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## Empathic accuracy and accommodative behavior among newly married couples

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### Abstract

An established method for assessing empathic accuracy was used to examine the consequences of accurate understanding during the early years of marriage. Structural equation modeling analyses simultaneously examined within-individual and across-partner associations among variables (actor effects and partner effects). During the first year of marriage, actor effects and partner effects were observed for two presumed consequences of empathic accuracy—accommodative behavior and couple well-being. Actor effects, partner effects, or both were observed for three possible determinants of empathic accuracy—commitment level, partner perspective-taking, and psychological femininity. Levels of empathic accuracy reliably declined following the first year of marriage, as did the strength of the above-noted associations with empathic accuracy.

When close partners find themselves in the grips of conflict, would they behave differently if they possessed accurate insight into one another's thoughts and feelings? If they could read one another's minds, would their relationships be improved? The present research addresses these and related questions by exploring a phenomenon termed *empathic accuracy*, defined as the "ability to accurately infer the specific content of another person's thoughts and feelings" (Ickes, 1993, p. 588). Ickes and his colleagues (Ickes, Bissonnette, Garcia, & Stinson, 1990) developed a method for assessing empathic accuracy, and have used this method to investigate the dynamics

of empathic accuracy in interactions between strangers, friends, and dating partners (e.g., Ickes, Stinson, Bissonnette, & Garcia, 1990; Stinson & Ickes, 1992; Simpson, Ickes, & Blackstone, 1995).

The present research extends this literature by advancing and testing an interdependence analysis of the role of empathic accuracy during conflicted interaction among newly married couples. We suggest that in ongoing close relationships, empathic accuracy promotes prosocial transformation of motivation, yielding costly and effortful "relationship maintenance acts" such as accommodative behavior (e.g., Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; for a review, see Rusbult, Olsen, Davis, & Hannon, 2001). Thus, the present work brings together two previously unrelated research traditions, combining concepts and principles from interdependence theory (cf. Kelley & Thibaut, 1978; Rusbult & Van Lange, 1996) with concepts and principles from the literature regarding empathic accuracy (cf. Ickes et al., 1990a).

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*Empathic accuracy, accommodation, and couple well-being*

During the heat of conflicted interaction individuals sometimes enact destructive behaviors—they say hurtful things, yell at each other, or worse. Under such circumstances, partners frequently are inclined to behave destructively in turn. This inclination to reciprocate destructive behaviors results in the escalation of conflict: One person says something thoughtless, the other reacts with a snide comment; the first makes a nasty retort, and so on. Resolving conflicted interaction requires the ability to avoid destructive reciprocity, moving toward reconciliation rather than escalation. To reduce tension and soothe heated feelings, partners must inhibit the impulse toward negative reciprocity, instead reacting in a positive manner. This type of behavior is termed *accommodation*, defined as the inhibition of impulses to react destructively to a partner's potentially destructive acts, behaving in a constructive and conciliatory manner rather than retaliating (Rusbult et al., 1991).

Individuals presumably are tempted to reciprocate destructive acts during conflicted interaction because reciprocal hostility is a highly available defensive response to attack. When their partners behave destructively, individuals often feel angry or demeaned, and conciliation may seem more humiliating and less satisfying than retaliation. But destructive reciprocity is not inevitable. Importantly, interdependence theory distinguishes between: (a) *given preferences*, immediate, self-centered behavioral impulses; and (b) *effective preferences*, preferences that direct behavior (Kelley & Thibaut, 1978). The shift from given to effective preferences is guided by *transformation of motivation*, a process by which immediate, self-centered impulses are replaced by preferences taking into account considerations such as one's long-term interests, the partner's interests, or broader social norms. During the course of couple conflict, the transformation process often yields prosocial preferences and inclinations to accommodate (Rusbult et al., 1991). At the same time, antisocial trans-

formation and retaliatory behavior are also possible.

What impact will empathic accuracy exert on the transformation process? Is it likely to promote prosocial motives, constructive behavior, and good outcomes for relationships, or is it likely to promote self-interested or antisocial motives, destructive behavior, and poor outcomes? There is reason to believe that accurate understanding may not always be a good thing: The existing literature reveals that in some interaction situations, *inaccurate* inferences regarding the partner's thoughts and feelings may be adaptive (e.g., Simpson et al., 1995; Simpson, Ickes, & Grich, 1999). When the well-being of the individual, the partner, and the relationship would be promoted by *failing* to perceive the partner's true motives or goals (e.g., when the partner is harmlessly attracted to a tempting alternative), empathic accuracy may promote antisocial motives and destructive behavior. But we suggest that in the context of conflicted interaction, empathic accuracy generally will yield prosocial motivation and behavior. Why so?

First, empathic accuracy should enhance awareness of the fact that defensive, destructive reactions will yield escalating negativity and increasingly hostile interaction. When people are aware of their partner's thoughts and feelings, they know when the partner is sufficiently angry to retaliate in the absence of accommodation. Second, although a partner's true motives and goals may be predominantly self-centered or hostile in highly distressed relationships, we assume that among newly married couples, partner's true motives and goals are more likely to be benign or positive in flavor. Accordingly, among newly married couples empathic accuracy should uncover a greater number of positive than negative thoughts and feelings. Third, empathic accuracy should yield less blameful, more benevolent construal of the partner's behavior. When partners possess full and accurate knowledge of each other, they should be more likely to react to one another's seemingly hostile actions with understanding, perhaps even compassion (e.g., "I can see why he might act that way"). Thus, although there may be a subset of situations in which

individuals are motivated to *not* understand a partners thoughts and feelings (e.g., suspected infidelity or attraction to another), we suspect that on balance—particularly in the context of conflicted interaction—it serves us well to achieve a rather complete understanding of our partner’s thoughts and feelings.

Thus, and as indicated in Figure 1, we suggest that empathic accuracy frequently serves a positive function during conflict by promoting prosocial transformation, thereby encouraging accommodative behavior and promoting enhanced couple well-being. Indeed, psychotherapists underscore the importance of accurate understanding in promoting effective communication (Truax & Carkhuff, 1967), and accurate understanding of others’ needs has been emphasized in explaining the development and expression of altruism (Underwood & Moore, 1982). Also, the empirical literature suggests that accurate understanding tends to be associated with greater marital adjustment, although there are some noteworthy exceptions to this rule (for a review, see Sillars & Scott, 1983). Furthermore, given that accommodative behavior has been shown to be beneficial to couples (e.g., Gottman, 1979; Jacobson & Margolin, 1979; Rusbult, Bissonnette, Arriaga, & Cox, 1998) to the extent that empathic accuracy promotes accommodation, empathic accuracy should indirectly promote couple well-being.

In line with the assumption that accurate understanding promotes prosocial transformation of motivation during conflicted interaction, we predict that empathic accuracy will be positively associated with tendencies to accommodate rather than retaliate during interpersonal conflict.

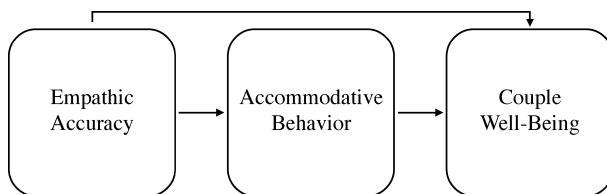
H1: *Empathic accuracy will be positively associated with tendencies to exhibit accommodative behavior during interpersonal conflict.*

Moreover, and consistent with the assumption that empathic accuracy promotes prosocial motives and inclinations to accommodate, we predict that empathic accuracy will be positively associated with couple well-being; that is, the relationships of individuals who more accurately infer their partners’ ongoing thoughts and feelings will exhibit greater dyadic adjustment.

H2: *Empathic accuracy will be positively associated with couple well-being (i.e., level of dyadic adjustment).*

We also advance hypotheses regarding the precise means by which empathic accuracy promotes couple well-being. As noted in Figure 1, we assume that at least part of the reason for an association of empathic accuracy with couple functioning centers on the fact that accurate understanding promotes accommodative behavior, which in turn promotes couple well-being. Thus, we anticipated that a significant portion of the association of empathic accuracy with couple well-being would be indirect, or attributable to the fact that empathic accuracy promotes accommodative behavior, which in turn promotes couple well-being.

H3a: *The association of empathic accuracy with couple well-being will be significantly mediated by accommodative behavior.*



**Figure 1.** Presumed direct and indirect associations of empathic accuracy with accommodation and couple well-being.

At the same time, our model suggests that empathic accuracy encourages prosocial transformation, which in turn promotes a *variety* of beneficial behaviors. For example, in previous work we have demonstrated that prosocial transformation encourages maintenance acts such as willingness to sacrifice, derogation of tempting alternatives, and forgiveness of betrayal (e.g., Finkel, Rusbult, Kumashiro, & Hannon, 2002; Van Lange et al., 1997; for a review, see Rusbult et al., 2001). Thus, we should not anticipate *complete* mediation by accommodative behavior: If accurate understanding promotes prosocial motives, which in turn affect couple well-being via diverse maintenance acts, then we should find that empathic accuracy yields broad benefits, extending beyond effects on accommodation per se. Thus, and as noted in Figure 1, some portion of the association of empathic accuracy with couple well-being is likely to be direct, and not attributable to mediation by accommodative behavior.

H3b: *Empathic accuracy will account for unique variance in couple well-being beyond variance attributable to accommodative behavior.*

In short, and combining Hypotheses 3a and 3b, we anticipated that accommodation would significantly yet partially mediate the association of empathic accuracy with couple well-being.

#### *Effects of time in marriage*

Will these predictions be moderated by the *passage of time*? Prior to conducting this research we did not advance explicit predictions about changes over time in empathic accuracy, nor did we advance predictions about whether the strength of associations with empathic accuracy would differ as a function of time. However, during the intervening years we performed preliminary analyses of a subset of the data from our study and had occasion to consider the effects of time in marriage (Bissonnette, Rusbult, & Kilpatrick, 1997). In addition, during the intervening years other authors have examined the effects

of relationship duration, testing the prediction that level of empathic accuracy would decline over time in marriage (Thomas, Fletcher, & Lange, 1997).

Accordingly, the following line of reasoning guided our analysis of the obtained data: We suggest that early in marriage, partners experience specific interactions as novel situations with unfamiliar constraints (Rusbult & Van Lange, 1996). In novel situations, individuals *need* to carefully monitor the partner's thoughts and feelings. Over time, specific interaction patterns will be encountered regularly and stable orientations to such situations will emerge. The solutions to recognizable patterns should increasingly come under the control of relationship-specific habits, and the scrupulous monitoring that initially guides behavior should dissipate. Accordingly, we anticipated that two sorts of changes might transpire over-time in marriage:

H4a: *Levels of empathic accuracy will decline over time in marriage.*

H4b: *The strength of the associations of other variables with empathic accuracy will decline over time in marriage.*

#### *Actor effects, partner effects, or both?*

Do the associations outlined above describe *within-individual* or *across-partner* phenomena? Prior to conducting this research we advanced explicit predictions about within-individual associations (actor effects), but we did not advance predictions about across-partner associations (partner effects; Kenny, 1996). At the same time, our interdependence analysis implies the possibility of both types of effect: During the course of interaction, the options and outcomes of each person are dependent on the motives and goals of both the individual *and* the partner (Kelley & Thibaut, 1978). Indeed, in recent work we obtained support for an interdependence-based model of the associations among commitment, accommodation, and trust, a model that includes both actor effects and

partner effects (Wieselquist, Rusbult, Foster, & Agnew, 1999).

Accordingly, our analysis of the obtained data was guided by the assumption that we might well observe both actor effects and partner effects in the associations of empathic accuracy with accommodation and couple well-being. Specifically, we anticipated that individuals with greater empathic accuracy would be more motivated to ensure that their partners understand them during conflicted interaction, and that their partners would exhibit greater tendencies to accommodate as a consequence (Corollary to Wieselquist, Rusbult, Foster, & Agnew, 1999). We also anticipated that individuals would experience enhanced gratitude, trust, and prosocial motivation when a partner exhibits empathic accuracy, and that, as a consequence, their partners would report greater levels of dyadic adjustment (Corollary to Wieselquist, Rusbult, Foster, & Agnew, 1999). Moreover, we anticipated that just as the actor effect of empathic accuracy on couple well-being would be both direct and indirect (i.e., significant yet partial mediation by accommodation), we speculated that the partner effect of empathic accuracy on couple well-being, likewise, might be both direct and indirect (Corollaries to Hypotheses 3a and 3b).

#### *Potential determinants of empathic accuracy*

What promotes empathic accuracy? When two people interact, the well-being of each person is dependent on the thoughts, feelings, and actions of the partner. Personal well-being is enhanced when an interaction partner behaves well when the partner is considerate, takes one's preferences into account, and behaves in such a manner as to gratify both person's needs and wishes. Personal well-being is threatened when the partner is inconsiderate, self-centered, or otherwise insensitive to one's needs. Thus, the existence of interdependence motivates individuals to pay special attention to one another's preferences, motives, and goals (Berscheid, Graziano, Monson, & Dermer, 1976). Of course, the ability and motivation to accurately infer another's

thoughts and feelings presumably varies across individuals and relationships. In a somewhat speculative vein, we identified three variables that may be relevant to understanding the abilities and motives that underlie empathic accuracy. Specifically, we anticipated that commitment level, partner perspective-taking, and psychological femininity might exhibit positive associations with empathic accuracy.

H5a-c: *Commitment level, partner perspective-taking, and psychological femininity will be positively associated with empathic accuracy.*

*Commitment level* describes the degree to which an individual intends to persist in a relationship, experiences long-term orientation toward the relationship, and feels psychologically attached to the relationship. Commitment increases as a consequence of high satisfaction (the relationship gratifies important needs), poor quality alternatives (important needs could not be gratified elsewhere), and increasing investment size (important resources are linked to the relationship; Rusbult, 1983; Rusbult, Martz, & Agnew, 1998). In short, commitment reflects "what is at stake" in a relationship. Accordingly, committed individuals should be motivated to do whatever they can to ensure that the relationship flourishes, including investing effort toward empathic understanding, so as to deal with the needs of the partner and relationship in whatever situations arise. Indeed, several studies have demonstrated that compared to less committed individuals, highly committed individuals experience more benevolent thoughts and emotions during conflict and are more likely to engage in a variety of positive interaction behaviors (e.g., Arriaga & Rusbult, 1998; Finkel et al., 2002; Rusbult et al., 1991; Van Lange et al., 1997).

*Partner perspective-taking* is defined as the inclination to adopt a partner's point of view in reacting to interaction situations, attempting to see the situation from the partner's perspective, and thinking and feeling as the partner thinks and feels (Rusbult et al., 1991). This definition differs from traditional conceptualizations,



which tend to assume that perspective-taking is a generalized disposition that emerges in diverse types of interaction with diverse partners (Davis, 1983). The present work examines *partner-specific* perspective-taking, or the motivation and ability to think and feel as the partner thinks and feels.<sup>1</sup> When individuals attempt to perceive events as the partner does, experiencing the internal events the partner experiences, they should achieve a greater understanding of the partner's thoughts and feelings. Of course, there is no guarantee that attempts to get inside the partner's mind will yield accurate understanding, but those who remain locked in their own perspective cannot even hope to achieve empathic accuracy. Indeed, several studies suggest that perspective-taking facilitates positive interaction and couple well-being (e.g., Davis, Conklin, Smith, & Luce, 1996; Davis & Oathout, 1987; Long & Andrews, 1990).

*Psychological femininity* represents social-emotional orientation, the degree to which an individual exhibits "affective concern for the welfare of others" and values positive interaction (Bem, 1974, p. 156). Psychological femininity includes such qualities as compassion, sympathy, and understanding. For psychologically feminine individuals, more is at stake in potentially harmful interactions with the partner; they care more about their relationships and should be motivated to ensure that their relationships persist and remain healthy. In addition, feminine individ-

uals possess superior social skills, which may enhance their ability to achieve accurate understanding during conflict. Indeed, prior research suggests that psychological femininity is associated with positive interaction behavior and greater expressive competence, and that the relationships of those with greater femininity exhibit greater adjustment (e.g., Bradbury & Fincham, 1988; Lamke, Sollie, Durbin, & Fitzpatrick, 1994; Peterson, Baucom, Elliott, & Farr, 1989).

## Method

We tested our hypotheses using data from the University of North Carolina Marriage Study.<sup>2</sup> The study obtained data from couples on six occasions over the first three years of marriage. Data relevant to measuring empathic accuracy were not gathered for all couples at all six occasions; procedures for assessing empathic accuracy were included at only three of six research occasions. We introduced such procedures partway into the project, and some couples did not complete these procedures at

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1. How do partner perspective-taking and empathic accuracy differ? From a theoretical point of view, the former construct describes attempts to place oneself inside the partner's mind; the latter construct describes accurately understanding the partner's thoughts and feelings. How do partner perspective-taking and empathic accuracy differ operationally? As will be seen when we describe our method, the former construct is assessed using a self-report instrument that assesses tendencies to place oneself inside the partner's mind; the latter construct is assessed using a technique that directly compares (a) the individual's beliefs about the partner's thoughts and feelings to (b) the partner's self-reported thoughts and feelings. Thus, our definitions of partner perspective-taking and empathic accuracy differ both theoretically and operationally.

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2. Data from this project were also employed in (a) Arriaga and Rusbult (1998), which examined partner perspective-taking and accommodative behavior (Study 1 used data from Times 2, 4, and 6); (b) Bissonnette et al. (1997), which examined commitment level, empathic accuracy, and accommodative behavior (data from Times 2 and 4 were used); (c) Drigotas, Rusbult, and Verette (1999), which examined mutuality of commitment and couple well-being (Study 2 used data from Times 1, 3, and 5); (d) Drigotas, Rusbult, Wieselquist, and Whitton (1999), which examined partner affirmation, movement toward the ideal self, and dyadic adjustment (Study 4 used data from Time 6); (e) Gaines et al. (1997), which examined attachment style and accommodative behavior (Study 4 used data from Time 3); (f) Rusbult, Bissonnette, et al. (1998), which examined commitment level, accommodative behavior, and couple well-being (data from Times 1, 2, and 3 were used); (g) Rusbult, Van Lange, Wildschut, Yovetich, and Verette (2000), which examined commitment level and positive illusion (Study 3 used data from Times 2 and 5); (h) Van Lange et al. (1997), which examined commitment level and willingness to sacrifice (Study 6 used data from Times 3, 4, and 5); and (i) Wieselquist et al. (1999), which examined commitment level, accommodative behavior, and trust (Study 2 used data from Times 3 and 5).

all occasions because they moved from the region or declined to take part in videotaped interactions.

### *Participants and recruitment*

Our analyses employ data from all couples who completed relevant activities at any of three research occasions, including 55 couples at Time 2, 52 couples at Time 4, and 40 couples at Time 6. Couples were recruited via a three-stage process: (a) we identified 230 couples who applied for marriage licenses at the Orange County, NC courthouse; (b) research assistants telephoned couples to provide project information; and (c) the principal investigator telephoned couples to determine whether they wished to participate. A total of 165 couples agreed to participate, for a volunteer rate of 72%; 123 couples completed Time 1 activities, for a participation rate of 75%.

At Time 1 the participants were 32.94 years old on average, their personal annual salary was around \$29,000, and the majority were Caucasian (4% African American, 3% Asian American, 90% Caucasian, 2% Latino). All participants had completed high school, 40% had bachelor's degrees, and 32% had graduate degrees. Forty-three percent were Protestant, 17% were Catholic, 3% were Jewish, and 37% reported other religious or nonreligious affiliations (e.g., Buddhist, Atheist). At Time 1 participants had been married for about 16 months; 11% had been married previously.

### *Research design and procedure*

The project was a six-wave lagged longitudinal study: Couples began participating at different times but engaged in parallel activities at a parallel pace, completing research activities at six-month intervals. At Times 1, 3, and 5 the couples completed mailed questionnaires. At Times 2, 4, and 6 the couples participated in laboratory sessions during which they completed questionnaires including measures of key model variables, engaged in videotaped interactions, and completed judgment tasks regarding their interactions. Couples were paid \$25 for mailed questionnaires and \$40 for laboratory sessions. Partic-

ipants were asked to complete their questionnaires independently and were assured that their responses would remain confidential. At the end of Times 1 through 5 the couples were partially debriefed; at the end of Time 6 they were fully debriefed.

### *Questionnaires*

Following previous research regarding accommodation, 16 items were included to measure Accommodative Behavior (Rusbult et al., 1991). The instrument included four stems describing accommodative dilemmas, situations in which the partner enacted a potentially destructive exit or neglect behavior (e.g., "When my partner is upset and says something mean to me or snaps at me . . ."). Four items followed each stem, one each for exit, voice, loyalty, and neglect (e.g., "I feel so angry that I want to walk right out the door"). Participants reported the frequency with which they engaged in each of 16 responses (four responses for each of four stems; 0 = *never*; 8 = *always*). Responses for destructive exit and neglect items were reverse-scored so that high numbers reflected greater accommodation. Quality of couple functioning was measured using Spanier's (1976) Dyadic Adjustment Scale (e.g., "Do you kiss your partner?"; 0 = *never*; 5 = *every day*). This 32-item measure assesses such qualities as intimacy (e.g., "Do you confide in your mate?"), agreement (e.g., Do you agree about "sex relations"?), and shared activities (e.g., "Do you and your mate engage in outside interests together?"). Following previous research regarding commitment processes, five items were included to measure commitment level (Rusbult, Martz, et al., 1998; e.g., "To what degree do you feel committed to maintaining your marriage?"; 0 = *not very committed*, 8 = *completely committed*). To measure partner perspective-taking we included five items that were developed for previous research (Rusbult et al., 1991). These items paralleled items from Davis's (1983) instrument for assessing general perspective-taking (e.g., "When I'm upset or irritated by my partner, I try to imagine how I would feel if I were in his/her shoes"; 0 = *doesn't describe me*,

8 = *definitely describes me*). To measure psychological femininity we included the 39-item version of Bem's (1974) instrument. Thirteen items assessed psychological femininity (e.g., "sensitive to the needs of others"; 0 = *doesn't describe me*, 8 = *definitely describes me*).

### *Measuring empathic accuracy*

*Videotaping couple interactions.* Partners were escorted to a videotaping facility and were seated in chairs placed at a 120 degree angle to one another. Their interactions were videotaped using a ceiling-mounted camera, with a microphone placed on a nearby table. A research assistant located in an adjoining room controlled the videotaping equipment, preparing two videotapes of each interaction; time displays were included so that precise segments of the interaction could later be identified. We began each videotaping session with a warm-up exercise in order to acclimate couples to interacting before a video camera. At Time 2 couples: (a) discussed something that the wife would like to change about herself (3 min.); and (b) discussed something that the husband would like to change about himself (3 min.). At Times 4 and 6 couples recreated the conversation they had just prior to arriving at the laboratory session (3 min.). Following the warm-up exercise couples recreated a recent conflict. At Time 2 partners themselves were instructed to select a conflict of moderate severity. At Times 4 and 6 we helped partners identify a conflict of moderate severity using data they provided in brief questionnaires. Partners interacted for 5 minutes at Time 2, for 7 minutes at Time 4, and for 7 minutes at Time 6.

*Obtaining reports of own and partner thoughts and feelings during interaction.* Following the videotaping session partners were led to separate research rooms and worked through two thought-and-feeling rating sessions. During the first session they viewed the videotaped interaction and described their own thoughts and feelings. The participant was asked to say "stop" at each point at which he or she recalled

experiencing an unexpressed thought or emotion. At each "stop point" a research assistant stopped the videotape, recorded the number on the time display, and asked the participant to describe the thoughts and feelings he or she experienced at that point. A one-page rating form was provided for this purpose. Participants identified about one stop point per minute, with 4.76 stop points during the five-minute Time 2 interaction, 6.63 stop points during the seven-minute Time 4 interaction, and 6.19 stop points during the seven-minute Time 6 interaction.

The thought-and-feeling rating form provided blank lines on which to record thoughts and rate the strength of each thought (0 = *thought this a little bit*, 2 = *thought this strongly*). The form also included a checklist of six emotion categories identified in prior research regarding emotion prototypes (love, joy, fear, anger, surprise, sadness; Shaver, Schwartz, Kirson, & O'Connor, 1987), along with three to five exemplars of each emotion (e.g., caring, alarm, frustration, hurt). Participants indicated which emotions they experienced, rating the strength of each emotion (0 = *didn't feel this at all*, 2 = *felt this strongly*); a "no emotion experienced" category was also included.

During a second rating session participants described what they believed their partners thought and felt during the interaction. The research assistant replayed the videotape, stopping the replay at each of the partner's previous stop points. At each stop point, participants described the thoughts and feelings they believed the partner experienced. The one-page form employed for this purpose was parallel to the self-rating form described above, except that it requested the participant's beliefs regarding the *partner's* thoughts and feelings.

*Obtaining ratings of empathic accuracy.* The thought-and-feeling rating sessions provided us with information regarding (a) what each participant recalled thinking and feeling during the interaction and (b) what each participant believed the partner was thinking and feeling during the interaction. These data were entered into a software package, which was programmed to present



paired thought-and-feeling data to trained research assistants. For example:

#### Husband's Actual Thoughts and Emotions

His thoughts: I really thought that we had more money in our checking account—where did it all go?

His emotions: Surprise

#### Wife's Beliefs About Husband's Thoughts and Emotions

His thoughts: He didn't know that our balance had dropped so low.

His emotions: Surprise, amazement, astonishment

The research assistant's task was to rate the similarity between (a) what the participant believed the partner thought and felt and (b) what the partner reported thinking and feeling (2 = *essentially similar; clear hit*; 1 = *somewhat similar*; 0 = *essentially dissimilar; clear miss*). Research assistants rated two types of paired thought-and-feeling data: (a) pairings of participant inferences and partner self-reports from the *same stop point*; and (b) pairings from *differing stop points* (i.e., randomly paired stop points). Similarity ratings for differing stop points allowed us to assess baseline accuracy (i.e., the level of accuracy that would be anticipated on the basis of chance). Four to 10 research assistants rated each pair of thoughts and feelings.

Each research assistant's ratings were combined to develop an *unadjusted empathic accuracy* measure with a potential range from 0 to 100. Scores were represented as missing values if they were based on fewer than three inferences (i.e., too few observations for reliable measurement). *Baseline empathic accuracy* was calculated in parallel manner, using ratings for differing stop points. Adjusted Empathic Accuracy, referred to hereafter as *empathic accuracy*, is the signed difference between unadjusted accuracy and baseline accuracy (for a detailed description, see Ickes, Bissonnette, et al., 1990). Reliability analyses performed on research assistants' empathic accuracy scores revealed good interrater agreement at Times 2, 4, and 6 ( $\alpha$ s ranged from .89 to .95). Therefore, we

calculated an averaged score for each participant, separately for Times 2, 4, and 6.<sup>3</sup>

## Results

### *Reliability of measures*

We performed reliability analyses on the self-report items designed to measure each construct. These analyses revealed acceptable internal consistency for Time 2, Time 4, and Time 6 measures of accommodation ( $\alpha$ s = .87, .87, and .87), dyadic adjustment (.92, .92, and .90), commitment (.77, .77, and .76), partner perspective-taking (.78, .81, and .81), and psychological femininity (.85, .87, and .87). Therefore, we averaged the items designed to assess each construct to develop a single measure of each variable (separately for each partner at each time).

To evaluate the test-retest reliability of our measures we calculated lagged correlations for the measures of each model variable. These analyses revealed good test-retest reliability for the Time 2-to-Time 4 and Time 4-to-Time 6 lags for dyadic adjustment ( $r$ s = .84 and .85), accommodation (.84 and .80), commitment (.75 and .81), partner perspective-taking (.54 and .61), and psychological femininity (.76 and .78). However, these analyses revealed low test-retest reliability for empathic accuracy (.11 and .04).

### *Simple associations among model variables*

As a preliminary step in analyzing the obtained data, we examined simple within-individual

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- Our measure of empathic accuracy is a difference score: Adjusted accuracy is calculated by subtracting from the unadjusted accuracy score that which would be expected on the basis of chance "hits," or baseline accuracy. Would our results differ if we were to adopt an alternative analysis strategy, examining associations with unadjusted accuracy while controlling for baseline accuracy? Not in meaningful ways. For example, we examined within-individual associations with empathic accuracy using two analysis techniques: (a) examining simple correlations with adjusted accuracy; and (b) examining correlations with unadjusted accuracy, controlling for baseline accuracy. These techniques revealed similar associations of empathic accuracy with both accommodation (combined  $\beta$ s = .24 and .26, respectively) and dyadic adjustment (combined  $\beta$ s = .38 and .39).

associations among key variables, separately for each research occasion, and separately for husbands and wives. The results of these analyses are displayed in Appendix A (see “Within-individual *r*s”). In the main, these findings were consistent with expectations. For example, at Time 2 empathic accuracy was positively correlated with accommodation and dyadic adjustment (Hypotheses 1 and 2). Also, the correlations of empathic accuracy with other model variables were descriptively stronger at Time 2 than at Times 4 and 6 (Hypothesis 4b). Moreover, these analyses revealed positive correlations of empathic accuracy with other model variables, such as commitment and perspective-taking (average *r*s = .18 and .31; Hypothesis 5).

We also examined simple cross-partner associations among model variables, the results of which are also displayed in Appendix A (see “Across-partner *r*s”). These analyses revealed significant across-partner, same-variable correlations (i.e., correlations between partners’ reports of the same variable) at Times 2, 4, and 6 for dyadic adjustment and accommodation, and at Times 2 and 6 for empathic accuracy. Across-partner, same-variable correlations were significant at Times 2, 4, and 6 for commitment (*r*s = .59, .51, and .47), and at Times 2 and 6 for partner perspective-taking (.36, .32, and .10), but were nonsignificant for femininity (.01, .01, and .08). Also, and in support of the assumption that we might observe partner effects for many of our hypotheses, many other across-partner, different-variable correlations were significant (i.e., correlations between partners’ reports of different variables). For example, self-reports of accom-

modation were correlated with partner reports of dyadic adjustment.

*Analysis strategy*

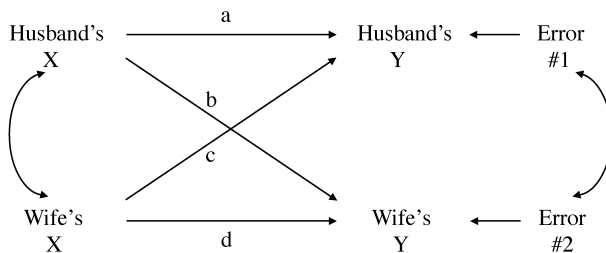
Given that male and female partners’ scores are not independent for most model variables, we adopted an analysis strategy that employs structural equation modeling to separate actor effects (within-individual associations) from partner effects (across-partner associations; Kenny, 1996). For example, in an analysis assessing the association of *X* with *Y*, we simultaneously examined four scores: the husband and the wife scores for variable *X*, and the husband and the wife scores for variable *Y*. Our goal was to simultaneously regress the husband and wife scores for *Y* onto the husband and wife scores for *X*. This structural equation model is displayed in Figure 2. Paths a and d represent actor effects, or the extent to which the individual’s score for variable *X* is related to the individual’s score for variable *Y* (e.g., is the husband’s accommodation a function of his own empathic accuracy?). Paths b and c represent partner effects, or the extent to which an individual’s score for variable *X* is related to the partner’s score for variable *Y* (e.g., is the husband’s accommodation a function of his wife’s empathic accuracy?).

Using couple as the unit of analysis, two regression equations were simultaneously estimated using the Amos software package (Small Waters Corporation, 1997):

$$Y_H = aX_H + cX_W + e_1$$

$$Y_W = dX_W + bX_H + e_2.$$

Subscripts denote whether a variable represents the husband’s score or the wife’s score,



**Figure 2.** Structural equation model representing possible actor effects and partner effects.

and a, b, c, and d represent standardized regression coefficients corresponding to two actor effects (effects a and d) and two partner effects (effects c and b). There are no latent variables. To control for the nonindependence of partners' scores, the two  $X$  variables are allowed to correlate, as are the two error terms. This model is just identified; it will fit the data perfectly, and will have a chi-square and degrees of freedom equal to zero.

Each coefficient is tested with a  $z$ -test, or by dropping it from the model and assessing the change in  $\chi^2$  (1  $df$ ). The presence of actor effects and partner effects is tested by dropping both actor effects (or both partner effects) from the model and assessing the change in  $\chi^2$  (2  $df$ ). Sex differences in actor effects and partner effects are tested by constraining the two actor effects (or the two partner effects) to be equal and assessing the change in  $\chi^2$  (1  $df$ ). For all findings reported below, we report statistics for actor effects and partner effects from analyses regressing husbands' and wives' criteria onto husbands' and wives' predictors. At the same time, to provide effect size estimates for key analyses, we also report pooled coefficients (coefficients for husbands and wives combined). In light of our speculation that the associations of empathic accuracy with model variables may decline over time in marriage, we begin by reporting analyses for the Time 2 data; parallel analyses performed for the Time 4 and Time 6 data are discussed later.

#### *Empathic accuracy, accommodation, and couple well-being, Time 2*

Hypothesis 1 predicted that to the degree individuals achieve greater empathic accuracy, they would be more likely to accommodate during couple conflict. To test for the existence of actor and partner effects, we regressed the husband's and wife's self-reports of accommodation simultaneously onto the husband's and wife's Empathic Accuracy scores. Table 1 presents standardized coefficients and  $\chi^2$ 's for the actor and partner effects from this analysis, along with pooled coefficients. Consistent with expectations, the overall actor effect of Empathic Accuracy was significant (see Hypothesis 1 in the table;

$\chi^2 = 9.65$ ,  $p < .01$ ); this effect was significantly stronger for wives than for husbands. In addition, the overall partner effect was significant. Thus, to the extent that wives exhibit greater empathic understanding, they themselves are more likely to accommodate during conflict; to the extent that both husbands and wives exhibit greater empathic understanding, their partners (both wives and husbands) are more likely to accommodate.<sup>4</sup>

Hypothesis 2 predicted that to the degree that individuals achieve greater empathic accuracy during conflict, their relationships would function better. To test for the existence of actor and partner effects, we regressed the husband's and wife's dyadic adjustment scores simultaneously onto the husband's and wife's empathic accuracy scores. Consistent with expectations, the overall actor effect of empathic accuracy was significant, and the overall partner effect was marginal (see Hypothesis 2 in the table). Thus, to the extent that each individual exhibits greater empathic understanding, both the individual and the partner report greater couple well-being.

We also predicted that the association of empathic accuracy with couple well-being would be significantly yet partially mediated by accommodative behavior (Hypotheses 3a and 3b). To explore the plausibility of our predictions, we regressed both persons' adjustment scores simultaneously onto their empathic accuracy *and* accommodation scores (see Hypothesis 3 in Table 1; Baron & Kenny, 1986). Consistent with Hypothesis 3a, tests of the significance of mediation revealed that in accounting for associations with couple well-being, accommodation marginally mediated the actor effect of empathic accuracy ( $z = 1.91$ ,  $p < .06$ ) and significantly mediated the partner effect of empathic accuracy ( $z = 3.04$ ,  $p < .01$ ; Kenny, Kashy, & Bolger, 1998). And

4. There is only partial overlap in the couples for whom we have data at Times 2, 4, and 6, so we were unable to perform residualized lagged analyses to examine the ability of earlier predictors to account for change over time in criteria. If we were to limit the analyses to couples for whom we had data on all (or even just two of three) research occasions, our sample size would be insufficient to yield acceptably powerful statistical tests.

consistent with the prediction that mediation would be partial rather than complete (i.e., that empathic accuracy would account for unique variance beyond accommodation; Hypothesis 3b) in predicting dyadic adjustment from both empathic accuracy and accommodation, the overall actor effect of empathic accuracy was significant; however, the partner effect was not. Thus, the actor effect of empathic accuracy on couple well-being is partially (marginally significantly) mediated by accommodation; the partner effect of empathic accuracy is fully mediated by accommodation.<sup>5</sup>

*Empathic accuracy, accommodation, and couple well-being, Times 4 and 6*

We held the general expectation that over time in marriage (a) the levels of empathic accuracy would decline (Hypothesis 4a) and (b) the strength of the association of empathic accuracy with accommodation and couple

well-being would decline (Hypothesis 4b). We performed two-factor analyses of variance to examine changes over time in levels of empathic accuracy, as well as in other model variables. There is only partial overlap in the couples for whom we have data at Times 2, 4, and 6, so we represented time as a between-couples variable and represented sex as a within-couple variable (this arguably is a conservative test of time effects). Consistent with Hypothesis 4a, the main effect of time on empathic accuracy was significant ( $M_s = 18.74, 12.71, \text{ and } 11.85; F [2, 114] = 6.40, p < .01$ ). Contrasts using Tukey's HSD test revealed that mean empathic accuracy was significantly greater at Time 2 than at Times 4 and 6. Standard deviations for empathic accuracy did not differ significantly as a function of time, men and women did not differ significantly in mean Empathic Accuracy, and the interaction of time with sex was nonsignificant. Is the observed change over time in levels of adjusted empathic accuracy attributable to declines over time in unadjusted accuracy, increases in baseline accuracy, or both? Analyses of variance revealed a marginally significant main effect of time on unadjusted empathic accuracy ( $M_s = 40.23, 36.59, \text{ and } 35.02; F [2, 114] = 2.43, p < .10$ ); levels of baseline empathic accuracy increased descriptively, but this increase was not statistically significant ( $M_s = 21.49, 23.88, \text{ and } 23.18; F [2, 114] = 0.58, ns$ ). Thus, the ability and/or inclination of partners to accurately infer the specific content of one another's thoughts and feelings declined substantially following the first year of marriage; this change is attributable to a marginal decline in unadjusted empathic accuracy, along with a nonsignificant increase in baseline accuracy.<sup>6</sup>

5. Is it possible that order of causation is other than that specified in Figure 1? For example, is it possible that each person's tendency to accommodate enhances both his or her own and the partner's inclination toward empathic accuracy, which in turn promotes couple well-being? The actor and partner effects for the accommodation-adjustment association were significant in both a one-factor analysis (combined  $\beta_s = .47$  and  $.32$ , both  $p_s < .01$ ) and in the two-factor analysis in which we regressed both persons' adjustment scores simultaneously onto their empathic accuracy and accommodation scores (combined  $\beta_s = .43$  and  $.22$ , both  $p_s < .01$ ). Tests of the significance of mediation revealed that in accounting for the association of accommodation with dyadic adjustment, empathic accuracy marginally mediated the actor effect ( $z = 1.89, p < .06$ ) and significantly mediated the partner effect ( $z = 1.97, p < .05$ ; Kenny et al., 1998).

The Dyadic Adjustment Scale includes some items that refer to the existence of couple conflict (e.g., "Do you agree about sex relations?") or to the effectiveness with which partners resolve conflict (e.g., "How often do you or your partner leave the house after a fight?"). Is it possible that our results are influenced by the fact that this operational definition includes accommodation-relevant content; that is, are our findings attributable to item overlap regarding conflict? We developed a "conflict-purged" measure of dyadic adjustment by dropping items that made reference to conflict, and replicated the analyses reported in Tables 1 and 2. In all instances, patterns of significance (or marginal significance) versus nonsignificance were identical.

6. The main effect of time was nonsignificant for dyadic adjustment, accommodative behavior, commitment level, perspective-taking, and psychological femininity. Compared to men, women reported lower accommodation ( $M_s = 2.75$  and  $2.36; F [1, 133] = 7.51, p < .01$ ), higher dyadic adjustment ( $M_s = 121.34$  and  $123.49; F [1, 132] = 6.29, p < .05$ ), higher commitment ( $M_s = 6.50$  and  $6.81; F [1, 127] = 9.40, p < .01$ ), and lower partner perspective-taking ( $M_s = 5.16$  and  $4.84; F [1, 141] = 7.10, p < .01$ ). No time by sex interactions were significant.

**Table 1.** Predicting husbands' and wives' accommodative behavior and dyadic adjustment: Time 2

	Husband predictor	Wife predictor	Combined effect	Effect $\chi^2$
Hypothesis 1: <i>Predicting accommodative behavior</i>				
<i>Empathic accuracy → Accommodation</i>				
Actor effect: Own accommodation <sup>a</sup>	-.04	.49	.21	9.65**
Partner effect: Partner's accommodation	.20	.59	.41	15.59**
Hypothesis 2: <i>Predicting dyadic adjustment</i>				
<i>Empathic accuracy → Dyadic adjustment</i>				
Actor effect: Own dyadic adjustment	.30	.56	.44	19.25**
Partner effect: Partner's dyadic adjustment	.17	.26	.21	4.98+
Hypothesis 3: <i>Predicting dyadic adjustment</i> (Controlling for accommodative behavior)				
<i>Empathic accuracy → Dyadic adjustment</i>				
Actor effect: Own dyadic adjustment	.33	.40	.37	12.57*
Partner effect: Partner's dyadic adjustment	.11	-.15	-.02	1.24
Mediation of actor effect by accommodation: $z = 1.91, p < .06$				
Mediation of partner effect by accommodation: $z = 3.04, p < .01$				

*Note.* Statistics are from structural equation modeling analyses in which both partners' criteria were regressed onto both partners' predictors; "Effect  $\chi^2$ " represents the significance of actor and partner effects in these analyses, and values under "Husband" and "Wife" are standardized coefficients from these analyses. Values under "Combined effect" are effect size estimates, or pooled standardized coefficients. Actor effects are the association of each person's predictor with that person's criterion; partner effects are the association of each person's predictor with the partner's criterion.

<sup>a</sup>Coefficient differed significantly for husbands and wives.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

To determine whether the associations of empathic accuracy with accommodation and adjustment tended to be stronger during the first year than later in marriage, we replicated key analyses using data from Times 4 and 6. The results of these analyses are displayed in Table 2. We know of no direct test to determine whether Time 2 coefficients differ from those at Times 4 and 6, in that there is only partial overlap in the couples for whom we have data at Times 2, 4, and 6. However, consistent with Hypothesis 4b, the Time 4 and Time 6 findings are *descriptively* weaker than are parallel Time

2 findings: In predicting both accommodation and adjustment, at Time 2 both overall actor effects were significant and both overall partner effects were at least marginal. In contrast, at Times 4 and 6 only one of four overall actor effects was even marginal and no overall partner effects were significant. (Such declines over time in the strength of actor effects and partner effects were not evident for other model variables. For example, parallel analyses revealed moderate to sizeable actor effects for the association of accommodation with dyadic adjustment not only at Time 2



[combined  $\beta = .48$ ], but also at Times 4 and 6 [combined  $\beta$ s = .46 and .38].)

*Potential determinants of empathic accuracy, Times 2, 4, and 6*

We speculated that individuals might exhibit greater empathic accuracy to the degree that they were more strongly committed, exhibited greater partner perspective-taking, and were more psychologically feminine (Hypotheses

5a, 5b, and 5c). To explore these possibilities, we regressed both persons' empathic accuracy scores onto both persons' scores for each potential predictor. The results of these analyses are summarized in Table 2. At Time 2, the overall actor effect of partner perspective-taking on empathic accuracy was significant; overall partner effects were significant or marginal for commitment, perspective-taking, and femininity (see under Hypothesis 5 in Table 2). Thus, during the first year of

**Table 2.** Predicting husbands' and wives' empathic accuracy, accommodative behavior, and dyadic adjustment: Times 2, 4, and 6

	Time 2	Time 4	Time 6
Hypothesis 1: <i>Predicting accommodative behavior</i>			
<i>Empathic accuracy → Accommodation</i>			
Actor effect: Own accommodation	.21**	.06	.22
Partner effect: Partner's accommodation	.41**	.19	.10
Hypothesis 2: <i>Predicting dyadic adjustment</i>			
<i>Empathic accuracy → Dyadic adjustment</i>			
Actor effect: Own dyadic adjustment	.44**	-.08	.27+
Partner effect: Partner's dyadic adjustment	.21+	.05	.12
Hypothesis 5: <i>Potential determinants of empathic accuracy</i>			
<i>Commitment level → Empathic accuracy</i>			
Actor effect: Own empathic accuracy	.05	-.06	.06
Partner effect: Partner's empathic accuracy	.44**	-.14	-.06
<i>Partner perspective-taking → Empathic accuracy</i>			
Actor effect: Own empathic accuracy	.31**	-.10	.01
Partner effect: Partner's empathic accuracy	.26*	.15	.12
<i>Psychological femininity → Empathic accuracy</i>			
Actor effect: Own empathic accuracy	.11	.01	-.06
Partner effect: Partner's empathic accuracy	.16+	.03	.04

Note. Tests of significance are from structural equation modeling analyses in which both partners' criteria were regressed onto both partners' predictors. Values under "Time 2," "Time 4," and "Time 6" are effect size estimates, or pooled standardized coefficients. Actor effects are the association of each person's criterion with that person's predictor; partner effects are the association of each person's criterion with the partner's predictor.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

marriage, to the extent that individuals engage in greater perspective-taking, they exhibit greater empathic accuracy; to the extent that they are more committed, engage in greater perspective-taking, and are more feminine, their partners exhibit greater empathic accuracy. At Times 4 and 6, the results once again were descriptively weaker—not one of 12 actor or partner effects was even marginal.

For any actor and partner effects that were significant at Time 2, we performed mediation analyses to determine whether empathic accuracy plausibly mediates associations with accommodation and couple well-being (Baron & Kenny, 1986; Kenny et al., 1998). Tests of the significance of mediation revealed that empathic accuracy (a) significantly or marginally mediated the partner effects of commitment on accommodation ( $z = 2.51, p < .01$ ) and dyadic adjustment ( $z = 1.90, p < .06$ ); (b) significantly or marginally mediated the actor effects of perspective-taking on accommodation ( $z = 1.73, p < .08$ ) and dyadic adjustment ( $z = 2.61, p < .01$ ), as well as the partner effects on accommodation ( $z = 2.21, p < .03$ ) and dyadic adjustment ( $z = 1.77, p < .08$ ); and (c) did not significantly mediate the partner effects of femininity on accommodation ( $z = 1.42, ns$ ) or dyadic adjustment ( $z = 1.02, ns$ ). Thus, at Time 2, empathic accuracy plausibly plays a role in mediating the actor effects of perspective-taking, as well as the partner effects of commitment and perspective-taking.

In predicting accommodation and couple well-being, does empathic accuracy account for unique variance beyond each potential predictor? Appendix B summarizes Time 2 analyses in which we regressed both persons' criteria onto (a) both persons' scores for a single predictor variable (the one-factor model) as well as (b) both persons' scores for two predictor variables (the two-factor model). In 7 of 12 two-factor analyses, empathic accuracy accounted for unique variance in accommodation or dyadic adjustment beyond other potential predictors (see "Two-factor models" under the "Empathic accuracy" column); it is noteworthy that empathic accuracy accounted for little vari-

ance beyond partner perspective-taking. Thus, at Time 2, the actor and partner effects of empathic accuracy extend beyond variance attributable to commitment or femininity; such effects decline to nonsignificance at Times 4 and 6 (unreported analyses).<sup>7</sup>

In predicting accommodation and couple well-being, does each potential predictor account for unique variance beyond empathic accuracy? In 8 of 12 Time 2 analyses, potential predictors accounted for unique variance in accommodation or dyadic adjustment beyond empathic accuracy (see "Two-factor models" under "Other predictors"). Thus, at Time 2—as well as at Times 4 and 6 (unreported analyses)—commitment, partner perspective-taking, and femininity plausibly affect accommodation and couple well-being not only indirectly (via associations with empathic accuracy) but also directly (via other routes).

## Discussion

In the introduction we advanced hypotheses regarding the consequences of empathic accuracy, speculated about the effects of time in marriage, discussed the possibility of both actor effects *and* partner effects in the associations among model variables, and identified several possible determinants of empathic accuracy. We begin by discussing findings from the first year of marriage, reviewing actor effects, partner effects, possible determinants of accurate understanding, and sex differences. Following this, we address findings for Times 4 and 6 of the study.

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7. Is it possible that empathic accuracy is the cause rather than the consequence of our three predictors? Tests of the significance of mediation suggest that commitment and femininity do not plausibly play a role in accounting for the association of empathic accuracy with either accommodation or dyadic adjustment (only two of eight  $z$ s were significant or marginal). However, perspective-taking significantly mediated the actor effects of empathic accuracy on accommodation ( $z = 2.34, p < .02$ ) and dyadic adjustment ( $z = 2.19, p < .03$ ), marginally mediated the partner effect of empathic accuracy on dyadic adjustment ( $z = 1.94, p < .06$ ), and did not significantly mediate the partner effect of empathic accuracy on accommodation ( $z = 1.51, ns$ ).

*Empathic accuracy, accommodation, and adjustment early in marriage: actor effects and partner effects*

We predicted that individuals exhibiting greater empathic accuracy would be more likely to accommodate during conflicted interaction (Hypothesis 1), and that their relationships would exhibit enhanced adjustment (Hypothesis 2). Indeed, the Time 2 analyses revealed actor effects in the associations of empathic accuracy with both accommodation and adjustment (the former effect was significant only for wives; we will return to this result later). These findings are compatible with the claim that as a within-individual phenomenon, empathic accuracy promotes prosocial transformation of motivation, prosocial behavior, and enhanced couple well-being. These findings are also consistent with other work revealing positive associations among partner-oriented perception, prosocial relationship maintenance acts, and quality of couple functioning (e.g., Arriaga & Rusbult, 1998; Finkel et al., 2002; Rusbult et al., 1991; Van Lange et al., 1997).

Interdependence theory suggests the possibility of both within-individual and across-partner associations among interaction-relevant variables (Kelley & Thibaut, 1978). Over the course of extended interaction, the options and outcomes of each person are argued to be dependent upon the preferences, motives, and goals of both the individual and the partner. Thus, we held the general expectation that we might observe both actor effects and partner effects in the associations of empathic accuracy with accommodation and couple well-being. Indeed, the analyses revealed a partner effect of empathic accuracy on accommodation, such that individuals who exhibited more accurate understanding had partners who were more likely to accommodate (Hypothesis 1). The analyses also revealed a simple partner effect in the association of empathic accuracy with adjustment (Hypothesis 2), but this effect declined to nonsignificance when variance attributable to accommodation was taken into account. That is, this effect plausibly explained the fact that when individuals exhibit greater

empathic understanding, one or both persons accommodate at higher levels and their partners report greater adjustment.

We offer two lines of speculation to account for the partner effect of empathic accuracy on accommodation. First, it is possible that the partner effect resides largely in the partner. For example, perhaps the partner develops stronger trust when the actor is empathically accurate, and the partner accordingly feels more inclined to “give the actor a break” by accommodating during the course of conflict. Second, it is possible that the partner effect resides as much in the actor’s behavior as in the partner’s. For example, to the extent that an actor achieves empathic understanding, the actor may have better insights about how to communicate his or her personal needs; as a consequence, the partner may better understand the actor, form more benevolent interpretations of the partner’s behavior, and accordingly come to accommodate during the course of conflict. As such, partner effects can be described as either “actor driven” or “partner driven” influences on the partner’s motives and behavior.

Both lines of reasoning are compatible with recent work demonstrating both actor effects *and* partner effects in the associations among commitment, accommodation, and trust. Wieselquist et al. (1999) developed a model of mutual cyclical growth in ongoing relationships, suggesting that (a) the abilities, motives, and behavior of the actor exert reliable effects on the partner (e.g., the actor’s empathic accuracy promotes the actor’s inclination to accommodate, which in turn yields enhanced partner trust); and (b) in turn, the partner’s abilities, motives, and behavior exert reliable effects on the actor (e.g., the partner’s enhanced trust motivates the partner to achieve greater empathic accuracy, which in turn yields enhanced partner accommodation, which in turn yields enhanced actor trust). In the long run, this sort of mutual cyclical growth yields considerable vitality in a generally healthy relationship, in that (a) the actions of each actor promote parallel processes on the part of the partner and (b) ultimately, “later” model variables feed back on and promote “earlier” variables. Future work should further examine

the associations among empathic understanding, partner trust, and prosocial acts such as sacrifice and forgiveness.

#### *Mediation of associations with adjustment early in marriage*

We also explored the nature of the causal associations among empathic accuracy, accommodation, and couple well-being. Consistent with the claim that empathic accuracy promotes couple well-being at least in part via its influence on accommodative behavior, Time 2 analyses revealed that accommodation marginally or significantly mediated the actor and partner effects of empathic accuracy on dyadic adjustment (Hypothesis 3a). And consistent with the claim that empathic accuracy promotes prosocial motives and exerts rather broad effects on couple well-being, Time 2 analyses revealed an actor effect of empathic accuracy on dyadic adjustment above and beyond variance attributable to accommodation; however, the partner effect of empathic accuracy on adjustment was entirely attributable to mediation by accommodation (Hypothesis 3b). Thus, emphatically accurate actors experience healthy relationships not only because they accommodate at higher levels, but for other reasons as well; their partners experience healthy relationships largely because they respond to the actor's accuracy by accommodating.

Is it possible that the causal relations between empathic accuracy and accommodation are the reverse of that displayed in Figure 1, such that accommodation promotes empathic accuracy, which in turn promotes couple well-being? For example, is it possible that accommodation essentially taps the strength of individuals' prosocial motives, and that greater motivation to benefit one's relationship yields greater effort and/or ability relevant to achieving accurate understanding on the part of both actor and partner? We performed auxiliary mediation analyses to explore the plausibility of such a model (see footnote 5), and found that (a) empathic accuracy marginally or significantly mediated the actor and partner effects of accommodation on dyadic adjustment and (b) the actor and

partner effects of accommodation on dyadic adjustment extend beyond variance attributable to empathic accuracy. Thus, it is plausible that accommodation yields healthy relationships for both actors and partners not only because of the direct benefits of accommodation, but also because accommodation enhances the empathic accuracy of both actor and partner.

In short, from a purely statistical point of view, the two causal orders are indistinguishable. Of course, given that our analyses rest on concurrent analyses, we cannot form definitive conclusions about cause and effect. However, from a theoretical point of view, we believe that the Figure 1 model is the most plausible, in that it is common to assume that mental events (empathic accuracy) precede behaviors (accommodation), which in turn precede effects on relationships (dyadic adjustment). At the same time, there probably is an element of truth in both models: As noted earlier, we have argued for a model of mutual cyclical growth whereby earlier causes influence later effects, which in turn feed back on and influence earlier causes (Wieselquist et al., 1999). For example, couple well-being may ultimately feed back on and strengthen empathic accuracy and accommodation. We suspect that in the context of ongoing close relationships, many distinctions between cause and effect ultimately become blurred via extended feedback loops of this sort.

#### *Potential determinants of empathic accuracy early in marriage*

We speculated that individuals might exhibit greater empathic accuracy to the degree that they were more committed to their partners, more inclined toward partner perspective-taking, and more psychologically feminine (Hypotheses 5a, 5b, and 5c). Time 2 analyses revealed an actor effect of partner perspective-taking on empathic accuracy, and revealed partner effects on empathic accuracy for commitment, partner perspective-taking, and psychological femininity. Thus, early in marriage, empathic accuracy is more reliably elicited by attributes of the partner than it is driven by attributes of the individual (i.e.,

there was greater evidence of partner effects than actor effects).

How might we explain such effects? As noted in discussing partner effects for accommodation, we offer two lines of speculation. First, it is possible that these partner effects reside largely in the partner: When partners are interdependent with individuals who are committed to them, routinely attempt to see the world through their eyes, and care deeply about the quality of their shared relationship, partners may experience affective, cognitive, or motivational changes that increase their motivation and ability to achieve accurate understanding. For example, partners may feel loving rather than irritated when the individual behaves badly, partners may attend more carefully and form more differentiated and benevolent attributions regarding the individual's actions, and partners may develop more powerful prosocial inclinations. As a consequence of such processes, *partners may cause themselves* to better understand the individual's thoughts and feelings.

Second, it is possible that these partner effects reside largely in the actor: When actors are more committed, routinely attempt to see the world through the partner's eyes, and care deeply about the quality of their relationships, actors may develop affective, cognitive, or motivational changes that increase their motivation and ability to effectively communicate their needs to the partner. For example, actors may more freely express their emotions, more fully communicate their intentions, and more effectively display their prosocial motives. As a consequence of such processes, *actors may cause partners* to better understand the individual's thoughts and feelings.

Early in marriage, the variable that exhibited the most reliable associations with empathic accuracy was partner perspective-taking. Mediation analyses revealed that in predicting accommodation and dyadic adjustment, in three of four instances empathic accuracy marginally or significantly mediated the actor and partner effects of perspective-taking. At the same time, in predicting accommodation and adjustment, empathic accuracy accounted for unique variance beyond perspective-taking in only one of four

instances, whereas perspective-taking accounted for unique variance beyond empathic accuracy in all four instances. Collectively, these findings suggest that in understanding the effects of empathic accuracy, we might represent empathic accuracy as a cause rather than an effect of perspective-taking, or represent empathic accuracy and perspective-taking as two sides of the same coin in their implications for marital functioning. In either event, it seems clear that these variables are very closely related. This being the case, it would seem that empathic accuracy may promote prosocial acts primarily because accurate understanding entails "standing in the partner's shoes," which (a) makes the partner more salient to the actor, causing actors to form more benevolent construals of the partner's behavior, and leading actors to develop more prosocial motives; and (b) helps the actor make the self more salient to the partner, causing actors to more effectively communicate their benevolent intentions to partners, and eliciting more prosocial motives from partners. In turn, these positive events encourage both partners to exhibit prosocial acts, which in turn yields enhanced couple functioning.

It is noteworthy that previous studies have revealed nonsignificant associations of perspective-taking with empathic accuracy (e.g., Ickes, Stinson, et al., 1990). We assume that the significant links observed in the present work emerged because we examined *partner-specific* perspective-taking, whereas previous research examined *generalized* perspective-taking. It is also possible that the present findings are attributable to the fact that we examined *self-reported* tendencies to adopt the partner's perspective: In accounting for accommodative behavior, it may be more important that the individual *tries* to understand the partner (engages in partner perspective-taking) than that the individual *actually* understands the partner (achieves empathic accuracy).

Finally, we should note that although empathic accuracy was more reliably associated with perspective-taking than with commitment or psychological femininity, all three variables rather reliably accounted for unique variance in accommodation and dyadic adjust-



ment beyond variance attributable to empathic accuracy. Thus, commitment, perspective-taking, and femininity affect accommodation and adjustment not only by yielding accurate understanding, but also via other routes. Such associations have been discussed elsewhere (e.g., Arriaga & Rusbult, 1998; Finkel et al., 2002; Rusbult et al., 1991). Accordingly, we will say little about these findings, other than to note that such results are compatible with our general interdependence-based analysis of the role of dispositions and relationship-specific variables in promoting prosocial motives and behavior (cf. Rusbult & Van Lange, 1996).

### *Sex differences*

We did not advance a priori predictions about sex differences. However, we found that the actor effect of empathic accuracy on accommodation was evident for wives but not for husbands (the partner effect was evident for both sexes). This finding is particularly interesting in light of the fact that women exhibited lower levels of accommodation than men (see footnote 6). Thus, although wives were less constructive than their husbands, their empathic accuracy had more impact in shaping their own inclinations to accommodate. Prior research has often revealed sex differences in interaction tendencies. Some work suggests that women are more socially sensitive, interpersonally attentive, and skilled at nonverbal communication than men, whereas other research suggests that women are more demanding, more coercive, and less accepting (e.g., Gottman, 1979; Hall, 1978; Rosenthal & DePaulo, 1979).

How should we interpret the present findings? Perhaps women are more social-emotional than men, react in a more extreme and active manner to interpersonal situations, and accordingly exert a stronger impact on interaction (cf. Parsons & Bales, 1955). In interpersonal situations that “pull” for positivity, women may react in an actively positive manner and exert more constructive effects on interaction than men. In situations that “pull” for negativity, women may react in an actively negative manner and exert more destructive

effects on interaction. Of course, this line of reasoning is speculative, in part because there are insufficient regularities in the empirical literature to develop firm conclusions. Perhaps the present work will contribute to the emergence of clearer regularities.

### *Early marriage versus later marriage*

In the introduction, we speculated that (a) levels of empathic accuracy might decline over time in marriage (Hypothesis 4a), and (b) the impact of empathic accuracy on other model variables might decline (Hypothesis 4b). Consistent with expectations, we found that the ability to accurately infer the specific content of a partner's thoughts and feelings declined following the first year of marriage; this effect was attributable to marginal decreases in unadjusted accuracy, along with nonsignificant increases in baseline accuracy. Also, associations with empathic accuracy were descriptively stronger during the first year of marriage than during later years. Moreover, test-retest correlations revealed that earlier and later empathic accuracy scores were uncorrelated, suggesting that the meaning of empathic accuracy differs over time. How can we explain these findings?

To begin with, we do not believe that there was a “floor effect” in empathic accuracy. Although levels of empathic accuracy declined over time, the variability in scores did not differ as a function of time. Also, our results would not seem to be attributable to differential measurement accuracy. The reliability of empathic accuracy ratings remained strong over time, and the duration of the interactions on which accuracy ratings were based increased, yielding an increase in the number of stop points on which ratings were based. Also, wives' and husbands' empathic accuracy scores were positively correlated not only at Time 2, but also at Time 6 of the study.

Is it possible that associations with empathic accuracy were stronger at Time 2 than at Times 4 and 6 precisely *because* partners performed empathic accuracy judgments at Time 2? Once partners knew that they would be asked to report on each other's thoughts and feelings, they may have paid particular attention to each other during

interaction, thereby eliminating meaningful variability in our measure of empathic accuracy. We think this is unlikely, in that if awareness of our procedure instigated attempts to enhance empathic understanding, partners' scores should have increased over time. Instead, empathic accuracy scores declined.

Is it possible that we differentially activated empathic motives and skills at Times 2, 4, and 6? At all three occasions couples completed warm-up interactions. At Times 4 and 6 the warm-up was neutral in that the couples recreated the conversation they had prior to arriving at the laboratory. At Time 2 each person was asked to "discuss with your partner something you would like to change about yourself. Try to be as open and expressive of your feelings as possible." The partner was asked to "help your partner express his/her feelings." This warm-up task may have primed skills relevant to empathic accuracy, such as adopting the partner's perspective, attending to the partner's thoughts, or reflecting the partner's feelings. If so, Time 2 empathic accuracy scores may represent a "best effort" estimate of partners' abilities. In future work it would be interesting to determine whether level of empathic accuracy is influenced by differential priming of empathic skills and motives.

In the final analysis, we believe that changes over time in the level and impact of empathic accuracy are substantively meaningful. Assuming this to be so, there are at least three plausible explanations of the obtained findings. First, declines over time in empathic accuracy may reflect complacency or lack of motivation. For example, some authors have argued that empathic accuracy declines over time "because partners in longstanding relationships become complacent and overly familiar with each other and hence lack the motivation to actively monitor and detect the behavioral cues that facilitate judgmental accuracy" (Thomas et al., 1997, p. 840). This explanation seems unlikely in that other indices of prosocial motivation, including levels of accommodation, commitment, and perspective-taking, remained quite stable over the course of the study. Moreover, if we assume that partners' "stereotype accuracy," or global understanding of one another's

thoughts and feelings, is at least roughly tapped by our measure of baseline accuracy, it is noteworthy that this index did not decline over time; indeed, from a descriptive point of view, stereotype accuracy increased.

Second, declines over time in empathic accuracy may reflect motivated inaccuracy. As noted in a recent review of this literature, empathic *inaccuracy* may be adaptive when "accuracy [would lead] to insights that are not only painful and distressing to one or both partners, but also raise doubts about the strength and permanence of their relationship" (Ickes & Simpson, 1997, p. 224). When the reality of an involvement is discrepant from partners' ideals for their relationship, partners may be motivated to restrict their attention to negative events, selectively misrecall information, or change their perceptions to match their ideals (or vice versa; cf. Simpson, Fletcher, & Campbell, 2001). This interpretation is indirectly supported by research regarding other motivated processes, whereby close partners (a) react to threat and uncertainty by enhancing the desirability of their partners and relationships and/or exhibiting downward social comparison (e.g., Murray & Holmes, 1996; Rusbult et al., 2000), and (b) react to the threat of tempting alternatives by not attending to the alternative and/or cognitively derogating the alternative (Johnson & Rusbult, 1989; Miller, 1997).

However, if declines over time in empathic accuracy reflected motivated inaccuracy, we would anticipate rather blanket reductions over time in empathic accuracy, including not only adjusted and unadjusted accuracy, but also stereotype accuracy. As noted earlier, in the present work stereotype accuracy (i.e., baseline accuracy) remained constant or (descriptively) increased over time. Also, couples did not appear to suffer substantial increases in threatening or problematic interactions, in that levels of dyadic adjustment did not change significantly over the course of the study. And certainly, there was no evidence of negative associations of empathic accuracy with variables such as commitment or dyadic adjustment. At the same time, it is possible that over time couples did begin to encounter more threatening or problematic interactions,

and that the benefits of accuracy were offset by the liabilities. Perhaps couples were on the cusp between the pursuit of accuracy and the pursuit of inaccuracy. If many couples were in the midst of such a shift during the second and third years of their marriage, it makes sense that their levels of accuracy not only declined, but that their tendencies toward accurate understanding were unrelated to other variables that we assessed. This possibility remains to be explored in longitudinal research examining the balance of motivation toward accuracy versus inaccuracy over the course of more extended periods of time.

Third, declines over time in empathic accuracy may reflect the triumph of habit over scrupulous attention. In the introduction, we suggested that empathic accuracy may be most relevant to understanding motivation and behavior early in marriage. Early in marriage partners may actively work to solve interaction problems, consciously analyzing situational constraints and opportunities. In the context of active problem-solving, empathic accuracy is likely to be particularly adaptive. But, over time, specific interaction situations will be encountered regularly and behavior may increasingly come under the control of stable motives and behavioral inclinations. Indeed, we found that for variables other than empathic accuracy, associations that were evident during the first year of marriage were also evident during later years. That is, variables reflecting stable orientations relationship-specific habits continued to exhibit reliable associations with accommodation and couple well-being. Thus, the scrupulous monitoring and active problem-solving that initially play a role in guiding behavior may be replaced by relationship-specific motives such as commitment, or by well-established habits such as tendencies to accommodate. The possibility that habit and motivated inaccuracy may operate in a complementary manner over the course of extended involvements remains to be explored in future work.

#### *Limitations and directions for future research*

Before closing, we should comment on two important limitations of this work. First,

several constructs were measured using self-report instruments. Thus, our work is subject to common critiques of self-report measurement in that socially desirable responding, retrospective reconstruction, and the like might color our findings. It is noteworthy that our central construct, empathic accuracy, was assessed using well-validated procedures (Ickes, Bissonnette, et al., 1990). We assessed the remaining constructs using instruments that have been successfully employed in previous work. For example, self-reports of accommodation have been shown to be associated with partners' reports of the individual's accommodation, with measures obtained by coding audiotape or videotaped conversations, and with performance in laboratory tasks designed to measure conciliation (Rusbult et al., 1991; Rusbult, Bissonnette, et al., 1998). Also, our measure of commitment has been shown to predict voluntary persistence in relationships (Rusbult, 1983; Rusbult, Martz, et al., 1998). At the same time, in future work it would be fruitful to explore the contributions of empathic accuracy to couple well-being using alternative measurement techniques, including behavioral indicators, unobtrusive measures, and physiological indices.

A second limitation of the present work is that our conclusions rest largely on concurrent analyses. Our data were from a longitudinal study, but given that there was only partial overlap in the couples for whom we had data at the three research occasions, we were unable to perform analyses to examine change over time in key criteria (see footnote 4). Moreover, not only were our mediation findings based on concurrent analyses, but also those analyses could only be performed at one of three research occasions. Thus, it should be clear that we cannot form confident conclusions regarding cause and effect, and it must be recognized that our mediation analyses simply assess the plausibility of a few possible causal orderings. In future work, it will be important to obtain data from large numbers of couples using recruitment procedures that maximize the odds of attaining adequate changeover time in key criteria (e.g., recruiting samples in such a manner that the distribution of movement

toward increased versus decreased functioning is relatively normal).

### Conclusions

During the first year of marriage, good things come to those who more fully understand their partners: Wives with greater empathic accuracy exhibit greater willingness to accommodate during conflict, both wives and husbands exhibit greater accommodation to the extent that their partners are more empathically accurate, and to the extent that both persons accurately understand one another, their marriage is benefited. Achieving an accurate understanding of one's

partner may rest on such qualities as one's own and the partner's feelings of commitment, tendencies toward partner perspective-taking, and psychological femininity. Interestingly, levels of empathic accuracy decline following the first year of marriage, and the strength of associations with empathic accuracy likewise decreases. Thus, the scrupulous monitoring that characterizes empathic accuracy appears to shape behavior and influence couple well-being primarily during the first year of marriage. The interdependence-based analysis on which this research was founded provides a particularly rich yet parsimonious explanation of these processes.

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## Appendix A

*Within-individual and across-partner correlations for wives and husbands: Times 2, 4, and 6*

	Within-individual <i>r</i> s			Across-partner <i>r</i> s		
	DAS	ACC	EMP	DAS	ACC	EMP
Time 2 correlations:						
Dyadic adjustment		.66**	.43**	.68**	.59**	.27+
Accommodative behavior	.64**		.37*	.41**	.51**	.43**
Empathic accuracy	.33*	.23		.47**	.45**	.42**
Time 4 correlations:						
Dyadic adjustment		.64**	-.21	.69**	.54**	.10
Accommodative behavior	.62**		-.08	.44**	.56**	.17
Empathic accuracy	.08	.17		.04	.21	.10
Time 6 correlations:						
Dyadic adjustment		.56**	.17	.71**	.50**	.22
Accommodative behavior	.41*		.03	.31+	.58**	.13
Empathic accuracy	.38*	.38*		.21	.21	.34*

*Note.* DAS = dyadic adjustment; ACC = accommodative behavior; EMP = empathic accuracy. For within-individual associations, correlations for wives are displayed above the diagonal, and correlations for husbands are displayed below the diagonal. For across-partner associations, columns represent wives' variables and rows represent husbands' variables. + $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

## Appendix B

*Predicting husbands' and wives' accommodative behavior and dyadic adjustment — Simple associations and unique variance attributable to other model variables: Time 2*

	Empathic accuracy		Other predictors	
	One-factor model	Two-factor model	One-factor model	Two-factor model
Accommodation	<u>Empathic accuracy</u>		<u>Accommodation</u>	
Actor effect: Own dyadic adjustment	.44**	.37*	.47**	.43**
Partner effect: Partner's dyadic adjustment	.21+	-.02	.32**	.22**
Commitment level	<u>Empathic accuracy</u>		<u>Commitment level</u>	
Actor effect: Own accommodation	.21**	.14+	.34*	.18+
Partner effect: Partner's accommodation	.41**	.35**	.19	.16
Actor effect: Own dyadic adjustment	.44**	.31**	.31**	.42**
Partner effect: Partner's dyadic adjustment	.21+	.04	.40**	.25*
Partner perspective-taking	<u>Empathic accuracy</u>		<u>Partner perspective-taking</u>	
Actor effect: Own accommodation	.21**	-.01	.66**	.56**
Partner effect: Partner's accommodation	.41**	.18	.13*	.02
Actor effect: Own dyadic adjustment	.44**	.29*	.38**	.29*
Partner effect: Partner's dyadic adjustment	.21+	.04	.27*	.10*
Psychological femininity	<u>Empathic accuracy</u>		<u>Psychological femininity</u>	
Actor effect: Own accommodation	.21**	.11*	.43**	.43**
Partner effect: Partner's accommodation	.41**	.38**	.14	.06
Actor effect: Own dyadic adjustment	.44**	.39**	.22+	.28**
Partner effect: Partner's dyadic adjustment	.21+	.14	.14	.17

*Note.* Tests of significance are from structural equation modeling analyses in which both partners' criteria were regressed onto both partners' predictors. Values under "One-factor model" are from models including one predictor; values under "Two-factor model" are from models including two predictors; these values are effect size estimates, or pooled standardized coefficients. Actor effects are the association of each person's predictor with that person's criterion; partner effects are the association of each person's predictor with the partner's criterion.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .