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## Empathic accuracy of intimate partners in violent versus nonviolent relationships

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### Abstract

This study compared the empathic accuracy of men and women who had perpetrated physical intimate partner violence with that of partners in nonviolent but distressed and nonviolent and nondistressed relationships. Examined was the empathic accuracy (a) of partners for one another's thoughts and feelings during a relationship problem discussion in the laboratory, (b) of partners' empathic accuracy for each other with the empathic accuracy of objective observers who watched the couples' interactions, and (c) the males' empathic accuracy for their female partner to their empathic accuracy for female strangers. No significant group differences were found among women's empathic accuracy, but the data suggest that violent men exhibit poor empathic accuracy when attempting to understand their female partner's thoughts and feelings.

Physical violence between intimate partners is a serious health problem in the United States. Each year in the United States, between 12% and 14% of married couples experience husband physical aggression and nearly 2 million women are severely assaulted by their male partners (Schafer, Caetano, & Clark, 1998; Straus & Gelles, 1990). Interestingly, data suggest that male and female perpetrated relationship violence occur at similar rates. Nonetheless, male perpetrated physical violence often has more serious negative consequences

than female aggression, including more physical injury and psychological harm (e.g., Archer, 2000; Holtzworth-Munroe, Smutzler, & Sandin, 1997). For this reason, the focus of much of our research has been on male to female intimate partner violence.

Although the causes of male violence are undoubtedly complex and multilevel (e.g., societal, interpersonal, individual differences), our research has focused on individual correlates of violence and has utilized McFall's (1982) social information processing model to identify the social skills deficits of violent husbands (Holtzworth-Munroe, 2000). McFall posits that three sequential stages are needed to process information and respond competently in any social situation: (a) decoding (perception, attention, and interpretation of the situation), (b) decision making (generating and evaluating possible responses and selecting a response), and (c) enactment (engaging in a chosen response and monitoring its impact on the situation). As applied to intimate partner violence, the model posits that incompetent social responses, such as physical

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aggression, can result from skills deficits at any stage of social information processing, particularly in relationship conflict situations.

The current research study grew out of our program of research focusing on potential skills deficits at the decoding stage. For example, Holtzworth-Munroe and Hutchinson (1993) used hypothetical vignettes depicting marital conflict situations as study stimuli and found that relative to nonviolent husbands, physically violent husbands were more likely to attribute hostile intent to wife behaviors. Holtzworth-Munroe and Smutzler (1996) compared non-violent and violent husbands' self-reported feelings and behavioral intentions in response to a variety of hypothetical wife statements (e.g., wife verbal aggression toward the husband, wife complaints about nonmarital situations, wife complaints about herself, neutral and positive wife statements). Relative to nonviolent husbands, violent husbands reported higher levels of anger and more aggressive behavioral intentions in response to a wide array of hypothetical wife behaviors. Consistent with the social information processing model of skills deficits or lack of ability, these data suggest that violent husbands may not accurately interpret various types of wife thoughts and feelings (Holtzworth-Munroe, 2000). Unfortunately, the available research does not address other possible interpretations of the findings, such as the potential role of motivational factors (e.g., lack of interest in the wife's thoughts and feelings or even purposeful distortion of the wife's thoughts and feelings to control and abuse her further; Olson, 2004a).

The available findings raise other important questions addressed in the present study. Are physically violent men only inaccurate in interpreting their own partner's thoughts and feelings, or do they perform similarly poorly when interpreting the behaviors of women in general? Poor performance across differing targets (i.e., female partner and strangers) would suggest a perceiver effect (Thomas & Fletcher, 2003), such that violent men do not perform well in a variety of situations. Indeed, in studies examining other steps in social information processing (e.g., decision making), violent husbands have been found to perform more poorly than nonviolent men even in

response to hypothetical nonmarital situations (e.g., Anglin & Holtzworth-Munroe, 1997), although the greatest group differences are found in marital situations. Alternatively, could violent men's inaccuracy in interpreting their wife's thoughts and feelings be due to differences in the female partner's clarity of expression of their thoughts and feelings? In other words, perhaps others (e.g., objective observers) also would have difficulty interpreting the thoughts and feelings of women in violent relationships accurately (i.e., target effects; Thomas & Fletcher, 2003).

Although our previous research has focused primarily on husbands, one can also ask if physically violent women recognize and understand their male partner's thoughts and feelings. Some previous research suggests that violent wives, like violent husbands, may exhibit poor performance in marital situations. For example, compared to women in nonviolent relationships, greater problem-solving skills deficits have been demonstrated among women in bidirectionally violent relationships (Anglin & Holtzworth-Munroe, 1997; Riggs, O'Leary, & Breslin, 1990). We believe that it is important to examine potential social skills deficits among *both* partners in physically violent relationships, as couple interactions are dynamic processes in which both partners influence one another. In addition, as researchers begin to study female relationship aggression, it is important to establish whether models that help to explain male intimate partner violence are directly applicable to female violence, or whether male and female violence will be found to have differing correlates and causes (e.g., see Holtzworth-Munroe, 2005, for a discussion of this issue).

The main purpose of the present study was to increase our understanding of intimate partner violence. Based on our program of research on the social information processing model, we wished to test the notion that, relative to nonviolent partners, physically violent partners will be poor interpreters of one another's thoughts and feelings. To do so, we adopted the empathic accuracy methodology developed by Ickes and colleagues (e.g., Ickes, 1997, 2001, 2003; Ickes, Stinson, Bissonnette, & Garcia, 1990; Simpson, Orina, & Ickes,

2003; Stinson & Ickes, 1992). Empathic accuracy is generally conceptualized as a positive characteristic, reflecting a dyad member's ability to read and understand his or her partner's affective and cognitive state accurately (Thomas & Fletcher, 1997).

In one empathic accuracy methodology (e.g., Ickes, 2001; Ickes et al., 1990), 2 participants interact with one another. They then independently record what thoughts or feelings they had experienced during the interaction and infer the thoughts and feelings of their partner during the interaction. Empathic accuracy is assessed by independent raters' judgments of the degree of similarity between each participant's actual reported thoughts and feelings and the corresponding inferred thoughts and feelings provided by their interaction partner. One advantage of this empathic accuracy methodology, over much of our past research, is the use of actual relationship problem discussions, rather than hypothetical situation vignettes, as study stimuli.

Using these methods, empathic accuracy may reflect a perceiver's ability and motivation to infer accurately the specific content of a target's thoughts and feelings (perceiver effects) or the target's ability and motivation to send the verbal and nonverbal cues that express their thoughts and feelings clearly (target effects; Thomas & Fletcher, 2003). One previous study examined target and perceiver effects to test whether increased acquaintanceship with a target increases a perceiver's ability to judge the target's thoughts and feelings accurately. Using dating partners' thoughts and feelings during a couple problem-solving discussion as the target for assessing empathic accuracy, Thomas and Fletcher (2003) compared partners' empathic accuracy for each other to the empathic accuracy of friends of the dating couple and the empathic accuracy of strangers unfamiliar with the dating couple. Dating partners, friends, and strangers were privy to the same behavioral cues but empathic accuracy level increased with increasing familiarity. Thus, the researchers concluded that dating partners performed better because they could draw on insider knowledge gleaned from their relationship history to interpret participants' behavioral cues more accurately.

To date, the empathic accuracy paradigm has been used to study male relationship aggression, but only indirectly, in one published study. Schweinle, Ickes, and Bernstein (2002) examined the empathic accuracy of married men with the thoughts and feelings of female strangers (not their own wives). Their sample included 11 husbands who reported perpetrating physical aggression against their wife (i.e., 1 was violent in the past year; 10 were physically aggressive only prior to the past year), along with 71 men who reported engaging in verbal (not physical) aggression against their wife, and 3 men who reported perpetrating neither physical nor verbal aggression. Each man in the study was shown videotapes of three female strangers discussing their marital problems with a therapist (Marangoni, Garcia, Ickes, & Teng, 1995). Each of the women had reported her thoughts and feelings in the discussion. Schweinle et al. instructed the men in their study to infer what the women had been thinking or feeling and to indicate whether the women were being critical and rejecting of their husband or not. The men's perceptions were then compared to ratings of criticism and rejection made by female research assistants. The study results revealed that the greater the men's bias to perceive the women as being critical and rejecting of their husband, the lower the men's empathic accuracy scores, suggesting that this bias interferes with empathic accuracy. This study was limited in scope. In particular, it did not directly compare the empathic accuracy of physically violent and nonviolent men (i.e., no group comparisons). It also included only a small sample of men who had engaged in physical aggression against their partners. It did not examine the men's empathic accuracy for their own wife, and it did not examine wives' empathic accuracy for husbands.

Thus, in the present study, we used an empathic accuracy methodology to compare the empathic accuracy levels of both male and female partners across three groups of couples (i.e., those experiencing physical violence, those who are not violent but are experiencing relationship distress, and those who are nonviolent and nondistressed). As noted

above, empathic accuracy is potentially a mixture of both perceiver and target effects (e.g., Thomas & Fletcher, 2003). To examine potential target effects, we also asked objective observers to complete the empathic accuracy task and compared the observers' empathic accuracy to spouses' empathic accuracy for the study participants' partners. To examine potential perceiver effects for men, we used videotapes of female strangers to compare men's empathic accuracy for their own female partner to their empathic accuracy for female strangers. For exploratory purposes, we examined factors that may influence empathic accuracy level, such as partners' levels of physical violence in relationships and relationship satisfaction.

In the present study, we predicted that men who have perpetrated physical violence in their intimate relationship would have lower empathic accuracy than nonviolent men when inferring the thoughts and feelings of their own female partner. Given our past work on the social skills deficits of maritally violent men, our other predictions differed somewhat from what might be expected from the Thomas and Fletcher (2003) conclusion that familiarity and acquaintanceship increase empathic accuracy levels. Specifically, we expected that violent men would make judgments that were less accurate about the content of their female partner's thoughts and feelings than would objective observers. Furthermore, given that men who engage in intimate partner violence sometimes show more general performance problems even in nonmarital situations (e.g., Anglin & Holtzworth-Munroe, 1997), tentatively, we predicted that violent men would be less likely than nonviolent men to make accurate inferences about the thoughts and feelings of female strangers. Finally, given previous research on violent wives (e.g., Anglin & Holtzworth-Munroe) and a scientifically conservative approach (i.e., to apply existing models of male relationship violence to understand female relationship violence unless proven otherwise), tentatively, we predicted that physically violent women would exhibit less empathic accuracy for their partner's thoughts and feelings than would women in nonviolent relationships and objective observers.

## Method

### *Participants, recruitment, and phone screening*

The participants were 71 heterosexual couples recruited from the Indianapolis metropolitan area, in the Midwestern region of the United States, using flyers and newspaper advertisements stating that we were seeking a wide range of couples (e.g., happy, unhappy, emotionally distant, having serious or violent arguments, considering divorce) for "a study of marriage." In the present study, we were interested in a community, rather than a clinical sample, to study intimate partner violence that has not necessarily come to the attention of the criminal justice, legal, or mental health systems. While the present sample is a convenience sample, previous research suggested that the recruitment methods used in the present study may result in a more representative sample of the Indianapolis area than other sampling methods (e.g., random-digit dialing or directory-assisted recruitment using lists of residential phone numbers sorted into U.S. Census tracts; Farris & Holtzworth-Munroe, in press).

Both partners participated in a phone screening interview. To target couples in long-term committed heterosexual relationships for study participation, couples had to report being married or living together as if married in a heterosexual relationship. Also, both partners had to be willing to participate in the study and had to report being comfortable reading and writing English. During the phone interview, potential participants completed questionnaires used for final placement of each couple into one of three groups: (a) experiencing both male- and female-perpetrated physical violence in relationships, (b) nonviolent but experiencing relationship distress, and (c) nonviolent and nondistressed. To allow us to disentangle relationships among the study dependent variables, relationship violence, and relationship distress, nonviolent couples were placed into distressed or nondistressed groups. The screening measures are listed below.

*Demographics questionnaire.* We gathered descriptive information about the sample such

as age, ethnicity, years of education, income, length of relationship, and number of children. This measure also was used to screen some couples out of the study (e.g., as samples in our studies usually have an average age in the 30s, we screened out couples if both partners were older than 65). Most couples were in their early 30s, married, Caucasian, and had at least one child. In addition, most couples had been living together at least 5 years. See the Results section for a more detailed description of the sample demographics.

*Conflict Tactics Scale (CTS, Form N).* The CTS (Straus, 1979; Straus & Gelles, 1990) is the most widely used measure of relationship violence. On it, participants indicate whether they or their partner have ever engaged in a series of behaviors and, if so, how often they have done so in the past year, from "0 times" to "more than 20 times." The CTS lists 18 behaviors, beginning with behaviors that do not represent physical violence (e.g., "discussed the issue calmly," "cried") and progressing to eight physically violent behaviors (e.g., "pushed, grabbed, or shoved," "beat up"). Examining interitem reliability for just these eight physically violent behavior items, Cronbach's alphas for reports of men's physical violence in the past year were .83 for men's reports and .83 for women's reports; for reports of female violence in the past year, alphas were .88 for men's reports and .80 for women's reports.

Couples were placed in the physically violent group if, on the CTS, both the male and female partner had perpetrated physical violence in the past year, as reported by either partner. Physical violence was defined as endorsement of any of the eight CTS items listing physically aggressive behavior, starting with "pushed, grabbed, or shoved." In other words, if both partners had perpetrated physically violent behavior in the past year, the couple was placed in the violent group. Couples were included in one of the nonviolent comparison groups if both partners reported no male or female physical violence.

*Modified Short Marital Adjustment Test (SMAT).* The SMAT (Locke & Wallace,

1959) is a standard measure of marital distress that includes 15 items regarding marital satisfaction, areas of disagreement, and activities. Modifications were made to the SMAT to allow assessment of couples who were not married. Items were modified to be applicable to cohabiting, not just marital, relationships (e.g., referring to "partner" rather than "spouse"). As an example, one item was modified from "Do you ever wish you had not married?" to "Do you ever wish you were not in this relationship?" As another example, an item which asks participants whether, if they had their lives to live over, if they would marry the same person, was modified to ask whether, if they had their lives to live over, participants would: (a) be with the same partner, (b) be with a different partner, or (c) not be with a partner at all. Cronbach's alphas, which were used to examine interitem reliability, were .78 for male partners and .81 for female partners.

Established cutoff scores indicate that intimate partners who score below 100 are regarded as experiencing relationship distress. We used criteria from Holtzworth-Munroe, Meehan, Herron, Rehman, and Stuart (2000) to categorize nonviolent couples into the relationship distressed or nondistressed group. Couples were included in the nonviolent-distressed group if both partners scored below 100 or if one partner scored below 80 (i.e., indicating more severe marital distress). To be included in the nonviolent-nondistressed group, both partners had to score above 100.

*Recruitment and screening efforts.* We received phone messages from 265 individuals expressing an interest in the study. Of these, 68 couples never completed the phone screening interview (i.e., 11 could not be reached, 27 were contacted but decided not to complete the interview, and 30 individuals completed the interview but their partner could not be contacted or declined to be interviewed). Among couples who did complete the interview, 102 were ineligible for the study, with the primary reasons being: 34 couples did not meet our demographic inclusion criteria (e.g., were not married or cohabiting; were younger than 18 years old), 38 did not meet our criteria

for either the violent or the nonviolent groups (e.g., a partner had been physically violent only prior to the past year), 20 did not meet our criteria for either the relationship distressed or nondistressed groups (e.g., on the SMAT, one partner scored above 100 while the other scored below 100 but neither scored below 80), and 10 couples were ineligible for other reasons (e.g., one partner was incarcerated). Twenty-four couples completed the screening interview and met study inclusion criteria but declined to participate, could not be contacted to schedule an appointment, could not find time to come to the lab, or did not attend their lab appointment. As noted above, 71 couples qualified for the study, attended lab sessions, and were included in the study sample.

*Study participant groups.* Of the 71 couples in the study sample, 38 were in the physically violent group. According to the highest report of male to female partner violence from either partner, men in this group had perpetrated from 1 to 119 acts of relationship violence in the past year ( $M = 13.1$ ,  $SD = 22.6$ ,  $Mdn = 5.0$ ), and women in the violent group had perpetrated from 1 to 109 acts of violence in the past year ( $M = 15.5$ ,  $SD = 25.1$ ,  $Mdn = 4.5$ ). Using the standard, and widely used, CTS criteria to differentiate minor from severe violence (Straus & Gelles, 1990; i.e., “pushed, grabbed, or shoved” and “slapped” are minor violence; other physically violent acts are severe), 16 of the male partners and 15 of the female partners in the violent group had perpetrated only acts of minor violence in the past year. Among the nonviolent couples in the sample, 14 couples were classified as nonviolent but experiencing relationship distress, and 19 couples were classified as being in nonviolent and nondistressed relationships.

In support of our decision to recruit groups of subjects, as opposed to accepting all couples interested in the study, it should be noted that recent research suggests that marital distress is a categorical, not a continuous, variable; thus, group comparisons of maritally distressed versus nondistressed couples are an appropriate approach to the study of relationship discord (Beach, Fincham, Amir, & Leonard, 2005).

The present study expands upon that approach by also assessing violent and nonviolent couples, allowing us to consider whether differences in empathic accuracy are related to relationship distress, relationship violence, or both.

Regarding the violent group, however, recent theory and research has demonstrated that there are subtypes of relationship violence (e.g., Holtzworth-Munroe et al., 2000; Johnson & Ferraro, 2000; Olson, 2004b). Thus, there is potentially much heterogeneity in the violence experiences of couples recruited in the manner used in the present study (i.e., including all couples who experienced any physical violence in the past year in the violent group). One concern is that there may be inherent differences between couples experiencing only husband violence and couples experiencing bidirectional, or mutual, physical aggression. Thus, in the present study, we included only couples experiencing bidirectional violence in our violent group, dropping 5 couples in which only the husband had perpetrated physical aggression and 6 couples in which only the wife had been violent. Another concern is that severity level of violence may be an important differentiator of violence experiences. To explore this possibility in our sample, we conducted a series of analyses of variance (ANOVAs) comparing the couples who had experienced only minor levels of relationship violence in the past year to the couples who had experienced severe levels of violence in the past year (using standard CTS definitions; Straus & Gelles, 1990) on each of the study-dependent variables (e.g., men’s empathic accuracy for female partner). The group effect did not reach statistical significance for any study variable. Although this could be due to the small sample sizes, none of the group effects showed even a trend toward statistical significance. A third concern is that frequency of violence might be an important variable to examine when considering possible subtypes of violent couples. But, as in many previous studies (e.g., Holtzworth-Munroe et al., 2000), in the present study, severity and frequency of relationship violence were strongly related; couples experiencing severe relationship violence in the past year reported significantly more acts of physical violence in the past year

( $M = 21.0$ ) than couples experiencing only minor violence in the past year ( $M = 4.5$ ). Of course, existing typologies of relationship violence are not focused simply on direction (male vs. female), severity (minor vs. severe), or frequency of violence. Unfortunately, as this study was not designed to compare subtypes of violent couples, we had not administered measures of variables proposed to be important in existing typologies (e.g., we had no measure of the use of violence for power and control or of violence initiation, making it impossible for us to assess Johnson's typology directly). Despite this limitation, the exploratory analyses presented here suggest that, for the present study, it is justifiable to create one violent group, composed of only bidirectionally violent couples but varying in level of violence severity and frequency.

*Laboratory assessment.* Qualified couples were invited into the laboratory to complete two sessions, each lasting up to 3.5 hr. During the first session, couples completed informed consent procedures and the Shipley Institute of Living Scale (SILS; Shipley & Burlingame, 1941). The SILS is a measure of intelligence with two subscales (abstraction and verbal). We were interested in the SILS verbal score, as a previous study of individual difference correlates of empathic accuracy found verbal intelligence to be "the 'best candidate' predictor" (Ickes et al., 2000). The empathic accuracy procedures took place during the second lab session and are described below. At the end of each session, male and female partners independently completed procedures to ensure that they did not feel uncomfortable or unsafe leaving together. Each partner was compensated US\$85 per session. In both laboratory sessions, study participants completed additional measures that are not relevant to this study; additional data collected during the assessment sessions have not been published elsewhere.

#### *Empathic accuracy measures and procedures*

*Male partners' empathic accuracy for female strangers' thoughts and feelings.* The stimuli for assessing men's empathic accuracy for

female strangers' thoughts and feelings were taken from videotapes of two simulated individual therapy sessions, in which two women discussed their marital problems with a male therapist; these tapes were developed by Marangoni et al. (1995) and used by Schweinle et al. (2002). Each woman had viewed the videotape of her session and was asked to: (a) stop the tape at each point that she recalled having experienced a specific thought or feeling during the therapy session, (b) use the time stamp recording on the video image to record the time that she had experienced each thought or feeling, and (c) write the content of her thought or feeling on a standardized form.

The original tapes (Marangoni et al., 1995) consisted of half-hour therapy sessions with three women (i.e., 90 min total), with 30 stop points each (i.e., 90 thoughts and feelings). Due to time constraints in our study, we only used 10-min excerpts from the sessions of two of the women. One excerpt included the first 10 min of one woman's session, and the other included the last 10 min of another woman's session. These two segments were chosen because during them, both women reported a wide range of emotions (i.e., positive and negative) and the conversations were coherent (i.e., as opposed to taking a middle segment of the session out of context). On the segments we used, one woman had stopped her tape to report her thoughts and feelings 9 times, and the other woman had 11 stop points. Thus, we gathered data for a total of 20 thoughts and feelings of the female strangers. The order in which the two women were presented to participants was randomly determined for each study participant.

In the present study, only men completed procedures for assessing empathic accuracy for female strangers. Each man was informed about the nature of the videotaped segments. While he viewed the tapes, a research assistant (seated in the back of the room) used a remote control to stop the tapes at each point where the women had reported having had a thought or feeling. For each stop point, the man was instructed to write down what he believed the woman had been thinking or feeling.

*Study participants' empathic accuracy for their partner's thoughts and feelings.* Once

a man had completed the procedures to assess his empathic accuracy for female strangers, he and his partner were reminded that they would be discussing a problem in their relationship while being videotaped. They were given a list of possible discussion topics (i.e., common relationship problems, such as communication, finances, and childrearing) but were not restricted to those topics. Each partner was asked to list problems independently that both partners would be willing to discuss and that both would identify as a problem (i.e., topics around which both were seeking change in their partner's behavior); they ranked their problem list in order of importance.

The research assistant discussed each partner's list with him or her in private to clarify the meaning of the topics and to ensure that they did not feel unsafe discussing the topics. The research assistant then selected the topic ranked as most important among topics identified by both partners, independently informed both partners of the chosen topic, and confirmed that they would not feel unsafe discussing it. No participant refused to discuss the chosen topic or reported that discussing it would make them unsafe. Partners were reunited; they were instructed to discuss the problem as naturally as possible and that although they were free to work toward a solution, they did not have to solve the problem. Two videotapes of the discussion were recorded. After 10 min, the experimenter signaled that the discussion was over.

The partners were then taken to separate rooms to view the videotaped discussion independently. First, they were asked to recall any specific thoughts or feelings they had experienced during the discussion. While viewing the tape, each partner was asked to: (a) stop the tape each time they recalled having had a thought or feeling, (b) use the time stamp on the television monitor to record the time during the discussion when the thought or feeling had occurred, and (c) write down the specific content of their thoughts and feelings, in as much detail as possible.

After both partners finished reporting their own thoughts and feelings, they independently viewed the taped discussion a second time. During this viewing, they were instructed to

infer the specific thoughts and feelings that their *partner* had experienced during the discussion. For each study participant, a research assistant (in the back of the room) used a remote control to stop the tape at each point where the partner had indicated having experienced a thought or feeling. Participants were instructed to record their inferences about their partner's thoughts and feelings, writing down the time of the stop point and what they believed their partner had been thinking or feeling.

*Objective observers' empathic accuracy for male and female partners' thoughts and feelings.* Ten undergraduate research assistants viewed the tapes of the couples' problem discussions and completed the empathic accuracy procedures. The undergraduate research assistants were not informed of the study hypotheses or of the couples' violence or distress classifications. Research assistants stopped the tapes each time the partner had indicated having had a thought or feeling and recorded the time and what they believed the study participant had been thinking or feeling at that point in the discussion. To maintain comparable perceiver perspectives with regard to gender, five male research assistants watched the female partners and inferred the women's thoughts and feelings, and five female research assistants watched male partners and inferred the men's thoughts and feelings.

*Empathic accuracy coding.* Targets' (female partners' or female strangers') self-reported thoughts and feelings and perceivers' (study participants' or objective observers') inferences about those thoughts and feelings were transcribed into a spreadsheet so that each reported thought or feeling was paired, side by side, with the inference regarding that thought or feeling (Schweinle & Ickes, 2000). Coders were trained to focus on one thought or feeling and inference pair at a time and to evaluate the degree of similarity between the content of the actual reported thought and feeling and what the perceiver inferred that the target had been thinking and feeling. Similarity ratings were made on a 3-point scale (0 = *essentially different content*; 1 = *similar, but*

not the same, content; 2 = essentially the same content).

Weekly coding meetings were held to allow raters to ask questions and discuss their coding. Eight to 15 undergraduate coders independently viewed and rated each of the thought or feeling and inference pairs (the differing numbers reflect the number of undergraduate coders available across semesters of coding). Interrater reliability was consistently high, with Cronbach's alpha ranging from .80 through .99 ( $M = .91$ ,  $SD = .11$ ). For 8% of the thought or feeling and inference pairs, raters had poor agreement (i.e., at least one rater coded a 0, while at least one other rater coded a 2). These pairs were assigned ratings by the authors who were blind to the couples' violence and distress classifications.

Using Schweinle et al.'s (2002) method, we calculated an empathic accuracy percentage score for each study participant's inferences of his or her partner's thoughts and feelings, each man's inferences of the female strangers' thoughts and feelings, and the objective observers' inferences of the male partners' and female partners' thoughts and feelings. To do so, empathic accuracy ratings were summed across coders for each thought or feeling and inference pair. Then, these mean ratings for each thought or feeling and inference pair were summed across all thoughts and feelings reported by a target in a discussion. For relationship problem discussions, we adjusted for the differing numbers of thoughts and feelings reported across individuals by dividing the summed mean similarity rating by the total number of thoughts and feelings reported by a given participant; this adjustment was not necessary for the female stranger data, as all men viewed the same number of stop points. Finally, the resulting value was divided by 2 (the highest rating of accuracy in the coding system) and multiplied by 100 (to yield a percentage measure of empathic accuracy).

## Results

### *Preliminary analyses*

*Demographic and screening variables.* ANOVAs and chi-square analyses were con-

ducted to determine if there were significant differences across the violent, nonviolent–distressed, and nonviolent–nondistressed groups on demographic variables. The groups did not differ significantly on these variables: men's age,  $F(2, 68) = 3.03$ ,  $p > .05$  ( $M = 36.3$  years,  $SD = 10.2$  years); men's monthly income,  $F(2, 64) = 0.81$ ,  $p > .05$  ( $M = \text{US}\$2208$ ,  $SD = \text{US}\$2014$ ); men's years of education,  $F(2, 68) = 1.51$ ,  $p > .05$  ( $M = 13.0$ ,  $SD = 2.3$ ); the couples' length of time living together,  $F(2, 67) = 1.9$ ,  $p > .05$  ( $M = 8.2$  years,  $SD = 7.1$  years); the number of children the couple had together,  $F(2, 67) = 1.99$ ,  $p > .05$  ( $M = 1.17$ ,  $SD = 1.6$ ); the ethnicity (White vs. non-White) of the male partner,  $\chi^2(2) = 2.82$ ,  $p > .05$  (80% White; 20% non-White: 17% Black and 3% Other), or female partner,  $\chi^2(2) = .36$ ,  $p > .05$  (78% White; 22% non-White: 18% Black and 4% Other); and the proportion of couples married versus cohabiting,  $\chi^2(2) = .96$ ,  $p > .05$  (80% married). As shown on Table 1, significant group differences did emerge for women's age, women's income, and women's years of education. Nonviolent–distressed Women were significantly older than nonviolent–nondistressed women. Nonviolent–nondistressed women earned more per month than nonviolent–distressed and violent women; nonviolent–nondistressed and violent women did not differ significantly from one another. Lastly, nonviolent–distressed women had completed significantly more years of education than violent women.

The demographic variables on which there were significant group differences (e.g., women's age) were correlated with the relevant study dependent variables (e.g., women's empathic accuracy scores). Women's income and education levels did not correlate significantly with the study dependent variables, suggesting that group differences on these demographic variables were unlikely to affect the study findings. Nonetheless, there was a trend toward a statistically significant negative correlation between women's age and women's empathic accuracy for their male partner,  $r = -.23$ ,  $p < .06$ . Thus, for the main analyses of women's empathic accuracy, women's age was included as a covariate.

Group comparisons of modified SMAT scores are reported in Table 1. As required by

**Table 1.** Demographic and other sample descriptive variables

Sample characteristics	NVND		NVD		V		Significance
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Female partners' age (years)	30	8	28	11	34	9	$F(2, 68) = 3.17^*$
Female partners' monthly income (US\$)	880	833	1,982	1,315	1,089	1,286	$F(2, 68) = 3.89^*$
Female partners' years of education	14.2	2.1	15.5	2.0	13.2	2.8	$F(2, 68) = 4.38^*$
Relationship adjustment							
Male partners	125.4	15.8	84.1	23.1	83.2	29.9	$F(2, 68) = 18.72^{***}$
Female partners	128.6	14.2	73.5	26.8	81.1	30.0	$F(2, 68) = 25.49^{***}$

Note. Relationship adjustment was measured with the modified Short Marital Adjustment Test (SMAT; Locke & Wallace, 1959). NVND = nonviolent and nondistressed; NVD = nonviolent but relationship distressed; V = Violent.  $^*p < .05$ .  $^{***}p < .001$ .

subject group inclusion criteria, nonviolent–nondistressed partners reported significantly greater relationship satisfaction than nonviolent–distressed and violent partners. Nonetheless, it is important that the scores of the nonviolent–distressed and violent groups did not differ significantly, suggesting that any violent versus nonviolent–distressed group differences in empathic accuracy would not likely be due to group differences in level of relationship distress. Group comparisons of SILS verbal scores revealed no significant group effects for men,  $F(2, 62) = 2.04$ ,  $p > .05$  ( $M = 28.8$ ,  $SD = 5.2$ ), or women,  $F(2, 63) = 1.88$ ,  $p > .05$  ( $M = 29.5$ ,  $SD = 4.9$ ), suggesting that any group differences in empathic accuracy were unlikely to be due to group differences in level of verbal intelligence.

### Main analyses

*Men's empathic accuracy for their female partner's thoughts and feelings versus for female strangers' thoughts and feelings.* All 71 men in the study were able to complete the empathic accuracy procedures for both their own partner and for female strangers. See Table 2. To test the hypothesis that, compared to nonviolent men, violent men would make less accurate inferences about the thoughts and feelings of their female partners and female strangers, we conducted a Group (violent, nonviolent but relationship dis-

tressed, nonviolent and nondistressed)  $\times$  Target (female partner vs. female strangers) repeated measures ANOVA on men's empathic accuracy scores. Target was a within-subjects factor because each man completed empathic accuracy procedures for both his own partner and female strangers. Group was the between-subjects factor. There was no significant main effect for target,  $F(1, 68) = .15$ ,  $p > .05$ . There was a significant main effect for group,  $F(2, 68) = 6.56$ ,  $p < .01$ , but also a significant Group  $\times$  Target interaction,  $F(2, 68) = 7.96$ ,  $p < .01$ . Post hoc Tukey's honestly significant difference (HSD) tests of the interaction effect indicated that when their own partner was the target, violent men exhibited significantly less empathic accuracy than nonviolent men in nondistressed relationships. When the target was female strangers, there were no significant group differences. In addition, a statistical trend ( $p < .07$ ) indicated that violent men exhibited less empathic accuracy for their female partner than for female strangers. In contrast, nonviolent–nondistressed men had significantly greater empathic accuracy for their female partner than for female strangers.

*Male partners' versus male objective observers' empathic accuracy for female partners' thoughts and feelings.* Due to videotape problems (i.e., observers were unable to hear the female partner), objective observers were

**Table 2.** Men's Empathic accuracy for their female partner's and female strangers' thoughts and feelings

Perceiver and target	NVND			NVD			V		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Men's empathic accuracy for their female partner	19	33.3	17.1	14	23.5	13.0	38	16.4	9.6
Men's empathic accuracy for female strangers	19	22.4	6.30	14	25.4	7.9	38	23.1	11.7
Significance	G: $F(2, 68) = 6.56^{**}$ ; T: $F(1, 68) = .15, p > .05$ ; G $\times$ T: $F(2, 68) = 7.96^{**}$								

Note. NVND = nonviolent and nondistressed; NVD = nonviolent but relationship distressed; V = violent; G = group effect; T = target effect; G  $\times$  T = Group  $\times$  Target interaction effect.

\*\* $p < .01$ .

unable to code the tapes of 3 women (1 nonviolent–nondistressed and 2 nonviolent relationship distressed wives), despite our trying multiple pieces of video equipment to play the tapes. To test the hypothesis that violent male partners would make less accurate inferences about their female partner's thoughts and feelings than objective observers, we conducted a Group (violent, nonviolent and relationship distressed, nonviolent but nondistressed)  $\times$  Viewer (male partner vs. objective observers) repeated measures ANOVA on empathic accuracy for female partners' thoughts and feelings. Viewer was a within-subjects factor (as male partners and objective observers watched the same woman); group was the between-sub-

jects factor. As the data in Table 3 indicate, there was no significant main effect of viewer  $F(1, 65) = .00, p > .05$ . There was a significant main effect of group,  $F(2, 65) = 7.21, p < .01$ , but also a significant Group  $\times$  Viewer interaction,  $F(2, 65) = 3.29, p < .05$ . Post hoc Tukey's HSD tests of the interaction effect indicated that there were no differences in the empathic accuracy of objective observers for female partners in the three groups. In contrast, as noted in the previous analysis results, among male partners, violent men had significantly less empathic accuracy for their female partner than nonviolent–nondistressed men had for their female partner. In addition, there was a trend toward statistical significance ( $p < .10$ ,

**Table 3.** Male partners' empathic accuracy and objective male observers' empathic accuracy for female partner's thoughts and feelings

Perceiver and target	NVND			NVD			V		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Men's empathic accuracy for their female partner	18	31.7	16.6	12	22.5	13.7	38	16.4	9.6
Obj. obs.' empathic accuracy for female partners	18	27.9	15.0	12	20.0	8.7	38	22.7	11.3
Significance	G: $F(2, 65) = 7.21^{**}$ ; V: $F(1, 65) = .00, p > .05$ ; G $\times$ V: $F(2, 65) = 3.29^*$								

Note. NVND = nonviolent and nondistressed; NVD = nonviolent but relationship distressed; V = violent; Obj. obs. = objective observers; G = group effect; Vi = viewer effect; G  $\times$  V = Group  $\times$  Viewer interaction effect.

\* $p < .05$ . \*\* $p < .01$ .

two-tailed test) suggesting that violent husbands had lower empathic accuracy for their female partner than did male objective observers.

*Female partners' versus female objective observers' empathic accuracy for male partners' thoughts and feelings.* Due to problems with tape quality (i.e., unable to hear the male partner), objective observers were unable to code the tapes of 2 men (both in the nonviolent–nondistressed group). To test the hypothesis that female partners would make less accurate inferences about their male partner than would nonviolent female partners and female objective observers, we conducted a Group (violent, nonviolent and relationship distressed, nonviolent but nondistressed)  $\times$  Observer (female partners vs. objective observers) repeated measure analysis of covariance (ANCOVA) on empathic accuracy for male partners' thoughts and feelings; see Table 4. Group was the between-subjects factor, viewer was a within-subjects factor, and female partners' age was the covariate. There was no significant main effect of viewer,  $F(1, 65) = .01, p > .05$ , or group,  $F(2, 65) = 2.35, p > .05$ , and no significant interaction effect,  $F(2, 65) = .85, p > .05$ .

*Male partners' versus female partners' empathic accuracy for one another's thoughts and feelings.* All study participants were able to complete the empathic accuracy proce-

dures for their partner. While we had not offered hypotheses comparing men and women's empathic accuracy, we did conduct a Group (violent, nonviolent and relationship distressed, nonviolent but nondistressed)  $\times$  Gender (female partners vs. male partners) repeated measures ANCOVA on partners' empathic accuracy for one another. Group was the between-subjects factor, gender was a within-subjects factor, and female partners' age was the covariate. Data for male partners' empathic accuracy for their female partner's thoughts or feeling are presented in Table 2; data for female partners' empathic accuracy for their male partner's thoughts and feelings are presented in Table 4. There was no significant main effect of gender,  $F(1, 67) = .74, p > .05$ . There was a significant main effect of group,  $F(2, 67) = 6.85, p < .01$ , but also a marginal trend toward a significant Group  $\times$  Gender interaction,  $F(2, 67) = 1.98, p = .12$ , with significant post hoc Tukey's HSD tests of the interaction effect. Although there were no significant differences between male partners and female partners in nonviolent–distressed or nonviolent–nondistressed relationships, women in violent relationships had significantly greater empathic accuracy for their male partner than their male partner had for them. In addition, violent men had significantly less empathic accuracy than nonviolent–nondistressed men (mentioned above) and than nonviolent–nondistressed women, and tended ( $p < .10$ ) to have lower

**Table 4.** *Women's empathic accuracy and objective female observers' empathic accuracy for male partner's thoughts and feelings*

Perceiver and target	NVND			NVD			V		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Women's empathic accuracy for their male partner	17	30.6	12.9	14	25.7	14.8	38	24.2	16.1
Obj. obs.' empathic accuracy for male partners	17	29.9	12.6	14	24.5	11.5	38	19.0	13.7
Significance	G: $F(2, 65) = 2.35, p > .05$ ; V: $F(1, 65) = .01, p > .05$ ; G $\times$ V: $F(2, 65) = .85, p > .05$								

*Note.* NVND = nonviolent and nondistressed; NVD = nonviolent but relationship distressed; V = violent; Obj. obs. = objective observers; G = group effect; Vi = viewer effect; G  $\times$  V = Group  $\times$  Viewer interaction effect.

empathic accuracy than nonviolent–distressed women.

### *Exploratory analyses*

Two issues were examined in exploratory analyses. First, our study design allowed us to consider whether the groups were found to differ in empathic accuracy level after accounting for perceiver effects (e.g., Do the groups of male partners continue to differ in their empathic accuracy levels for their female partner's thoughts and feelings after accounting for male partners' empathic accuracy levels with someone besides their partner—the female strangers?) and target effects (e.g., Do the groups of male partners continue to differ in their empathic accuracy levels for their female partner's thoughts and feelings after accounting for male objective observers' empathic accuracy for female partners?). Second, although this study was designed as a between-groups comparison, some of the findings revealed significant group differences only between the two extreme groups (violent vs. nonviolent–nondistressed), raising the question of whether relationship distress or violence is driving findings. Thus, working within the inherent limitations imposed by a between-groups study design (e.g., couples with violence before the past year, but not in the past year, were excluded), we were interested in exploring whether relationship distress or violence was a better predictor of empathic accuracy and whether relationship distress or violence would predict empathic accuracy even after controlling for perceiver and target effects. The correlation matrix for relevant variables in the exploratory analyses is presented in Table 5.

*Exploratory analyses of husbands' empathic accuracy for wives' thoughts and feelings.* We first conducted an ANCOVA of the men's empathic accuracy for their female partner's thoughts and feelings. Group (violent, nonviolent and relationship distressed, nonviolent but nondistressed) was the between-subjects factor. We included two covariates: (a) male partners' empathic accuracy for female strangers (to control for perceiver effects or male part-

ners' general empathic accuracy ability across targets) and (b) male objective observers' empathic accuracy for female partners (to control for target effects or differences in the ease of inferring female partners' thoughts and feelings across perceivers). Consistent with the main analyses findings, the group effect was statistically significant,  $F(2, 61) = 4.40, p < .05$ , and post hoc Tukey's HSD tests showed that violent men had significantly lower levels of empathic accuracy than did nonviolent–nondistressed men.

Using continuous data, we conducted an exploratory regression analysis to predict male partners' empathic accuracy for their female partner's thoughts and feelings. At the first step, we entered male partners' empathic accuracy for female strangers (to control for perceiver effects) and male objective observers' empathic accuracy for female partners (to control for target effects). This first step approached statistical significance,  $R^2 = .09, p < .06$ . The male objective observers' empathic accuracy for female partners was a significant positive predictor ( $\beta = .30, p < .05$ ), suggesting that female partners' behavior during the videotaped interaction conveyed information that both male partners and objective observers were able to use to infer female partners' thoughts and feelings (i.e., a target effect). In contrast, male partners' empathic accuracy for female strangers was not a significant predictor, suggesting that men in this sample did not have a consistent level of empathic accuracy across their female partner and female strangers (i.e., no perceiver effect). At the second step, we entered male partners' CTS past year physical violence scores, log transformed to correct for the expected skewed distribution in violence scores (as a measure of male partners' violence level), and male partners' SMAT scores (as a measure of male partners' relationship satisfaction level). This step of the model was statistically significant,  $R^2$  change = .13,  $p < .05$ . Relationship satisfaction was not a significant predictor. In contrast, male partners' level of physical violence was a statistically significant negative predictor ( $\beta = -.30, p < .05$ ), indicating that increasing levels of male partner violence predict decreased male partners' empathic accuracy

**Table 5.** Bivariate correlations among major study variables

Study variables.	Male partner violence	Female partner violence	Men's relationship satisfaction	Women's relationship satisfaction	Men's EA for female strangers	Men's EA for their female partners	Women's EA for their male partners	Male EA	Female obj. obs.' EA
Male partner violence	—	.52**	-.15	-.30**	.14	.18	-.14	-.04	.14
Female partner violence		—	-.18	-.30**	-.04	-.15	-.06	-.06	.08
Men's relationship satisfaction			—	.60**	-.05	.14	.12	.16	.14
Women's relationship satisfaction				—	.02	.39*	.10	.25*	.14
Men's EA for female strangers					—	.02	.13	.08	.16
Men's EA for their female partner						—	.29*	.28*	.18
Women's EA for their male partner							—	.06	.58**
Male obj. obs.' EA for female partners								—	.03
Female obj. obs.' EA for male partners									—

*Note.* Level of partner violence in the past year was measured with the Conflict Tactics Scale (CTS; Straus, 1979). Relationship satisfaction was measured with the modified Short Marital Adjustment Test (SMAT; Locke & Wallace, 1959). NVND = nonviolent but relationship distressed; NVD = nonviolent and nondistressed; V = violent; EA = empathic accuracy; obj. obs. = objective observers.  
\* $p < .05$ . \*\* $p < .01$ .

for their own female partner, even after controlling for perceiver and target effects.

*Exploratory analyses of male partners' empathic accuracy for female strangers' thoughts and feelings.* We also conducted an exploratory ANCOVA of the men's empathic accuracy for female strangers' thoughts and feelings. Group was the between-subjects factor, and male partners' empathic accuracy for their own female partner was the covariate, to control perceiver effects (or men's general empathic accuracy ability across targets). The group effect did not reach statistical significance,  $F(2, 66) = .01, p > .05$ .

Using a continuous data analytic approach, we conducted an exploratory regression analysis to predict male partners' empathic accuracy for female strangers' thoughts and feelings. At the first step, we entered male partners' empathic accuracy for their own female partner (to control for perceiver effects). This step did not reach statistical significance,  $R^2 = .00, p > .05$ , suggesting that men's empathic accuracy for their female partner was unrelated to their empathic accuracy for female strangers (i.e., no perceiver effects). At the second step, we entered male partners' CTS past year physical violence scores, log transformed (as a measure of male partners' violence level), and male partners' SMAT scores (as a measure of male partners' relationship satisfaction level). The model did not reach statistical significance,  $R^2$  change =  $.003, p > .05$ , and neither predictor was statistically significant, indicating that male partners' empathic accuracy for female strangers was not predicted by either their violence or relationship satisfaction levels.

*Exploratory analyses of female partners' empathic accuracy for male partner's thoughts and feelings.* We conducted an ANCOVA of the female partners' empathic accuracy for their male partner's thoughts and feelings. Group (violent, nonviolent and nondistressed, nonviolent but distressed) was the between-subjects factor. Covariates were female partners' age and female objective observers' empathic accuracy for male partners (to control for target effects or the ease

of inferring male partners' thoughts and feelings across perceivers). The group effect did not reach statistical significance,  $F(2, 63) = .01, p > .05$ .

We then conducted an exploratory regression analysis to predict female partners' empathic accuracy for their male partner's thoughts and feelings. At the first step, we entered female partners' age and female objective observers' empathic accuracy for male partners (to control for target effects). This step of the model reached statistical significance,  $R^2 = .35, p < .001$ . The female objective observers' empathic accuracy for male partners was a significant positive predictor ( $\beta = .57, p < .001$ ), indicating that male partners conveyed information in their behavior that both female partners and objective observers used to infer male partners' thoughts and feelings (i.e., target effects). At the second step, we entered female partners' CTS past year physical violence scores, log transformed (as a measure of female partners' violence level), and female partners' SMAT scores (as a measure of women's relationship satisfaction level). This step was not statistically significant,  $R^2$  change =  $.001, p > .05$ , and neither predictor reached statistical significance, suggesting that female partners' level of relationship violence and satisfaction did not predict women's empathic accuracy for male partners beyond the behavioral cues to male partners' thoughts and feelings that both female partners and female objective observers were using to infer male partners' thoughts and feelings.

## Discussion

The present study compared the empathic accuracy of partners in couples experiencing both male and female perpetrated physical violence to that of partners in nonviolent relationships. The main purpose of this study was to increase our understanding of violence by examining the link between intimate partner violence and empathic accuracy. Thus, this research extended the only previous study on relationship aggression and empathic accuracy (Schweinkle et al., 2002) by: (a) examining the empathic accuracy of both male and female intimate partners, (b) examining study

participants' empathic accuracy for their own partner's thoughts and feelings, (c) examining empathic accuracy during actual relationship problem discussions (rather than in response to hypothetical situation vignettes), and (d) including physically violent couples and two nonviolent comparison groups (nonviolent but relationship distressed and nonviolent and nondistressed couples). We further extended the existing literature by examining: (e) potential target effects among men and women (i.e., whether group differences in empathic accuracy for one's partner was due to group differences in the partners' expressing their thoughts and feelings clearly) by comparing the empathic accuracy of intimate partners to that of objective observers who viewed videotapes of the couples' interactions, (f) potential perceiver effects among male partners (e.g., level of empathic accuracy, relative to other men in the sample, across targets) by comparing men's empathic accuracy for their female partner's thoughts and feelings to their empathic accuracy for female strangers' thoughts and feelings, and (g) the relative role of level of physical violence in relationships and relationship satisfaction as predictors of empathic accuracy for male and female partners.

Previous research findings, derived from a social information processing theoretical framework, have suggested that violent husbands may misinterpret their wife's behaviors and may not differentiate between her various emotions and behaviors (e.g., Holtzworth-Munroe & Hutchinson, 1993; Holtzworth-Munroe & Smutzler, 1996). Thus, we predicted that violent men would have lower empathic accuracy for their female partner's thoughts and feelings than nonviolent men and objective male observers. Consistent with this prediction, violent husbands were significantly less accurate at inferring their female partner's thoughts and feelings than were nonviolent-nondistressed men. This group difference does not appear to be due to differences in the clarity of violent female partners' expression of their thoughts and feelings, relative to women in the nonviolent comparison groups, as there were no group differences in the male objective observer's empathic accuracy for the female partners' thoughts and feelings across

the three groups. Indeed, violent men were the only partners who tended to be less accurate than objective observers at inferring their own partner's thoughts and feeling. Exploratory analyses showed that violent men had lower empathic accuracy for their female partner than nonviolent-nondistressed men even when controlling for both perceiver (i.e., men's empathic accuracy for female strangers) and target (i.e., male objective observers' empathic accuracy for female partners) effects.

The lack of a statistically significant difference between the violent and distressed men raises the question of whether the differences between violent and nonviolent-nondistressed men's empathic accuracy for their female partner were due to men's level of relationship violence or relationship satisfaction. The exploratory regression analyses revealed that male partners' level of physical violence, but not their level of relationship satisfaction, was a significant predictor of men's empathic accuracy for their female partner's thoughts and feelings, even once perceiver and target effects were statistically controlled. Increasing levels of male violence predicted *decreased* levels of men's empathic accuracy for a female partner, confirming that male intimate partner violence is related to inaccuracy in men's inferences about their female partner's thoughts and feelings. The fact that level of relationship satisfaction was not a significant predictor of men's empathic accuracy for their female partner is not completely unexpected, given previous contradictory findings regarding the association between relationship distress and empathic accuracy for one's intimate partner (e.g., Ickes, Dugosh, Simpson, & Wilson, 2003; see also Ickes & Simpson, 1997, for a review).

Further highlighting the low empathic accuracy of violent men for their female partner's thoughts and feelings was the finding that violent men were the only men who tended to be less accurate at inferring their female partner's thoughts and feelings than they were at inferring the thoughts and feelings of female strangers. Also, violent husbands were the only group of men to have lower empathic accuracy for their female partner than their female partners had for them.

We did not confirm our tentative hypothesis that men who perpetrate violence in their intimate relationships would also be less accurate than nonviolent men at inferring the thoughts and feelings of female strangers, as there were no significant group differences in men's empathic accuracy for female strangers. The exploratory analyses demonstrated that perceiver effects (i.e., men's empathic accuracy for their female partner), men's violence level, and men's relationship satisfaction level all failed to predict male partners' empathic accuracy for female strangers. Unfortunately, as we did not assess the male objective observers' empathic accuracy for female strangers, we were unable to examine target effects directly. It is likely, however, that husbands were primarily using behavioral cues, from the videotaped female strangers, to infer these women's thoughts and feelings.

In contrast to the present study findings, Schweinle et al. (2002) found that the degree of men's reported aggression toward their female partner was related to their degree of oversensitivity to female strangers' rejection and criticism of their husbands. The differences in findings across the present study and the Schweinle et al. study may be due to procedural differences between the two studies. First, Schweinle et al. used 90 min of videotapes across three women. In contrast, we used only two 10-min sections. Shortened segments may not allow the viewer to comprehend fully the context, content, or emotional aspects of the interactions, potentially creating something of a floor effect in inferences about female strangers' thoughts and feelings. If true, then it is especially interesting that violent men were actually worse at inferring the thoughts and feelings of their own female partner than they were at inferring the thoughts and feelings of female strangers. Second, the authors assessed men's sensitivity to the female strangers' rejection and criticism of their husbands; we assessed empathic accuracy in general. This difference suggests that it might be fruitful for future researchers to develop empathic accuracy coding systems that more carefully examine what types of female thoughts and feelings are most likely to be misinterpreted by violent men or what

types of misinterpretations violent men are most likely to make when inferring females' thoughts and feelings.

It is interesting that in our exploratory regression analyses, across groups, men's empathic accuracy for female partners did not predict men's empathic accuracy for female strangers and vice versa. In other words, there was no perceiver effect for male partners' empathic accuracy (no consistency in a man's empathic accuracy relative to other men) across targets (i.e., female partner vs. female strangers). This may be attributable, in part, to variations in perceiver effects across groups. Specifically, although violent men tended to have lower empathic accuracy for their own female partner than they did for female strangers, nonviolent–nondistressed men showed the opposite pattern, having significantly higher empathic accuracy for their female partner than for female strangers. Thus, across the groups, there was no one consistent direction of relationship between men's empathic accuracy for their female partner and their empathic accuracy for female strangers.

The lack of group differences, among male partners, in empathic accuracy for female strangers' thoughts and feelings (in contrast to group differences in empathic accuracy for female partner's thoughts and feelings) suggests that violent men are particularly inaccurate in intimate relationship situations. Consistent with this idea, some of our previous research on social skills deficits (e.g., Anglin & Holtzworth-Munroe's, 1997, study of response competency) has demonstrated stronger violent versus nonviolent husband group differences in response to marital conflicts than in response to conflicts with other individuals (e.g., boss, friends, other relatives). Although social skills deficits are one possible explanation for violent men's low empathic accuracy for their female partner, other explanations are also possible. Perhaps, as Schweinle et al. (2002) suggest, violent men fail to attend to their female partner's immediate social cues in the situation and instead rely on global or preexisting biases to interpret their female partner's behaviors. Indeed, other studies have revealed that, relative to

nonviolent husbands, violent husbands tend to attribute hostile intentions to their wife's behavior (Holtzworth-Munroe & Hutchinson, 1993) and report cognitive distortions during anger arousal (e.g., Eckhardt, Barbour, & Davison, 1998). Such findings suggest that violent husbands hold negative schemas that lead them to believe their wives have hostile intentions and to perceive wife negativity without fully processing their wife's social cues during ongoing marital discussions. Alternatively, perhaps violent men have the ability to infer women's thoughts and feelings accurately (e.g., their empathic accuracy for female strangers did not differ from that of nonviolent men) but they lack the motivation to understand their own wife's thoughts and feelings. Or perhaps, they do not engage their skills when interacting with their wife, as their goals and objectives in marital interactions may be different from that of other men (e.g., to control their wife rather than to maintain a healthy relationship). Indeed, self-reports from at least one battered woman (Olson, 2004a) suggest that some violent husbands may be quite competent in their communication and social skills but may use those skills to ensnare and control their wives further. Thus, future researchers should attempt to disentangle motivational from behavioral skill factors in examining violent men's empathic accuracy, to address the question of the mechanisms involved in violent men's failure to infer what their wife is thinking and feeling.

The present study extended previous research findings by comparing the empathic accuracy of violent and nonviolent women for their male partner's thoughts and feelings. Interestingly, violent women did not exhibit the same empathic accuracy difficulty as their male partner did. In the present study, no significant group differences in empathic accuracy were found across the violent and nonviolent groups of female partners or between violent women and objective female observers. In addition, the exploratory analyses demonstrated that women's level of relationship violence and satisfaction were not significant predictors of women's empathic accuracy for their male partner's thoughts and feelings.

Instead, the female objective observers' empathic accuracy for male partners was a statistically significant predictor of women's empathic accuracy for their male partner, suggesting male partner as target effects, or that female partners and female objective observers were using the same behavioral cues from male partners to infer men's thoughts and feelings. Similarly, in our exploratory regression analysis predicting men's empathic accuracy for female partner's thoughts and feelings, target effects (but not perceiver effects) were significant predictors of men's empathic accuracy for female partners, suggesting that, across groups, both male partners and male objective observers used women's behavioral cues to infer female partners' thoughts and feelings. The fact that all three groups of female partners (and nonviolent-distressed male partners) did no better than objective observers in inferring their own partner's thoughts and feelings is contrary to one previous study which demonstrated that both male and female dating partners had higher empathic accuracy for their relationship partners than did friends of the couples or strangers (Thomas & Fletcher, 2003). The findings of the Thomas and Fletcher (2003) study make intuitive sense. Thus, it is unclear why intimate partners in the present study were unable to use their prior knowledge of their partner and the topics they discussed with their partner to make better inferences about their partner's thoughts and feelings than strangers were able to make. Given the contradictory findings across studies, this issue requires further empirical examination.

Overall, our study findings highlight the low empathic accuracy of violent men for their own female partner's thoughts and feelings. Yet, the same pattern of findings was not revealed for violent women. This gender difference is potentially quite important. As awareness of the fact that both males and females engage in intimate partner violence grows (e.g., Archer, 2000), so does a controversy regarding whether male and female relationship aggression are similar or distinct phenomena. Although a growing body of research has been conducted on male violence, much less is known about female violence, and

it has been argued that researchers must begin to compare the correlates and predictors of male and female marital violence to understand better if existing theories of male perpetrated relationship violence can be directly applied to understand female violence (Holtzworth-Munroe, 2005). For example, the current data suggest that the social information processing skills theory of male intimate partner violence (the model on which this study was based) may not be directly applicable to female violence. Instead, the current data suggest that new, unique models of female aggression may need to be developed.

These findings suggest that therapists working with violent couples may wish to include empathy training in their interventions. For example, as part of teaching couples effective problem-solving skills, it may be beneficial to focus specifically on improving men's perceptions of their partner's thoughts and feelings. It is important to note, however, that the present sample was not a clinical sample. Thus, the current findings may require replication among a clinical sample before interventions are designed to address empathic accuracy among violent couples.

As with all studies, this research has limitations. In the present study, we recruited a volunteer community sample in the United States. Future replications of this research on other similar community samples will suggest how generally applicable our findings are. Furthermore, we do not know whether our findings would be reproduced in a clinical or criminal justice sample of violent couples (e.g., men arrested for domestic violence or violent couples seeking therapy) or whether findings would be similar to those from studies conducted in other cultures or countries.

Despite considerable evidence for the validity of data using the thought and feeling assessment procedure (e.g., Ickes, Robertson, Tooke, & Teng, 1986), we cannot assume that the study participants (or the female strangers) always accurately reported their own thoughts and feelings. Individuals may at times be unaware of, or may inaccurately recall, certain thoughts and feelings. For example, social desirability concerns may prevent intimate partners from reporting thoughts and feelings

honestly. Unfortunately, we did not include a measure of social desirability. Moreover, the unusual nature of the empathic accuracy reporting task may have led some study participants to have difficulty accurately reporting their thoughts and feelings. For example, perhaps, participants with poor writing skills were unable to report their thoughts and feelings clearly. Allowing partners to report their thoughts and feelings verbally (e.g., via audio recording) might be a useful procedural modification. Another limitation was our ability to test perceiver effects only among male partners but not among female partners, as we did not have available tapes of male strangers for women to watch. Also, our limited sample size prevented us from comparing the role of empathic accuracy in differing types of violent relationships. As already noted, findings from the present study may not directly apply to batterers arrested or in therapy for their perpetration of partner violence.

Despite such limitations, the present study provides interesting findings that require replication. It appears that violent men have particularly poor empathic accuracy for their own female partner's thoughts and feelings, relative to both nonviolent men and male objective observers, and relative to their empathic accuracy for female strangers. In contrast, the empathic accuracy of violent and nonviolent women for their male partner's thoughts and feelings did not differ, suggesting that there may need to be different models of the correlates and potential causes of male versus female relationship violence. The specific role of empathic accuracy in understanding both male and female intimate partner violence, and the mechanisms by which empathic accuracy and relationship violence are linked, await further study.

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