social-locus and caregiver-responsibility scales. Dimension 2 is most consistently related to controllability and to person, as compared with situation, scales.[3] These correlations confirm the logical interpretation of stimulus configurations obtained from the MDS analyses.

[3] In fact, the third dimension, which appeared to measure valence, was found to be significantly related only to valence ($r = .91$).

Study 2

Method

The central goals of Study 2 were to test the predicted relationships between causal attributions for caregiving failure and (a) parental abusiveness or coerciveness and (b) affective responses to target compared with nontarget children. We tested these relationships within two groups of mothers: a group being seen at a child abuse agency (with a variable history of abuse) and a group drawn from the general community (with no known history of abuse). Higher levels of abusiveness or coerciveness were expected to be associated with low perceived balance of control (i.e., relatively low attributed control to caregivers and relatively high attributed control to children). Additionally, women with a low perceived balance of control were expected to react with more annoyance to target than to nontarget children (within sibling pairs drawn from families being seen in counseling). These effects were predicted to be stronger for *unrelated* than for related mothers because (a) target children posed a novel as well as aversive stimulus for unrelated mothers and (b) related mothers could be expected to be more responsive to the demands of the situation (apparent "public scrutiny" of their parenting skills) than to the individual behavior of their two children.

Subjects

The first group consisted of 40 mothers who had sought counseling at a local child abuse agency. The sample was limited to mothers for two reasons: Existing normative information on the PAT is limited to mothers, and about half of the physically abusive parents seen at the agency were single mothers. Thirty-nine of the mothers had sought help on a voluntary basis; one was court-mandated. The mean age of mothers was 32.73 years (SD = 4.65), and the mean education was 13.25 years (SD = 2.27). All mothers had two or more children between the ages of 3 and 13 years. Twenty-one of the 40 mothers were currently married.

Mothers fell into three abusiveness groupings: (a) 13 mothers had abused two or more of their children, (b) 13 mothers had abused only one child, and (c) 14 mothers had not abused any of their children. Abusiveness was assessed on the basis of responses to the Conflict Tactics Scale (CT; Straus, Gelles, & Steinmetz, 1980). The CT assesses the frequency of use of different disciplinary strategies, ranging from positive control tactics to abusive tactics. The CT was developed for use in a national survey of over a thousand parents. The reliability of "violent parental tactics," as measured by internal consistency, is .62. Validity is indicated by (a) significant agreement between CT responses and in-depth interviews and (b) significant agreement between perpetrators and victims of abuse (see Straus, 1979, for a full report of validity and reliability). The five most coercive items (i.e., kicking, biting, hitting, beating up, threatening with or use of a weapon) were defined as abusive. The second set of five items (e.g., spanking, pushing, slapping) were defined as coercive but not abusive. All assignments of mothers to abuse categories were checked with family counselors (on the basis of which one family was reassigned from nonabusive to abusive).

Children selected from these families (to be observed at a later time in interaction with their parents) consisted of 40 sibling pairs. Sibling pairs were selected from each family on the basis of (a) maximum difference in terms of history of abuse (CT scores) and reported "difficulty" by mothers and (b) optimal matching for sex and age of the two children (i.e., whenever possible, we attempted to select sibling pairs of the same sex who were close in age). Parents showed little problem in ranking their children for perceived difficulty, an observation that has been supported by others (Schachter, 1982). The mean ages of target children (relatively high CT and difficulty ranking) and nontarget chil-

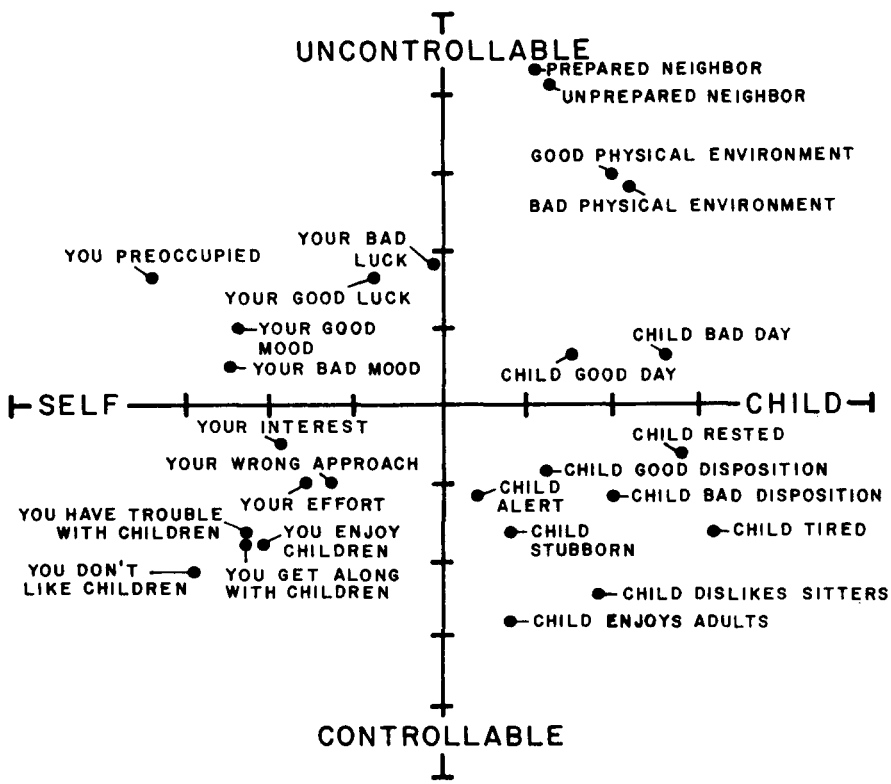

Figure 1. Configuration including Dimensions 1 and 2.

Table 1
Perceived Meaning of Attribution Dimensions: Correlations Between Perceived Dimensional Meaning and MDS Dimensional Coordinates

Perceived meaning scales	Positive outcomes		Negative outcomes	
	Dim. 1	Dim. 2	Dim. 1	Dim. 2
Controllability	.32	.79**	−.48	.90**
Intentionality	.22	.29	.07	−.25
Situation	−.15	.83**	−.73**	.75**
Social locus	.94**	.17	.91**	−.02
Valence	.24	.12	−.44	.20
Stability	.06	.50	−.49	.64*
Responsibility	.94**	−.14	.88**	−.23

Note. MDS = multidimensional scaling. Dim. = dimension.
* $p = .05$. ** $p \leq .01$.

dren (relatively low CT and difficulty ranking) were 8.6 and 7.4 years, respectively. Ages ranged from 3 to 13 years; the difference between groups was not significant. For five cases where it was unclear which child was targeted, the opinion of the family counselor was solicited, and the child was assigned accordingly. Because the target group included a disproportionate number of boys (80%, as opposed to 65% for the nontarget group), we checked analyses separately for the 19 sibling pairs that included only boys.

A second group of mothers ($n = 40$) was recruited from the community through publicly placed advertisements. Their mean age was 39.03 years ($SD = 7.11$), and their mean education was 15.43 years ($SD = 1.95$). Twenty-seven of the 40 mothers were currently married. All had at least one child between the ages of 3 and 13. This second group differed in too many ways from the first group to be considered as a control group. It afforded a conceptual replication of our expectation that adults (regardless of their relationship to the child) respond to children as an interactive function of their causal beliefs and child characteristics.

Procedure

Both groups of mothers completed the PAT in advance of observational procedures. All related mothers were given the CT in an interview 1 week in advance of other procedures. On the basis of an MDS analysis of PAT items, the following four scales were constructed that reflected the four quadrants within the two-dimensional solution: (a) ACS (perceived controllability of the adult's contribution to caregiving success), (b) ACF (perceived controllability of the adult's contribution to caregiving failure), (c) CCS (perceived controllability of the child's contribution to caregiving success), and (d) CCF (perceived controllability of the child's contribution to caregiving failure).

A composite score was created for perceived balance of control over failure (PCF)—the focus of interest in this article. A high PCF score consists of a positive score for ACF and a negative score for CCF (i.e., a high PCF score reflects high perceived control by self and low perceived control by children over caregiving failure). Test–retest reliability of PCF was .63 for mothers and .61 for female undergraduates.[4]

Mothers spent 12 min interacting separately with sibling pairs. All observations were videotaped from behind a one-way mirror in a comfortably furnished room at a child abuse agency. Children were randomly assigned to order of interaction with related and unrelated mothers. Children were described to unrelated mothers as belonging to families going through a parent education class; adults (and experimenters) were blind as to the target status of the two children. During the first 4 min of the interaction, we asked the mother and child just to talk to each other for a few minutes "while we get the game set up." Mothers were asked in advance to keep the child seated in the chair during this time because we were supposedly checking for sound levels. For the last 8 min, we asked the pair to play games obtained from an educational toy store and not typically known to the children (e.g., Crazy Dogs, a game that involves completion of an apparently easy jigsaw-type puzzle—which was actually solved by only one dyad).

After the interaction was completed, each mother rated the two children on a questionnaire designed to measure any annoyance that she had experienced during these interactions. The mothers were asked to rate children on 7-point scales that measured how annoying, unfriendly, uncooperative, difficult, and dependent (compared with pleasant, friendly, cooperative, easy, and mature, respectively) they believed each child's behavior to be.

Results and Discussion

Relationship Between PAT Scores and Maternal Abusiveness

We used a regression analysis strategy to determine the relationship between PCF and maternal abusiveness. As noted earlier, related mothers were divided into those who had abused one or more children compared with those who had never abused any of their children. The most meaningful analysis involved the predictive value of PCF for abusiveness among those mothers who were in counseling (related mothers). This group of mothers shared a common motivation in that they sought help to prevent future abusiveness but not all had actually abused their children. In the first hierarchical regression analysis, we partialed out the effects of mother age (by introducing this variable at an initial step) and then assessed the extent to which PCF predicts presence or absence of abusiveness.[5] A regression analysis used in this way provides information that is identical with that obtainable in a discriminant function analysis (Kleinbaum & Kupper, 1978). As expected, PCF was found to be negatively related to abuse ($\beta = -.30, p = .038$). Low levels of PCF predicted higher probability of abuse. In a secondary analysis, we measured the separate effects of ACF and CCF (again, partialing out the effects of maternal age). As expected, ACF was a negative predictor ($\beta = -.38$, $p = .011$), and CCF was a nonsignificant positive predictor ($\beta = .07$, $p = .633$) of abusiveness.

We conducted an equivalent set of regression analyses for the combined set of related and unrelated mothers. We partialed out the effects of group status (mothers seeking help at a child abuse agency as opposed to mothers responding to an advertisement) and maternal age and then assessed the effects of PCF on abusiveness (abuse history compared with no known abuse history). Maternal education and marital status were not found to be related to PAT scores and were not introduced as variables. PCF was again found to be a significant negative predictor of abuse ($\beta = -.16, p = .045$).

[4] Reliability was based on a sample of 57 mothers and 55 undergraduate females (retested after a 1-week time period). Normative information on the Parent Attribution Test is available from the authors on request.

[5] Maternal age was also significantly related to abuse ($\beta = .39$, $p = .009$); that is, abuse was more common for older mothers.

Relationship Between PAT Scores and Maternal Coerciveness

We ran separate regression analyses in which the effects of attributions (related mothers) were assessed for nonabusive maternal coerciveness. Frequency of use of nonabusive coercive tactics was used as the dependent variable. We ran separate analyses for maternal coerciveness with target and nontarget children. For target children, PCF (partialing out the effects of maternal age and child age) was found to be a significant negative predictor of nonabusive maternal coerciveness ($\beta = -.39$, $p = .013$). That is, the lower the mother's perceived balance of control, the more frequent her use of coercive disciplinary tactics. In a secondary analysis in which ACF and CCF were introduced separately, both scales were found to have the predicted relationship with coerciveness (for ACF, $\beta = -.26$, $p = .091$; for CCF, $\beta = .32$, $p = .042$). A separate analysis testing the relationship between PCF and coerciveness with nontarget children produced nonsignificant effects in the expected direction ($\beta = -.24$, $p = .140$).[6]

In support of our predictions, a very general pattern was found for low PCF as a predictor of abusive or coercive disciplinary tactics. Low ACF was a significant predictor of abuse, whereas high CCF was a significant predictor of nonabusive coerciveness. Future research will be necessary to determine whether these two scales predict in any consistently differential fashion. The most parsimonious conclusion at this point, however, is that the combination of low attributed control to self and high attributed control to children (over negative caregiving outcomes) predicts coercive caregiving.

Experienced Annoyance With Target and Nontarget Children

Annoyance ratings were analyzed in a multivariate analysis of variance that included two grouping variables (related compared with unrelated mothers and high compared with low PCF) and one repeated measure (target compared with nontarget child).[7] As predicted, a significant interaction was found among mother relatedness, PCF, and target status of the child, $F(1, 68) = 7.11$, $p = .010$. As shown in Table 2, only unrelated mothers with low PCF reported significantly greater annoyance (i.e., they were less pleased) with target than with nontarget children. The critical factor here is the distinction between the two children rather than absolute levels of annoyance. Moreover, trends were found that suggested greater annoyance for related than for unrelated mothers, $F(1, 68) = 2.90$, $p = .093$, and for low PCF than for high PCF mothers, $F(1, 68) = 3.34$, $p = .072$. Differences in reactions of related and unrelated mothers may reflect general differences as a function of "ownness" (Halverson & Waldrop, 1970). Although the differences between target and nontarget children were objectively observable (Bugental, Blue, & Lewis, 1989) and discernible by unrelated mothers, they were fairly subtle and by no means extreme. It should be noted that almost all ratings involved gradations of "pleasingness" rather than actual annoyance. Thus, the relatively good behavior of children may have provided a positive comparison for related mothers (in particular, for target children). It should also be noted that abusive parents are often insensitive to subtle differences in child behavior (e.g., Kropp & Haynes, 1987).

Table 2
Experienced Annoyance in Response to Target and Nontarget Children

Attributions	Target child	Nontarget child	Difference
Related mothers			
High PCF			
M	11.84	10.11	1.73
SD	5.91	4.37	
Low PCF			
M	12.53	14.00	−1.47
SD	5.36	7.45	
Unrelated mothers			
High PCF			
M	8.89	9.78	−.89
SD	4.17	4.41	
Low PCF			
M	13.17	9.06	4.11*
SD	8.40	4.43	

Note. PCF = perceived control. Higher scores indicate higher annoyance ratings.
* $p < .01$.

Unrelated mothers with low perceived balance of control responded to sibling pairs in a fashion that can be thought of as paralleling the responses of the children's own mothers within the home environment. Children seen by their own mothers as relatively "difficult" were responded to by *strangers* with greater annoyance than were children seen by their own mothers as relatively "easy." This finding supports our expectation that low PCF acts to moderate adults responses to child behavior. The same caregiver belief pattern that was related to coercive discipline at home was paralleled by the belief patterns of unrelated mothers who were particularly reactive to child characteristics.

General Discussion

The perceived controllability of negative caregiving outcomes was shown here to be related to risk for physically abusive care-

[6] The Conflict Tactics Scale was not administered to unrelated mothers because any related instances of abusiveness would legally have to be reported to a Child Welfare Services.

[7] A test of the validity of annoyance ratings was made by determining that there was a significant relationship between annoyance ratings and nonverbally expressed affect. Furthermore, four of the original sample of 40 subjects failed to complete the postratings and were not used. We conducted a secondary analysis on the postratings given to sibling pairs that included only boys. For this subsample, differences between groupings was even more pronounced: For example, for low PCF unrelated mothers, the mean annoyance ratings for target children was 2.77, whereas the mean annoyance ratings for nontarget children was 1.68. Thus, it does not appear to be the case that the lower annoyance ratings for nontarget children (as a whole) reflect the higher representation of girls in the nontarget as opposed to the target group. Secondary analyses, in which ACF and CCF were included as separate dimensions, yielded significant effects only for ACF (although results were in the predicted direction for CCF). That is, greater annoyance was reported by low ACF and high CCF mothers.

giving. Abusive mothers were found to be more likely than nonabusive mothers to believe that they can do little to prevent negative caregiving outcomes; at the same time, they were more likely to believe that children can control such outcomes. Mothers with low PCF (perceived balance of control over caregiving failure) were not only more likely to be abusive, but also more likely to show high levels of nonabusive but coercive caregiving. This pattern was most marked for their reported interactions with the target child in the family (i.e., the child who was more likely to be seen as difficult). Mothers did not, however, show differences in their affective response to target compared with nontarget children during their brief, relatively pleasant videotaped interaction. It would appear that more intensely aversive child behaviors (or situations) are necessary before differential affective responses are shown.

Target children not only were at elevated risk for abusive or coercive caregiving (at home) from their own low PCF parents, but were also more likely to elicit negative affect from low PCF strangers. Unrelated mothers with low perceived balance of control showed a greater reactivity to the differences between target children and their less targeted siblings than did mothers with high perceived control. Specifically, they reported higher levels of annoyance after brief interactions with target than with nontarget children. For this short-term interaction, we predicted and found stronger attributional moderator effects for unrelated than for related mothers. Presumably, the immediate impact of a difficult child is greater if the child's behavior is novel or unexpected. Following this line of reasoning, caregiver attributions should have maximum influence during initial encounters (or, as suggested earlier, during intensely aversive encounters).

These observations support the notion that cognitive inferences regarding the controllability of interpersonal events have important implications for the ways in which caregivers interpret and affectively respond to potentially stress-inducing child behavior. If, for example, a child engages in aversive behavior, very different outcomes can be anticipated for adults who believe that this is a controllable or "willful" act on the part of the child as opposed to adults who simply believe that the child is responding to some aspect of the environment or is tired, or so forth. In the same way, adults who see themselves as powerless to prevent negative caregiving events can be expected to respond more negatively to difficult child behavior. In both cases, the groundwork is laid for higher levels of reactivity. As Wolfe noted (1985), there is little cohesive evidence concerning stable differences between abusive and nonabusive parents; there are, however, indications that abusive parents may be more reactive to stressful events.

In a model proposed elsewhere (Bugental, 1987a; Bugental, Mantyla, & Lewis, in press), it has been suggested that abusive families can be conceptualized as stress-maintaining systems. As noted earlier, children who are more likely to be targeted for abuse have characteristics that can potentially elicit arousal and negative affect in others. In our own ongoing research, we have observed that the target children within the families studied here were verbally and nonverbally more unresponsive to adults (Bugental, Blue, & Lewis, 1989). When such children are paired with adults with low perceived control, a dysfunctional match is created. The annoyance that such caregivers experience can be thought of as reflecting a combined frustration with their own ability to change the child's behavior and an irritation with the child for "deliberately" acting to create an aversive situation.

These findings should be considered together with the Bugental and Cortez (1988) observation that adults with low perceived control respond with elevated physiological reactivity to difficult children. Vasta (1982) proposed that there are individual differences in parental physiological reactivity that increase levels of risk for abuse. Conceivably, the difference between parents may not be so much in their basic levels of reactivity as in the causal inferences that set them at risk for greater reactivity. Alternately, low perceived control may be an ultimate *consequence* of initial differences in physiological reactivity.

In the present investigation, we have shown that cognitive inferences may influence short-range annoyance (in strangers) and long-range coercion (in parents). In other ongoing research, we hope to demonstrate the intermediate consequences of causal beliefs—both in terms of the expressed affect of the adult and the reciprocal behavior of the child. Consistent with current trends in the field of social development, the findings reported here have provided support for the conceptualization of socialization processes as reflecting reciprocal systems that are moderated by the cognitions of caregivers.

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