Rejection sensitivity as a mediator of the impact of childhood exposure to family violence on adult attachment behavior

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Abstract
Substantial evidence indicates a link between exposure to family violence in childhood and troubled social relationships. We draw on attachment and social-cognitive theory to formulate a model of the mechanisms underlying this association. The model proposes that early experiences of overt rejection (e.g., physical maltreatment) or covert rejection (e.g., emotional neglect) are internalized as sensitivity to rejection. In this study, we operationalize sensitivity to rejection in social-cognitive terms as a tendency to expect and be concerned about rejection across a range of social situations. We hypothesize that rejection sensitivity mediates the link between exposure to family violence and adult attachment behavior. Data from a survey of 212 undergraduates support this hypothesis and also provide evidence that indicates sensitivity to rejection underlies both avoidant and ambivalent patterns of insecure adult attachment behavior. Overall, the results illustrate the power of a process approach to explaining the developmental sequelae of maltreatment.

Children exposed to family violence often have troubled social relationships. Problems emerge in their interactions with peers, romantic partners, spouses, and offspring (Cicchetti & Carlson, 1989; Dodge, Bates, & Pettit, 1990; Downey, Feldman, Khuri, & Friedman, in press; Downey & Walker, 1989; Emery, 1989; Huesmann, Eron, Lefkowitz, & Walder, 1984; Malamuth, Sockloskie, Koss, & Tanaka, 1991; Straus, Gelles, & Steinmetz, 1980; Widom, 1989). Because children exposed to family violence show similar interpersonal problems to those exposed to neglect and emotional maltreatment, some researchers have speculated that their difficulties result from the emotional message communicated by physical abuse rather than the physical acts themselves (Brassard, Germain, & Hart, 1987; Claussen & Crittenden, 1991; Garbarino, Gutman, & Seeley, 1986). In particular, a number of researchers have begun to emphasize the harmful effects of rejection embodied in the hostility, denigration, and insensitivity that accompany physically abusive acts (e.g., Downey et al, in press; Garbarino et al., 1986).

This interest in parental rejection echoes conclusions drawn by some of the earliest researchers on the impact of quality of parenting on children's socioemotional development (Newell, 1936, 1934; Symonds, 1938). Symonds (1938), for example, claimed that parental rejection is evident in neglect, physical cruelty, and hostile criticism and underlies the emotional and inter-

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personal difficulties of children exposed to such parenting. However, like current researchers, these early researchers did not adequately describe the psychological processes linking early exposure to rejection with subsequent socioemotional difficulties.

In this article, we propose that sensitivity to rejection is an internalized legacy of early rejection experiences that mediates the impact of such experiences on interpersonal relationships. We view sensitivity to rejection as a motive to avoid rejection that may be evident in the encoding biases, expectancies, values, and self-regulatory plans that influence people's behavior in social situations. The study will assess whether or not sensitivity to rejection mediates the relation between people's exposure to family violence in childhood, a marker of exposure to parental rejection, and their orientation to interpersonal relationships in adulthood, captured in adult attachment style (Hazan & Shaver, 1987).

Rejection Sensitivity as a Mediator of the Link Between Parental Rejection and Behavior in Interpersonal Relationships

There is broad empirical support for proposing that the internalized legacy of early rejection experiences is an important influence on behavior in intimate adult relationships. First, theoretical and empirical approaches to describing the features of healthy and unhealthy parenting consistently identify parental rejection—acceptance as a key dimension with implications for children's social adjustment (see Maccoby & Martin, 1983, for a review; Becker, 1964; Bowlby, 1969; Parker, Tupling, & Brown, 1979; Rohner & Nielson, 1978; Rohner & Rohner, 1981; Symonds, 1938). Early experiences of rejection have been documented to predict depression, aggression, social withdrawal, and substance abuse (Campo & Rohner, 1992; Maccoby & Martin, 1983; Parker et al., 1979; Patterson, 1982; Whitbeck et al., 1992).

Second, sensitivity to rejection, operationalized in clinical interviews as intense dejection following perceived rejection, has been identified as a core symptom of two different disorders of interpersonal relating: extreme social avoidance, which characterizes social phobia and avoidant personality disorder, and extreme social preoccupation, which characterizes atypical or dependent depression and dependent personality disorder. Evidence that rejection sensitivity may underlie these clinical disorders comes from findings that both atypical depressives and social phobics respond selectively to the monoamine oxidase inhibitor phenelzine by showing a decline in rejection sensitivity and related interpersonal difficulties. Following treatment with phenelzine, social phobics become less socially avoidant and atypical depressive's social relationships become less stormy (Liebowitz et al., 1988, 1992). Consistent with our argument that rejection sensitivity is a legacy of parental rejection, both atypical or dependent depressives and social phobics are more likely than the average person to have experienced parental rejection (Blatt & Zuroff, 1992; Liebowitz, Gorman, Fyer, & Klein, 1985; Parker, 1979; Parker & Hadzi-Pavlovic, 1992; Straus, Elie, & Franche, 1989).

The extreme social avoidance of social phobics and the social preoccupation of atypical depressives closely parallel the anxious-avoidant and anxious-ambivalent behavior patterns that children identified by attachment theorists as insecurely attached develop to cope with their doubts and anxieties about the supportiveness of social world (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969). Whereas secure attachments typically develop in children exposed to accepting, supportive caretakers, insecure attachments typically develop in children exposed to caretakers who respond to their needs with overt or covert rejection. Insecurely attached children who develop the anxious-avoidant strategy of regulating their interpersonal behavior actively avoid contact with the caretaker and show hesitance about seeking support from their social environment (Ainsworth et al., 1978). As adults, they find intimacy and trust difficult and distressing (Hazan & Shaver, 1987), paralleling the more extreme difficulties of social phobics. Insecurely
attached children who develop the anxious-ambivalent self-regulatory strategy make frequent demands for reassurance from the caretaker interspersed with displays of hostility (Ainsworth et al., 1978). As adults, they find that others are reluctant to get as close as they would like, and they are preoccupied with the possibility of rejection (Hazan & Shaver, 1987), paralleling the difficulties of dependent or atypical depressives.

**Conceptualizing Sensitivity to Rejection**

These observations converge to suggest that sensitivity to rejection may be a key internalized legacy of childhood exposure to rejection. However, clinical research on rejection sensitivity has given little attention to articulating precisely how early rejection experiences influence key psychological processes. In attempting to bridge this gap, we draw on both an attachment theory perspective (Bowlby, 1969, 1973, 1980) and a cognitive social learning perspective (Mischel, 1973, 1993). Although these perspectives depart from one another in significant ways, they share a common goal of delineating the psychological mediators of behavior.

**Contributions from attachment theory**

To explain continuity between early parenting experiences and later social behavior, Bowlby (1973) proposed that "each individual builds working models of the world and of himself in it, with the aid of which he perceives events, forecasts the future, and constructs his plans" (p. 203). This mental analogy to the real world enables the individual to capitalize on environmental regularities, rather than responding completely anew to each situation (Craig, 1943). Among the individual's working models or representations of the world, working models of the primary attachment relationship(s) and associated models of the self and of important caretakers are of special significance for social behavior (Bowlby, 1973). Children of accepting, supportive caretakers mentally represent attachment relationships as warm and accepting, significant others as supportive, and the self as worthy of affection.

Children of rejecting caretakers have internal working models of attachment relationships as neglecting or overtly rejecting, of others as potentially unresponsive, and of the self as unworthy of love.

Bretherton, Ridgeway, and Cassidy (1990) noted that when Bowlby introduced the concept of the internal working model into attachment theory, "it was little more than a metaphor with useful connotations" (p. 275). Attachment researchers are beginning to elaborate and operationalize Bowlby's rudimentary conceptualization of working models. For example, Bretherton views working models as mental representations or scripts (Schank & Abelson, 1977) that contain skeletal information on what typically transpires in social relationships (Bretherton, 1985; Bretherton et al., 1990). These scripts are generalized from early caretaker-child relations and guide social behavior (Bretherton, 1985; Bretherton et al., 1990). Using projective tests with separation themes, Bretherton and her colleagues have inferred the content of children's working models from their level of distress at the prospect of separation from an attachment figure, their expectancies about their parents' behavior following the separation and about their own coping efficacy, and their strategies for regulating behavior and distress following the separation (Bretherton et al., 1990; Cassidy, 1988, 1990). Main, Kaplan, and Cassidy (1985) extended the definition of working models to include rules for accessing stored memories of earlier social experiences. These rules are considered to underlie the encoding of new information. Individual differences in children's emotional openness in responding to projective tests with separation themes (Cassidy, 1988, 1990; Bretherton et al., 1990) and the coherence of their mothers' memories of their childhood (Main & Goldwyn, 1984) have been interpreted as evidence of individual differences in cognitive self-regulatory strategies.

**Contributions from social-cognitive theory**

The data from these studies are highly compatible with the social-cognitive perspective
on individual differences in the mediators of behavior. This perspective is concerned with the moment-to-moment psychological processes that interact to generate behavior in particular situations (Dweck & Leggett, 1988; Mischel, 1973, 1993). These include how people encode or construe situations (Kelly, 1955), their expectations of the outcomes of possible behaviors they could enact (Rotter, 1954), the subjective value they place on diverse behavioral outcomes (Rotter, 1954), and their plans and strategies for regulating their behavior in the service of desired goals (Mischel, Shoda, & Rodriguez, 1989). This approach has increased our understanding of the psychological mediators of aggression (Bandura, 1973; Dodge, Pettit, McClaskey, & Brown, 1986; Downey & Walker, 1989; Perry, Perry, & Rasmussen, 1986; Slaby & Guerra, 1988), helplessness (Heyman & Dweck, 1992), delay of gratification (Mischel et al., 1989), social problem solving (Yeates & Selman, 1989), and borderline personality disorder (Westen, Ludolph, Block, & Wixom, 1990).

The different components of information processing (e.g., appraisals, expectancies) have been found to contribute independently to explaining behavior, suggesting that they are not reducible to surface indicators of a single underlying construct (Dodge et al., 1986; Downey & Walker, 1989; Westen, 1991; Westen et al., 1990).

The psychological processes identified by the social-cognitive perspective are inherent in most contemporary attachment theorists’ operationalizations of working models. Taken together, current research on internal working models incorporates (a) the interpretation or encoding of interpersonal situations, (b) expectancies about the consequences of behavior in such situations, (c) the value placed on the response of significant others to one’s attachment behavior, and (d) strategies for regulating one’s behavioral and emotional response to the behavior of significant others (Bretherton, 1985; Bretherton et al., 1990; Cassidy, 1988; Cicchetti, Ganiban, & Barnett, 1991; Kobak & Sceery, 1988; Main, Kaplan, & Cassidy, 1985; Speltz, Greenberg, & Deklyren, 1990).

Despite clear compatibilities between attachment and social-cognitive approaches, there are subtle but important differences in emphasis. First, these approaches differ in the relative attention given to the impact of early parent–child experiences on psychological processes as opposed to the operation of these processes in the immediate situations in which behavior is to be enacted. Attachment theory focuses on the nature and quality of early interpersonal experiences and the manner in which these experiences are processed or represented. Social-cognitive theory has typically focused on processes more proximal to behavior in current situations, while paying little empirical attention to the social origins of individual differences in these processes (for exceptions, see Dodge et al., 1990; Downey & Walker, 1989; Higgins, 1991). Our approach borrows from both perspectives in that we attempt to assess the impact of prior interpersonal experience on the processing of social information in current situations.

Second, these approaches differ in their models of representation. Attachment theory accords representational structures (i.e., the working model) a central role in the mediation of behavior. Despite operationalizing working models in process terms (e.g., as encoding or expectancies), most current attachment researchers explicitly or implicitly view these processes as merely surface manifestations of underlying representational structures (e.g., Bretherton, 1985). The goal of research is to infer the content and organization of these structures. The social-cognitive perspective, on the other hand, views representational processes as of central theoretical importance in and of themselves and accords equal conceptual status to encoding, expectancies, values, and self-regulatory plans. We have adopted this more pluralistic and less inferential approach to characterizing the mediators of behavior.

Our theoretical model proposes that early rejection experiences shape the encoding strategies, expectancies, values, and self-regulatory plans that individuals bring to bear in new situations. We expect that children who are overtly or covertly rejected
Rejection sensitivity

by their parents may learn to expect and be concerned about rejection in new situations and to interpret ambiguous social feedback as rejection. They may learn to regulate the distress evoked by anticipated or perceived rejection by actively avoiding situations with the potential for rejection. Alternatively, they may seek to quell their distress by making constant demands for reassurance that they will not be rejected.

Goals of the Research

Our research defines rejection sensitivity in social information-processing terms and attempts to demonstrate its role in mediating the impact of exposure to family violence in childhood on interpersonal behavior in adulthood. In this article, we focus on expectancy aspects of rejection sensitivity and on the value accorded to acceptance (or avoiding rejection) in interpersonal situations. Expectancies about others’ availability are viewed as a crucial component of working models (e.g., Kobak & Sceery, 1988; Speltz et al., 1990; Sroufe & Fleeson, 1986). However, as social-cognitive theorists have noted, the impact of expectancies on behavior is qualified by the value or concern that one invests in the outcome of the behavior (e.g., Bandura, 1986; Mischel, 1973, 1993; Rotter, 1954). Thus, we have operationalized rejection sensitivity as the interaction of the extent to which one expects rejection and one is anxious or concerned about the prospect of rejection in situations with a potential for rejection. People who expect rejection and for whom the prospect of rejection is anxiety provoking across a range of interpersonal situations are defined as being rejection sensitive.

The primary aim of the study is to assess whether or not these aspects of rejection sensitivity interact to mediate the relationship between childhood exposure to family violence, a marker of exposure to parental rejection, and insecure attachment behavior styles in adulthood. Attachment theory indicates that one behavioral strategy for avoiding rejection is avoiding intimate relationships (i.e., anxious-avoidant attach-

ment behavior) (Main & Goldwyn, 1984), while another is being hypervigilant for signs of rejection and preventing or punishing perceived rejection by coercive, resistant behavior (i.e., anxious-ambivalent attachment) (Bowlby, 1973). Drawing on the clinical literature on atypical depression and social phobia, we propose that rejection sensitivity underlies both the avoidant and ambivalent attachment styles.

Expectations of and anxiety about rejection may be learned directly (i.e., by child abuse or other forms of parental rejection of the child) and indirectly by observation (i.e., by witnessing parents abuse each other) (Bandura & Walters, 1963; Mischel, 1973). Thus, we expect the mediational model to hold for both parent-child physical aggression and parent-parent physical aggression.

Methods

Subjects and procedure

Subjects (Ss) were 116 female and 96 male Columbia University undergraduates who began participating in the fall of 1992 in a larger study, the Relationship History Project. Posters seeking subjects for a study on interpersonal relationships for pay were placed around the campus. Persons interested in participating were asked to pick up questionnaires from special booths located in campus dormitories. Fifty-five percent of the Ss were Caucasian, 25% Asian American, 7.5% Hispanic, 6.5% African American, and 7% from other ethnic backgrounds. The racial and gender composition of the sample is representative of the Columbia University undergraduate population. Ss’ mean age was 19.47 years (SD = 2.59). Seventy-two percent were freshmen, reflecting our efforts to recruit students in the early stages of their college careers.

Ss completed three sets of questionnaires over the 1992–93 academic year, which included questions about basic demographics, family background, dating history, current psychosocial functioning and social information processing. Ss received $5 for completing each set of questionnaires.
half of the sample, the measures of childhood violence and rejection sensitivity were administered concurrently (in September), while for the other half of the sample the childhood violence measure was administered 6 months prior to the rejection sensitivity measure. The correlations between the childhood violence variables and rejection sensitivity did not differ appreciably between these two groups.

Measures

Rejection Sensitivity Questionnaire. A complete description of the Rejection Sensitivity Questionnaire (RSQ) is given in Feldman and Downey (1994). The measure consists of 18 hypothetical interpersonal situations in which Ss imagine situations in which they ask someone to do something for them (e.g., "You ask a friend to do you a big favor," "You ask your boyfriend/girlfriend to move in with you," "You ask your parents to come to an occasion important to you"). The situations were selected from a larger set of interpersonal situations based on open-ended pilot interviews with 20 Ss, who were asked what they thought would most likely happen in each situation. The pilot Ss' responses varied along two general dimensions—expected acceptance or rejection and degree of concern over the outcome. Situations that generated variance in Ss' responses were retained. The fixed-choice responses for the RSQ were based on the interview responses and were designed to assess these two dimensions (see the Appendix for a sample item).

For each hypothetical situation, Ss first answered a question about their degree of concern about the outcome (e.g., "How concerned or anxious would you be over whether or not your parents would want to come?") on a 6-point scale ranging from 1 (very uninterested) to 6 (very concerned). They then indicated the likelihood that the other person(s) would respond to their demand in an accepting fashion (e.g., "My parents would want to come") on a 6-point scale ranging from 1 (very unlikely) to 6 (very likely). High likelihood of this outcome represents expectations of acceptance, and low likelihood represents expectations of rejection.

To calculate a score of rejection sensitivity for each situation, the person's rejection expectancy was weighted by their degree of concern over its occurrence. Specifically, the person's score on expectancy of acceptance was reversed to index their expectancy of rejection. The reversed score was then multiplied by their degree of concern. Factor analysis revealed that the 18 rejection anxiety scores loaded on a single factor. Thus, they were summed and divided by the number of items (18) to form a single rejection sensitivity score. The Cronbach alpha for the sample was .81.

The RSQ shows high levels of convergent and divergent validity. In a subsample of 100 Ss, we validated the RSQ against the Interpersonal Sensitivity subscale of the SCL-90 (Derogatis, Rickels, & Rock, 1976) and the Social Avoidance and Distress Scale (Watson & Friend, 1969), measures typically used in research on rejection sensitivity in atypical depressives and in social phobics, respectively. The RSQ correlated .61 ($p < .0001$) with the Interpersonal Sensitivity subscale and .49 ($p < .0001$) with the Social Avoidance and Distress Scale. Discriminant validity of the RSQ is evident in its pattern of correlations with the sociotropy subscales of the Sociotropy-Autonomy Scale (Beck, Epstein, Harrison, & Emery, 1983). The first subscale, concern about disapproval, includes several items indicative of sensitivity to rejection (e.g., "If a friend has not called me for a while, I get worried that he or she has forgotten me"), while the second and third subscales assess other dimensions of interpersonal dependence, desire to be close to others (e.g., "I like to spend my free time with others") (attachment/separation subscale) and desire to please others (e.g., "I find it difficult..."
to say no to other people") (pleasing others subscale). Comparisons of the correlations of the RSQ with these three subscales showed that the correlation of RSQ with concern about disapproval \( (r = .41) \) was significantly greater than that with attachment/separation \( (r = .21, t = 2.78, p < .01) \) and that with pleasing others \( (r = .20, t = 2.92, p < .01) \).

**Conflict Tactics Scale.** The Conflict Tactics Scale (CTS; Straus, 1979) is a comprehensive and widely used index of the type and frequency of tactics used to resolve conflict. Respondents are asked to think of situations in which they had conflicts with a specified family member and to indicate how often they had experienced (in the case of parent–child aggression) or witnessed (in the case of parent–parent aggression) each of the acts included in the CTS during their childhood. The CTS consists of 19 items indexing verbal and physical conflict resolution tactics. The scale starts with the least coercive items and ends with the most coercive items. It shows evidence of a stable factor structure and moderate test–retest reliability, construct validity and interpartner reliability (O'Leary & Arias, 1988; Straus, 1979, 1990). Because we were interested in physical maltreatment in this study, we used the nine items assessing mild to severe physical aggression. Items 9 ("threw something at the other person") to 11 ("slapped") are typically considered to be mildly physically aggressive and Items 12 ("kicked, bit, or hit with a fist") to 19 ("used a knife or gun") are considered to be severely aggressive (Gelles & Straus, 1988).

Ss indicated the frequency on a 7-point scale \( (0 = \text{never}, 6 = \text{weekly}) \) with which each of these nine types of physical aggression had occurred in each of their parent's behavior toward the other and toward the subject during the subject’s childhood. Measures of the frequency and the severity of marital and parent–child physical aggression were calculated for each subject. The frequency measures were calculated by summing the frequencies across the nine items for each relationship. The mean of the father–partner and mother–partner sums assessed the frequency of marital violence, and the mean of the father–child and mother–child sums assessed the frequency of child abuse. The severity measures were calculated by taking the highest level of severity of physical aggression in each relationship, with 0 = no physical aggression, 1 = mild physical aggression, and 2 = severe physical aggression.

**Adult attachment style.** Adult attachment style (Hazan & Shaver, 1987) is a categorical self-rating measure of adult attachment styles. As opposed to the Adult Attachment Interview (George, Kaplan, & Main, 1984), which was designed to assess characteristics of internal working models, Hazan and Shaver’s measure taps broad patterns of attachment behavior. The measure consists of descriptions of three styles of attachment behavior derived from Ainsworth et al.’s (1978) descriptions of three patterns of infant behavior in the Strange Situation: secure, anxious–avoidant, and anxious–ambivalent. Ss are asked to choose the description that most resembled them by circling the appropriate number. The measure shows temporal stability and has been externally validated against retrospective reports of the quality of family relationships and characteristics of romantic relationships (Brennan & Shaver, 1990; Hazan & Shaver, 1987, 1990; Shaver & Brennan, 1992).

The proportions of the three attachment styles assessed in this manner closely approximate those found in the infant attachment literature (Hazan & Shaver, 1987). In our sample, 58% of Ss classified themselves as secure, 34% avoidant, and 8% ambivalent. These frequencies are similar to those found in other studies (e.g., Collins & Read, 1990).

**Results**

**Bivariate relations**

Table 1 gives the means and intercorrelations of the variables. The frequency and se-
### Table 1. Means and intercorrelations among measures

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<tr>
<th>Measure</th>
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<td>Exposure to family violence</td>
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<td>1. Frequency of parent-child aggression</td>
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<td>2. Frequency of parent-parent aggression</td>
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<td>3. Severity of parent-child aggression</td>
<td>1.04</td>
<td>0.75</td>
<td>.63***</td>
<td>.28***</td>
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<td>4. Severity of parent-parent aggression</td>
<td>0.57</td>
<td>0.80</td>
<td>.39***</td>
<td>.66***</td>
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<td>Other measures</td>
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<td>5. Rejection sensitivity</td>
<td>9.35</td>
<td>2.96</td>
<td>.30***</td>
<td>.20**</td>
<td>.21**</td>
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<td>6. Security of attachment</td>
<td>0.58</td>
<td>0.50</td>
<td>-.19**</td>
<td>-.14*</td>
<td>-.15*</td>
<td>-.10</td>
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<td>7. Sex</td>
<td>1.53</td>
<td>0.50</td>
<td>-.04</td>
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<td>8. Age</td>
<td>19.01</td>
<td>1.50</td>
<td>-.02</td>
<td>-.02</td>
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<td>.01</td>
<td>-.06</td>
<td>.03</td>
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* *p < .05. **p < .01. ***p < .001.
Rejection sensitivity measures were highly correlated for both parent-child and parent-parent aggression. This is consistent with the view that physical aggression is on a continuum with minor physical aggression preceding more severe physical aggression (Gelles & Straus, 1988). Parent-child physical aggression correlated moderately with parent-parent aggression. Rejection sensitivity and security of adult attachment correlated significantly with one another and with the physical violence indices in the expected direction.

The only exception was the association between security of attachment and severity of parent-parent physical aggression, which did not reach significance at the .05 level. Subject age and sex were not correlated with any of the other measures. The inclusion of sex or age as covariates in the analyses reported below did not alter the pattern or significance of the results.

Testing the mediational model

A multivariate analysis of variance was conducted to test whether or not anxious-avoidant and anxious-ambivalent subjects were sufficiently similar on the measures of physical aggression and rejection sensitivity to be combined into a single insecurely attached group for purposes of testing the mediational model. The dependent variables were the four physical aggression indices and rejection sensitivity, and the between-subjects factor was type of insecure attachment style (avoidant or ambivalent). The multivariate F ratio was nonsignificant, $F(5, 80) = 1.38, p > .25$. Thus, we combined the avoidant and ambivalent subjects into an insecurely attached group in the analyses reported later.

We hypothesized that insecure attachment behavior in adulthood is associated with childhood exposure to family violence and that rejection sensitivity mediates or accounts for this association. To demonstrate mediation, the following four specific hypotheses were tested:

1. A history of childhood exposure to family violence is positively associated with insecure adult attachment style.
2. A history of childhood exposure to family violence is positively associated with rejection sensitivity.
3. Rejection sensitivity is positively associated with insecure adult attachment style.
4. When rejection sensitivity is statistically controlled, the relationship between exposure to family violence and insecure adult attachment is substantially reduced.

This mediational model was tested separately for four different indices of exposure to family violence: (a) frequency and (b) severity of parent-child aggression and (c) frequency and (d) severity of parent-parent aggression.

The results of regression analyses conducted to test the mediational model are presented in Figure 1 for each of the four measures of childhood exposure to family violence. The numbers above each arrowed line give the standardized regression coefficients and, in parentheses, the unstandardized coefficients for the full model. The italicized numbers below the arrowed lines give the standardized and unstandardized regression coefficients for the unmediated relationships.

Linking physical aggression in childhood with security of adult attachment style. To test the first hypothesis, separate regression analyses were conducted with security of attachment as the dependent variable and the
Four physical aggression indices as independent variables. The results are given as italicized standardized betas below the arrowed lines between the physical aggression indices and insecure attachment in Figure 1. Children exposed to frequent or severe parent-child physical aggression and frequent parent-parent physical aggression were significantly more likely to report a pattern of insecure attachment in their current relationships. Although severity of parent-parent physical aggression did not significantly predict security of attachment, the relationship was in the expected direction.

**Linking physical aggression in childhood with rejection sensitivity.** To test the second hypothesis, separate regression analyses were conducted with rejection sensitivity as the dependent variable and each of the four
indices of childhood exposure to physical violence as the independent variables. As the significant betas on the lines linking the indices of aggression with rejection sensitivity show, rejection sensitivity was highly significantly associated with mean frequency and severity of parent–child physical aggression and of parent–parent physical aggression. Ss exposed to family violence were more sensitive to rejection.

**Linking rejection sensitivity with security of adult attachment style.** To test the third hypothesis, a regression analysis was conducted with security of attachment as the dependent variable and rejection sensitivity the independent variable. As Figure 1 shows, Ss high on rejection sensitivity were more likely to show insecure patterns of adult attachment. A one-way analysis of variance with adult attachment style as the between-subjects factor was conducted to test whether or not rejection sensitivity differentiated both types of insecurely attached Ss from securely attached Ss. Consistent with the regression analysis, rejection sensitivity and adult attachment style were highly significantly associated, $F(2, 209) = 20.22$, $p < .0001$. Multiple comparison tests showed that securely attached Ss were significantly less rejection sensitive ($M = 8.36$, $SD = 2.45$) than either avoidant ($M = 10.46$, $SD = 3.10$) or ambivalent ($M = 11.72$, $SD = 2.88$) Ss, who did not significantly differ from one another at the .05 level. This supports claims that rejection sensitivity may underlie both insecure attachment styles.

**Rejection sensitivity as a mediator of the relationship between childhood exposure to family violence and adult attachment style.** To test the fourth hypothesis, separate regressions were conducted with security of attachment as the dependent variable, the four measures of exposure to family violence as the independent variables, and rejection sensitivity as a covariate. As hypothesized, when rejection sensitivity was controlled, childhood exposure to family violence no longer had a significant effect on security of attachment. In all four models, a comparison of the betas above and below the arrowed lines shows that the regression coefficients were reduced to less than half of their original values. In contrast, the highly significant relationship between rejection sensitivity and security of attachment was not reduced in any of the four models. Thus, the path through rejection sensitivity accounts for about 50% of the impact of childhood exposure to physical aggression on adult attachment style.

**Summary.** Taken together, these findings support the hypothesis that rejection sensitivity mediates about 50% of the relationship between exposure to family violence in childhood and security of adult attachment behavior. Although the relationship between severity of parent–parent physical aggression and security of attachment was nonsignificant, the pattern of results for this model was similar to that for the other three.

**Discussion**

Ample evidence indicates a link between childhood exposure to family violence and difficulties in adult relationships. Researchers are now beginning to investigate the mechanisms underlying this association. In this article, we proposed that rejection sensitivity is one important mediational mechanism. We defined rejection sensitivity as a motive to avoid rejection and hypothesized that it would be evident in one's expectations and concern about the prospect of rejection in a range of social situations. We proposed that people exposed to family violence in childhood—would learn to be sensitive to rejection by way of the emotional messages of rejection implicit in these aggressive acts. Sensitivity to rejection was expected, in turn, to contribute to insecure behavior in subsequent interpersonal relationships.

Consistent with our hypotheses, college students who had been exposed to frequent and severe family violence were at significantly heightened risk for showing insecure
attachment in their current relationships. This parallels findings that maltreated infants show heightened levels of insecure attachment as assessed in the Strange Situation paradigm (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Cicchetti & Barnett, 1991; Lyons-Ruth, Connell, Zohl, & Stahl, 1987; Schneider-Rosen, Braunwald, Carlson, & Cicchetti, 1985). Rejection sensitivity explained about half of the relationship between childhood exposure to family violence and insecure adult attachment behavior. The association between the family violence measures and insecure attachment behavior became nonsignificant when rejection sensitivity was entered as a covariate, whereas rejection sensitivity remained highly significantly associated with security of attachment. The mediational model was supported for both physical maltreatment and exposure to marital violence in childhood.

We also showed that both anxious-avoidant and anxious-ambivalent young adults were more rejection sensitive than those who were securely attached. This supports our hypothesis that both avoidant and ambivalent patterns of attachment behavior are motivated by sensitivity to rejection. It also suggests that rejection sensitivity may underlie not only clinical patterns of interpersonal avoidance and enmeshment, as the clinical literature on social phobia and atypical depression suggests, but also subclinical patterns of these behavioral tendencies.

**Mechanisms underlying the behavioral sequelae of maltreatment**

Until recently research on the sequelae of maltreatment focused on linking child abuse with subsequent aggressive behavior. The dominant explanation for aggression in abused children was that they modeled the aggressive behavior of their parents (e.g., Patterson, 1982). Other forms of maltreatment such as neglect, however, have also been linked with adolescent and adult aggression (Widom, 1990). Moreover, researchers have begun to document links between child abuse and nonaggressive outcomes including depression, social withdrawal, and being a victim of violence (see Downey et al., in press, for a review; Herman, 1992; Widom, 1989). Similarities in the consequences of different forms of maltreatment (e.g., physical abuse, neglect) and differences in the consequences of similar types of maltreatment defy simple learning explanations. A more adequate account of the developmental consequences of maltreatment must (a) identify commonalities in the experience of children exposed to different forms of maltreatment, (b) unpack the psychological processes linking maltreatment with social behavior, and (c) determine how these processes are altered by maltreatment. In attempting to provide such an account, our model draws on both attachment and social-cognitive theory.

Attachment theory provides a broad framework for conceptualizing how maltreatment is internalized and influences later social behavior. The theory's strength lies in its ability to account for the fact that various risk factors may result in similar developmental outcomes. Internal working models or representations of relationships are built up gradually by the cumulative encoding of social experience along such simple dimensions as acceptance-rejection. In this way, objectively distinct experiences such as emotional neglect and critical intrusiveness may be represented similarly as rejection. Thus, insecure working models of the primary attachment relationship(s) constitute a common pathway from troubled early experience to troubled social relationships later on.

Current attachment researchers have made inroads into characterizing the content and organization of working models by looking at social-cognitive processes of representation. Nonetheless, attachment theory holds that working models are conceptually distinct from these processes (Bowlby, 1980; Bretherton, 1985). This may be a shortcoming. In theory, representational structures and representational processes appear to be conceptually inextricable (Palmer, 1978). Putting this aside, our results and the results of other social-
cognitive research suggest a heuristic value to treating representational processes as of central theoretical interest, rather than as surface manifestations of underlying representational structures.

By allowing for multiple mediational constructs, the social-cognitive approach has greater potential for explaining why the same risk factor may result in various developmental outcomes. In spite of important commonalities, everyone has an idiosyncratic pattern of interpersonal experiences, which yields a personalized pattern of social-cognitive mediators (Mischel, 1973). Within the social-cognitive perspective, for example, early rejection may lead John to become very anxious about the possibility of rejection, although he may rarely encode others' negative behavior as rejecting. By contrast, early rejection may lead Mary to readily take offense when others do not appear to provide the level of support she expects. John and Mary probably would behave very differently in social relationships.

Our theoretical model of the mechanisms mediating the link between maltreatment and adult social difficulties draws on attachment theory to account for similarities in the consequences of different forms of maltreatment and on social-cognitive theory to account for differences in the consequences of similar types of maltreatment. The present study is a first step in testing our model of the mediational role of rejection sensitivity. Clearly, this study has several limitations that need to be addressed in future research.

Limitations and implications for future research

First, the Hazan and Shaver (1987) adult attachment style measure is limited as an assessment of interpersonal behavior. The strong relationship between rejection sensitivity and self-reported broad patterns of attachment behavior does not necessarily mean that rejection sensitivity predicts people's behavior in specific social situations. However, findings from an experimental investigation we conducted provide supportive evidence (Feldman & Downey, 1994). Subjects were randomly assigned to receive either rejection or nonrejection feedback after a break in a conversation with a confederate. In the rejection condition, the experimenter told the subject that the confederate "did not want to continue with the experiment," whereas in the control (nonrejection) condition, the experimenter told the subject that "there was not enough time for the rest of the experiment." Subjects who received the rejection feedback showed an increase in self-reported rejected mood and observer-rated negative reaction that was directly proportional to their level of sensitivity to rejection, whereas control subjects showed no increase in rejected mood. These findings support our claim that individual differences in rejection sensitivity predict emotional and behavioral reactions to specific social situations.

However, we still do not know how rejection sensitivity influences behavioral interactions between intimates rather than strangers. Moreover, an interactional perspective suggests that one's behavior is modified by its context (Bolger, Downey, Caspi, & Moorchhouse, 1988; Coyne, 1976; Mischel, 1973). Thus, it is likely that people's behavior in relationships will be influenced by their partners' sensitivity to rejection as well as their own. We are beginning to investigate this assertion in a laboratory-based observational study of conflicts between dating partners. This study will permit us to examine the association between particular patterns of interaction and the individual characteristics (i.e., rejection sensitivity) of dating partners.

Second, because the current study tested the mediational model cross-sectionally, we cannot draw unambiguous conclusions about the validity of the causal pathways we have proposed. Alternative accounts of the pattern of relationships are possible. One possibility is that the attachment style measure mediated the relationship between family violence and rejection sensitivity. In analyses not reported, we found no support for this alternative mediational model. When attachment style was statistically con-
trolled, the relation between family violence and rejection sensitivity remained robust.

Another possibility is that security of attachment or sensitivity to rejection could bias retrospective accounts of exposure to violence, leading to spurious relationships. While we cannot rule out this possibility, there are several reasons for concluding that the relationships of these variables with exposure to family violence were not artifacts of retrospective bias: (a) the CTS (Straus, 1979) was selected as a measure of exposure to family violence for this study specifically because the items identify concrete behaviors, rather than global characteristics of relationships which are more prone to retrospective bias; (b) the mediational model held for severity as well as frequency of exposure to family violence; and (c) as noted in the Procedures section, the relationships between exposure to family violence and rejection sensitivity were comparable whether these measures were administered concomitantly or 6 months apart.

A final possibility is that an unmeasured variable could account for the associations among subjects' retrospective reports of childhood experiences, their level of rejection sensitivity and security of attachment. One obvious candidate is neuroticism, or the disposition to experience negative affect. Our measure of rejection sensitivity shows little overlap with neuroticism, and its relationships with other measures including childhood reports of family violence appear to be robust when neuroticism is statistically controlled (Feldman & Downey, 1993). To more conclusively rule out alternative explanations of the results of our study, however, longitudinal data are needed. These data will be provided by a 5-year longitudinal study that we have just begun of developmental influences on the emergence of violence in the intimate relationships of young adults.

Third, our operationalization of rejection sensitivity was limited in that it only incorporated two elements of social information processing: behavioral-outcome expectancies and concern or anxiety over outcomes. A full conceptualization would require specification of other components like encoding strategies and the formation of self-regulatory plans to avoid rejection (e.g., Main & Goldwyn, 1984) and to cope with the emotional distress evoked by the possibility of rejection (see Cicchetti et al., 1991). Nonetheless, our measure of cross-situational rejection expectancy and rejection anxiety was shown to have significant power in accounting for the impact of exposure to family violence on adult interpersonal behavior patterns. In future studies, we plan to include encoding and self-regulatory measures.

Fourth, in testing our model in a sample of college students we are implicitly adopting a continuum approach to maltreatment. Whereas the sample included students who had been exposed to frequent and severe family violence, the majority of those exposed to violence experienced or witnessed infrequent, mild violence. Researchers do not yet know whether the severe, persistent abuse that comes to the attention of Child Protective Services agencies is qualitatively more damaging than that of milder forms of violence. However, recent research on normal populations shows a positive relationship between childhood exposure to family violence and a variety of negative adult outcomes including depression, marital violence, and the use of physical punishment (Straus, 1993). This research supports viewing family violence in the normal population as on a continuum and suggests a need for concern about relatively prevalent mild levels of family violence as well as the less prevalent serious cases of violence. Nonetheless, it is important to test our model with samples who have experienced persistent exposure to severe maltreatment as well as in the normal population.

Finally, although we view the psychological experience of rejection as a common pathway through which physical maltreatment, neglect, and emotional maltreatment compromise social development, this study focused only on physical aggression. In future studies, we plan to expand our measures of maltreatment to include neglect and emotional abuse and to examine their
relation to perceived rejection by parents. It is noteworthy, however, that exposure to family violence in our sample was significantly associated with perceived parental rejection, assessed by the Parental Bonding Instrument (Parker, 1979). This supports our view that parenting that involves physical aggression is subjectively experienced as rejection.

Concluding remarks

Findings that some victims of family violence become depressed, others reenact their abusive experiences in close relationships, and still others become resilient adults defy simple explanations. Models that take account of intervening mechanisms are needed. We have proposed that sensitivity to rejection, conceptualized in social-cognitive terms, mediates the impact of maltreatment on social development. Our study provides preliminary support for this model. We view this research as a first step in our efforts to move beyond simple direct learning approaches to understanding the long-term implications of maltreatment.

References


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Rejection sensitivity

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Appendix: Sample Item from the Rejection Sensitivity Questionnaire

You ask your friend to do you a big favor.

How concerned or anxious would you be over whether or not your friend would want to help you out?

I would expect that:

He/she would willingly agree to help me out.
He/she would not help me out.
He/she would agree to do the favor, although he/she would not really want to do it.

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