Intimacy as an Interpersonal Process: The Importance of Self-Disclosure, Partner Disclosure, and Perceived Partner Responsiveness in Interpersonal Exchanges

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H. T. Reis and P. Shaver's (1988) interpersonal process model of intimacy suggests that both self-disclosure and partner responsiveness contribute to the experience of intimacy in interactions. Two studies tested this model using an event-contingent diary methodology in which participants provided information immediately after their social interactions over 1 (Study 1) or 2 (Study 2) weeks. For each interaction, participants reported on their self-disclosures, partner disclosures, perceived partner responsiveness, and degree of intimacy experienced in the interaction. Overall, the findings strongly supported the conceptualization of intimacy as a combination of self-disclosure and partner disclosure at the level of individual interactions with partner responsiveness as a partial mediator in this process. Additionally, in Study 2, self-disclosure of emotion emerged as a more important predictor of intimacy than did self-disclosure of facts and information.

Most theorists and researchers agree that intimacy is an essential aspect of many interpersonal relationships (e.g., Bartholomew, 1990; Clark & Reis, 1988; McAdams & Constantian, 1983; Prager, 1995; Reis, 1990; Sullivan, 1953; Waring, 1984). Nevertheless, considerable variability exists in conceptualizations of intimacy (Perlman & Fehr, 1987). Some theorists have defined intimacy as a quality of interactions between persons: Individuals emit reciprocal behaviors that are designed to maintain a comfortable level of closeness (e.g., Argyle & Dean, 1965; Patterson, 1976, 1982). Other theorists have focused on

the motivation to seek intimate experiences: People vary considerably in the strength of their need or desire for warm, close, and validating experiences with other people (e.g., McAdams, 1985; Sullivan, 1953). Variations also exist in assumptions about the way in which intimacy develops and is sustained in relationships. Some theorists propose that intimacy develops primarily through self-disclosure (e.g., Derlega, Metts, Petronio, & Margulis, 1993; Jourard, 1971; Perlman & Fehr, 1987), whereas others have suggested that additional components, such as a partner's level of responsiveness, contribute significantly to the development of intimacy in relationships (e.g., Berg, 1987; Davis, 1982). Furthermore, intimacy has been conceptualized both as a state or end product of a relationship and as a moment-to-moment outcome of a process reflecting movement or fluctuation through time (Duck & Sants, 1983).

A recently developed model of intimacy (Reis & Patrick, 1996; Reis & Shaver, 1988) integrates these multiple perspectives by describing intimacy as the product of a transactional, interpersonal process in which self-disclosure and partner responsiveness are key components. In this view, intimacy develops through a dynamic process whereby an individual discloses personal information, thoughts, and feelings to a partner; receives a response from the partner; and interprets that response as understanding, validating, and caring. Although the Reis and Shaver (1988) model provides a rich description of how intimacy develops on an interaction-by-interaction basis, some of the hypothesized links have yet to be directly tested in empirical work. In the present investigation, we test several components of the interpersonal process model of intimacy within the context of naturally occurring daily social interactions, thus allowing for an examination of the intimacy process on an interaction-by-interaction basis.

The Interpersonal Process Model of Intimacy

According to Reis and Shaver (1988), intimacy results from a process that is initiated when one person (the speaker) communicates personally relevant and revealing information to another person (the listener). The speaker discloses factual information, thoughts, or feelings and may further communicate emotions through nonverbal behaviors (e.g., gaze, touch, body orientation; see Patterson, 1984). As the intimacy process continues, the listener must respond to the speaker by disclosing personally relevant information, expressing emotion, and emitting various behaviors. For the speaker to interpret the listener's communication as responsive, the listener must convey that he or she understands the content of the speaker's disclosure, accepts or validates the speaker, and feels positively toward the speaker. At each stage of this process, personal qualities and individual differences, including motives, needs, and goals, can influence each person's behaviors and their interpretation of a partner's behavior (Reis & Patrick, 1996). Although Reis and Shaver largely focused on what occurs in any given interaction, they explicitly acknowledge that intimacy accrues across repeated interactions over time. As individuals interpret and assimilate their experiences in these interactions, they form general perceptions that reflect the degree to which the relationship is intimate and meaningful (Reis, 1994). Although these generalized perceptions of intimacy in the relationship develop over the course of repeated interactions, over time, they may take on an emergent property that goes beyond experiences in each individual interaction (Chelune, Robison, & Kommor, 1984).

The model emphasizes two fundamental components of intimacy: self-disclosure and partner responsiveness (Reis & Patrick, 1996; Reis & Shaver, 1988). Many definitions suggest that intimacy is a feeling of closeness that develops from personal disclosures between people (Perlman & Fehr, 1987). Self-disclosure refers to the verbal communication of personally relevant information, thoughts, and feelings to another; research in this area has often relied on degree or depth of self-disclosure as an index of intimacy (Altman & Taylor, 1973; Derlega et al., 1993; Jourard, 1971). Some theorists (Morton, 1978; Reis & Patrick, 1996; Reis & Shaver, 1988) have suggested that particular types of self-disclosure (i.e., those revealing the core self) are more closely linked to the experience of intimacy than others.

Researchers have distinguished between factual (i.e., descriptive) and emotional (i.e., evaluative) disclosure when examining the impact of disclosing the self in intimate relationships (Morton, 1978; Reis & Shaver, 1988). Factual self-disclosures are those that reveal personal facts and information (e.g., "I've had three romantic partners in my life"). Emotional self-disclosures are those that reveal one's private feelings, opinions, and judgments (e.g., "The last breakup was so painful that I'm not sure if I can love someone again"). Although both types of disclosures reveal private aspects of the self to others, disclosures involving emotions and feelings lie most closely at the core of one's self-definition (Greenberg & Safran, 1987; Reis & Patrick, 1996). Self-disclosures that involve emotions are believed to generate greater intimacy than those that are merely factual because such disclosures open the way for the listener

to support and confirm core aspects of the discloser's view of self (Reis & Shaver, 1988; Sullivan, 1953).

Partner responsiveness is the other key component in the development of intimacy (Berg, 1987; Berg & Archer, 1982; Davis, 1982; Kelley et al., 1983). Partners are responsive when their behaviors (e.g., disclosures, expressions of emotion) address the communications, needs, wishes, or actions of the person with whom they are interacting (Miller & Berg, 1984). According to Reis and Shaver (1988), speakers are more likely to experience an interaction as intimate if they perceive their partner's response as understanding (i.e., accurately capturing the speaker's needs, feelings, and situation), validating (i.e., confirming that the speaker is an accepted and valued individual), and caring (i.e., showing affection and concern for the speaker). Reis and Shaver regard the speaker's interpretation of the listener's communication as more important for the development of intimacy than a speaker's disclosure or the listener's actual response. Although a partner may make a genuine attempt to be responsive to a disclosure, the speaker may not perceive the partner's behavior as responsive to his or her needs. This reasoning suggests that the degree to which a listener's actual communication (what we will call partner disclosure) is associated with intimacy in the interaction should depend heavily on the nature of the speaker's perceptions of and feelings about the partner's response (what we will call perceived partner responsiveness). Thus, the extent to which the speaker perceives the partner as responsive should mediate the association between the partner's disclosure and level of intimacy in the interaction.

Despite the conceptual appeal of Reis and Shaver's (1988) interpersonal process model of intimacy, little empirical research has addressed its validity. One unpublished investigation of the model (Lin, 1992), however, suggests that both self-disclosure and partner responsiveness contribute to perceptions of intimacy at the level of the relationship. In this study, college students reported on their level of self-disclosure and perceptions of their partner's responsiveness after every social interaction over a 10-day period and, in a later interview, indicated the degree of relationship intimacy with each interaction partner. Both self-disclosure and perceived partner responsiveness, aggregated across daily interactions, predicted overall relationship intimacy: People who, on average, disclosed more and perceived a partner to be responsive reported greater intimacy in their relationship with that partner. In addition, there was some evidence that emotional disclosures were more important to relationship intimacy than were disclosures about facts. Although this study provided initial evidence that both self-disclosure and partner responsiveness are central components of intimacy at the level of the relationship, other important aspects of the model remain to be validated. In the present work, we sought to test the Reis and Shaver model by examining the links among several components of the intimacy process (i.e., self-disclosure, partner disclosure, partner responsiveness) on an interaction-by-interaction basis. It is particularly important to investigate these links at the level of interactions to determine whether feelings of intimacy in a given interaction are associated with the perception that self-disclosure has occurred and the perception that the partner returned the disclosure and was responsive.

Overview of Studies 1 and 2

The overarching goal of the present studies was to test Reis and Shaver's (1988) interpersonal process model of intimacy at the level of individual social interactions. In Study 1, we examined two key tenets of the Reis and Shaver model: (a) Self-disclosure and partner disclosure will contribute to feelings of intimacy on an interaction-by-interaction basis, and (b) this process will be mediated by the degree to which a partner is perceived as responsive. In Study 1, partner responsiveness was operationalized solely by the degree to which a partner was perceived as accepting. In Study 2, we replicated and extended the findings from Study 1 by relying on broader measures of perceived partner responsiveness and self-disclosure and by investigating a third hypothesis: (c) Emotional disclosures will contribute more to intimacy in the interaction than would factual disclosures.

We examined these aspects of the model by having participants complete a version of the Rochester Interaction Record (RIR; Reis & Wheeler, 1991). The RIR is an event-contingent diary that participants complete immediately following their social interactions over a specified period of time. In our studies, after every interaction, participants provided detailed information about their degree of self-disclosure, their perceptions of partner's disclosure, the degree to which they perceived their partners as responsive toward them, and their feelings of intimacy over a 1 (Study 1) or 2 (Study 2) week period. The RIR methodology allowed us to examine the hypothesized relationships among self-disclosure, partner disclosure, partner responsiveness, and intimacy on an interaction-by-interaction basis.

Study 1

In Study 1, we tested two basic hypotheses following from the Reis and Shaver (1988) model. First, we tested the hypothesis that both self-disclosure and partner disclosure predict feelings of intimacy. Figure 1A shows the path model representing the hypothesized links among self-disclosure, partner disclosure, and intimacy. The degree to which individuals self-disclose should contribute to their feelings of intimacy, after controlling for their perceptions of the partner's disclosure (path p_{31}). The degree to which individuals view the partner's disclosing in turn also should contribute to feelings of intimacy, after controlling for self-disclosure (path p_{32}).

Second, we tested the hypothesis that individuals will experience intimacy in an interaction when self-disclosure and partner disclosure are linked to feelings that the partner is being responsive. Reis and Shaver (1988) emphasized the potential mediating role of partner responsiveness in the relationship between partner disclosure and intimacy. In addition, it is possible that partner responsiveness might also mediate the link between self-disclosure and intimacy, and for completeness, we tested this possibility. The mediational model, shown in Figure 1B, includes paths representing (a) the effect of self-disclosure (p_{31}) and partner disclosure (p_{32}) on perceived partner responsiveness and (b) the effect of each variable (i.e., self-disclosure, partner disclosure, and perceived partner responsiveness) on intimacy, while controlling for the effect of the others (paths p_{41}, p_{42}, and

p_{43}). For a partial mediation effect, perceived partner responsiveness should be related significantly to ratings of self-disclosure and to partner disclosure (paths p_{31} and p_{32}), as well as to ratings of intimacy (path p_{43}; Kenny, Kashy, & Bolger, 1997). For a full mediation effect (Baron & Kenny, 1986; Kenny et al., 1997), there is an additional requirement that self-disclosure, partner disclosure, or both no longer have a significant direct effect on intimacy (i.e., path p_{41}, p_{42}, or both should not be significantly different from zero).

Method

Participants

The study began with 104 participants who were selected from a larger undergraduate participant pool, 56 sampled from the University of Massachusetts and 48 sampled from the Pennsylvania State University.[1] Fourteen percent of the sample (15 participants) did not complete the study. These participants did not differ from those who remained in the study on any variable relevant to the present investigation. Twenty-one percent of the remaining sample (19 participants) reported having used their memory to complete more than 25% of the interaction records. We removed these participants from the analysis to minimize the influence of recall bias on participants' reports. The final sample consisted of 69 participants (42 women) who had complete data for the interaction record ratings on their dyadic interactions. All participants received extra credit for their participation and had a chance of winning $50 in a lottery at the end of the semester.
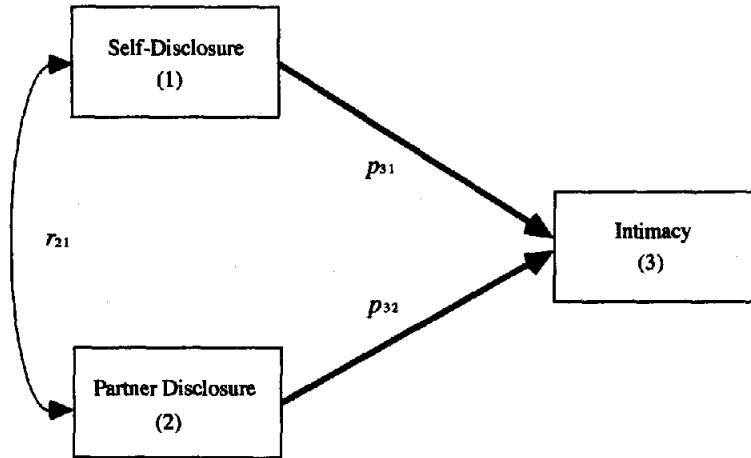
Interaction Record

We adapted the RIR to assess self-disclosure, partner disclosure, feeling accepted by a partner, and intimacy experienced during social interactions. Participants completed the fixed-format interaction record after every interaction lasting 10 min or longer (Reis & Wheeler, 1991) for a 1-week (i.e., 7-day) period. We defined an interaction as any encounter with another person(s) in which the individuals attended to one another and possibly adjusted their behavior in response to one another (Reis & Wheeler, 1991). We called the interactions "social" because they involved at least one other person, but the interactions included more than situations in which the participants socialized for entertainment purposes (e.g., we sampled interactions at work, over the telephone, during classes, on errands). Using the RIR, participants provided information about the number of interaction partners present, the initials of partners for each interaction, and who initiated the interaction. We analyzed only dyadic interactions, because theories of intimacy focus primarily on dyadic exchanges. Fifty-eight percent of the interactions (n = 1,494) from the total data set were used for the present report.

For each interaction, participants rated a variety of interaction aspects on 5-point scales (1 = *very little*, 5 = *a great deal*). Only the RIR items of interest for this report are presented here (see Appendix A for exact wording of Study 1 RIR items).
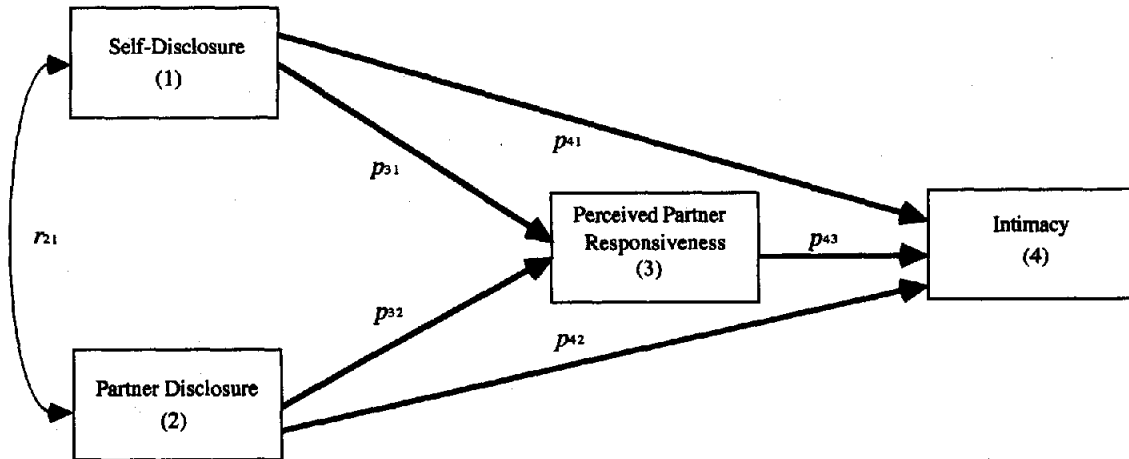
A

B

Figure 1. Models containing the disclosure components of the intimacy process (A) and perceived partner responsiveness as a mediator of the intimacy process (B).

Self-disclosure. Participants rated the amount they disclosed in general (one item) and how much they expressed their emotions (one item) to their partner in the interaction. A summary variable was created using the average of these two items.

Partner disclosure. Participants rated the amount the interaction partner disclosed (one item), the amount of positive emotion their partner expressed (one item), and the amount of negative emotion their partner expressed (one item). A summary variable was created using the average of these three items. We combined ratings of partner disclosure and partner's emotional expression because we were interested in investigating partner disclosure at a global level.

Perceived partner responsiveness. Participants rated the degree to which they felt accepted by their interaction partner during the interaction. The item was used as an index of Reis and Shaver's (1988) conceptualization of partner responsiveness in this study.

Intimacy. Participants rated the amount of intimacy that they experienced during the interaction.

Procedure

Participants attended three laboratory sessions. During the first session, the experimenter explained that the study concerned how people think and feel about their social interactions with others and that participants would keep records of all of their social interactions for 7 days.

To preserve confidentiality, participants selected a code name to write on all of their study materials. Participants also completed several questionnaires during the first session (for a complete description, see Pietromonaco & Feldman Barrett, 1997). Afterward, the experimenter explained the procedure for completing the interaction records and carefully defined all items on the interaction record form. For example, the experimenter indicated that the term *intimacy* referred to the extent to which the participants felt interpersonally close to their interaction partners in a given interaction, and that intimacy did not necessarily refer to sexual activity. The experimenter emphasized the importance of answering honestly when using the interaction records and of completing a record as soon as possible (within 15 min) after each interaction. In addition to oral instructions, participants received written instructions to which they could refer during the course of the study. Prior to leaving the first laboratory session, participants received several interaction records with which to practice.

During the second laboratory session, participants reviewed their practice interaction records with the experimenter. The experimenter answered any questions and gave participants a final written set of instructions for completing 7 days of interaction records. Participants returned their interaction records three times during their recording week, and they received extra lottery tickets for returning their forms on time. The experimenter phoned, within 24 hr, any participants who did not return their forms on time and reminded them to return the forms.

During the third laboratory session, the experimenter interviewed participants about their reactions to the study. Participants estimated how difficult they found the study, how accurate their recording was, and how much their social patterns changed as a result of being in the study. To ensure that participants followed all instructions, the experimenter asked several specific questions about the accuracy with which participants had recorded their interactions, including (a) whether they had recorded all of their interactions and, if they had not, what percentage they had not recorded (percentage not recorded: $M = 15.4\%$, $SD = 14.8$) and (b) whether they had completed any interaction records from memory (i.e., more than 1 hr later) and, if they had, the percentage of interaction forms that they had completed from memory.[2] The experimenter stressed that participants would not be penalized in any way (i.e., they would still receive credit and lottery tickets) if they had not followed instructions and that we were simply interested in obtaining an accurate picture of their data.

Results

Data Analytic Strategy

The interaction data in this study conformed to a multilevel data structure (Goldstein, 1987; Kenny et al., 1997). A defining feature of multilevel data is the existence of a hierarchy of observations in which multiple lower level observations are grouped within upper level units. In this research, the lower level data consisted of participants' ratings of self-disclosure, partner disclosure, partner responsiveness, and intimacy experienced during social interactions. Each lower level variable was measured on an interaction-by-interaction basis and, therefore, consisted of multiple data points for each individual. These lower level data were nested within upper level units, or participants. Hierarchical linear modeling (HLM; Bryk & Raudenbush, 1987, 1992; Bryk, Raudenbush, & Congdon, 1996) is a statistical program designed for use with multilevel data sets. HLM was used to analyze the interaction data because it allowed us to analyze within-subject (lower level) and between-subject

Table 1

Average Within-Subject Correlations for Items Used in Composite Variables (Study 1)

Variable	1	2	3	4	5
1. Self-disclosure	—				
2. Self expression of emotion	.63**	—			
3. Partner disclosure	.61**	.43**	—		
4. Partner expression of positive emotion	.29**	.38**	.31**	—	
5. Partner expression of negative emotion	.01	.06	.09*	-.40**	—

Note. Variables 1 and 2 constitute the self-disclosure composite. Variables 3, 4, and 5 constitute the partner disclosure composite.
* $p < .05$. ** $p < .001$.

(upper level) variation simultaneously, thus enabling us to model each source of variation while taking the statistical characteristics of the other level into account. HLM first computes a regression equation for each participant in which a lower level outcome variable is regressed on lower level predictors; the individual regression parameters for these predictors are then used to estimate the average parameter estimates for all participants as well as the amount of individual variation around this average. Standardized HLM regression coefficients were used to estimate paths.[3]

Self-Disclosure and Partner Disclosure in the Intimacy Process

Using HLM, we calculated the average within-subject correlations for items within the self-disclosure and partner disclosure composite variables. These correlations are presented in Table 1.

To test the hypothesis that both self-disclosure and partner disclosure emerge as significant predictors of intimacy in dyadic social interactions, we estimated the paths presented in Figure 1A using several HLM analyses. The within-subject level of the data analytic model estimated the p_{31} and p_{32} paths using the formula:

$$I_{ij} = b_0 + b_1 \times (SD_{ij}) + b_2 \times (PD_{ij}) + r_{ij}, \qquad (1)$$

[2] Six participants reported that they had recorded all interactions (9% of final sample), 51 participants reported they had missed recording up to 25% of their interactions (73% of the final sample), 6 participants reported that they had missed recording between 25% and 30% of their interactions (9% of final sample), 5 participants reported that they had missed between 30% and 50% of their interactions (7% of final sample), and 1 participant reported having missed 75% of his or her interactions. Thus, the majority of participants (81% of final sample) reported that they had documented three quarters of their social interactions over the observation week.

[3] Because all RIR ratings were based on the same metric, we opted to submit the raw data to HLM for analysis to obtain unstandardized estimates and then standardized these estimates using estimates of pooled within-subject standard deviations for the relevant variables.

Table 2
Average Within-Subject Correlations of Rochester Interaction Record Variables for Study 1

Variable	1	2	3	4
1. Self-disclosure	—			
2. Partner disclosure	.52	—		
3. Partner responsiveness	.21	.26	—	
4. Intimacy	.66	.57	.28	—

Note. All correlations significant at $p < .001$.

where I_{ij} is participant j's intimacy rating on the ith social interaction, b_0 is participant j's average intimacy rating across all dyadic social interactions, SD_{ij} is participant j's degree of self-disclosure on the ith social interaction, b_1 represents the relationship between self-disclosure and intimacy controlling for partner disclosure for participant j, PD_{ij} is participant j's perception of his or her partner's disclosure on the ith social interaction, b_2 represents the relationship between partner disclosure and intimacy controlling for self-disclosure for participant j, and r_{ij} is a within-subject error component.

The between-subjects (upper) level of the model allowed us to assess the average relationship between self-disclosure and intimacy (the average value of p_{31}), and the average relationship between partner disclosure and intimacy (the average value of p_{32}), as follows:

$$b_{1j} = b_{10} + u_{1j} \tag{2}$$

$$b_{2j} = b_{20} + u_{2j}, \tag{3}$$

where the upper level estimate, b_{10}, represents the average relationship between self-disclosure and intimacy, controlling for partner disclosure, and the upper level estimate, b_{20}, represents the average relationship between partner disclosure and intimacy, controlling for self-disclosure; u_{1j} and u_{2j} are between-subjects error terms and represent the degree to which the Level 1 regression coefficients for participants varied around the average for each coefficient. Although we also modeled the average of the intercept (b_{00}), we do not focus on this aspect of the analysis because it is not important to our hypotheses. Similar HLM analyses were used to estimate the average zero-order correlations between variables across all individuals found in Table 2. These correlations represent the average simple relationship among the lower level variables.

The results, presented in Figure 2A, indicated that on average, self-disclosure and partner disclosure were significantly correlated ($r = .52$, $p < .001$). Both self-disclosure and partner disclosure were associated significantly with ratings of intimacy. Self-disclosure was positively correlated with intimacy on average ($r = .66$, $p < .001$) and positively predicted intimacy over and above the effect of partner disclosure, $p_{31} = .49$, $t = 15.32$, $p < .001$. Similarly, partner disclosure was positively correlated with intimacy on average ($r = .57$, $p < .001$) and positively predicted intimacy over and above the effect of self-disclosure, $p_{32} = .28$, $t = 9.34$, $p < .001$.

The Role of Perceived Partner Responsiveness in the Intimacy Process

To test whether partner responsiveness mediated the intimacy process, we estimated the paths represented in Figure 1B using HLM analyses similar to those presented in Equations 1, 2, and 3. The results, presented in Figure 2B, indicated that on average, perceived partner responsiveness partially mediated the relationships among self-disclosure, partner disclosure, and feelings of intimacy. Self-disclosure and partner disclosure were significantly correlated with perceived partner responsiveness ($r = .21$, $p < .001$, and $r = .26$, $p < .001$, respectively); self-disclosure and partner disclosure were also uniquely related to perceived partner responsiveness, $p_{31} = .08$, $t = 2.65$, $p < .01$, and $p_{32} = .20$, $t = 4.37$, $p < .001$, respectively. Perceived partner responsiveness was also significantly correlated with intimacy ($r = .28$, $p < .001$) and demonstrated a unique relationship to intimacy, $p_{43} = .11$, $t = 3.80$, $p < .001$.

Full mediation of a predictor's effect on the criterion variable is indicated if the predictor no longer has a direct effect on the criterion after the mediator has been introduced. For example, if perceived partner responsiveness fully mediated the effect of self-disclosure on intimacy, then the direct path from self-disclosure to intimacy in Figure 1B would be reduced to zero. Partial mediation exists when the direct effect is reduced in magnitude yet remains different from zero. Self-disclosure and partner disclosure continued to have significant direct effects on ratings of intimacy after the contribution of perceived partner responsiveness was controlled, $p_{41} = .48$, $t = 15.49$, $p < .001$, and $p_{42} = .26$, $t = 8.64$, $p < .001$, respectively, suggesting that the relationship between disclosures and intimacy was only partially mediated by perceptions of partner responsiveness.

To examine specifically the significance of the partial mediation effects, we tested whether the mediator (i.e., perceived partner responsiveness) significantly reduced the size of the direct effects on intimacy (Baron & Kenny, 1986; Kenny et al., 1997). Tests were conducted on partial regression coefficients using unstandardized HLM estimates with their associated standard errors (N. Bolger, personal communication, September 1997). To test whether perceived partner responsiveness mediated the relationship between self-disclosure and intimacy, we compared the standardized estimate of self-disclosure's effect on intimacy in the original model (.49) with the corresponding effect in the mediated model (.47). This difference represented a small but significant reduction ($z = 2.13$, $p < .02$), suggesting that perceived partner responsiveness partially mediated the effect of self-disclosure on intimacy, after controlling for the effects of partner disclosure. The same test was conducted with partner disclosure as the predictor variable. The reduction in the standardized path of partner disclosure on intimacy (from .28 to .26) was also small but significant ($z = 2.82$, $p < .003$), indicating that perceived partner responsiveness also partially mediated the effect of partner disclosure on intimacy.

Discussion

The findings from Study 1 supported the basic tenets of the interpersonal model of intimacy at the level of social interac-
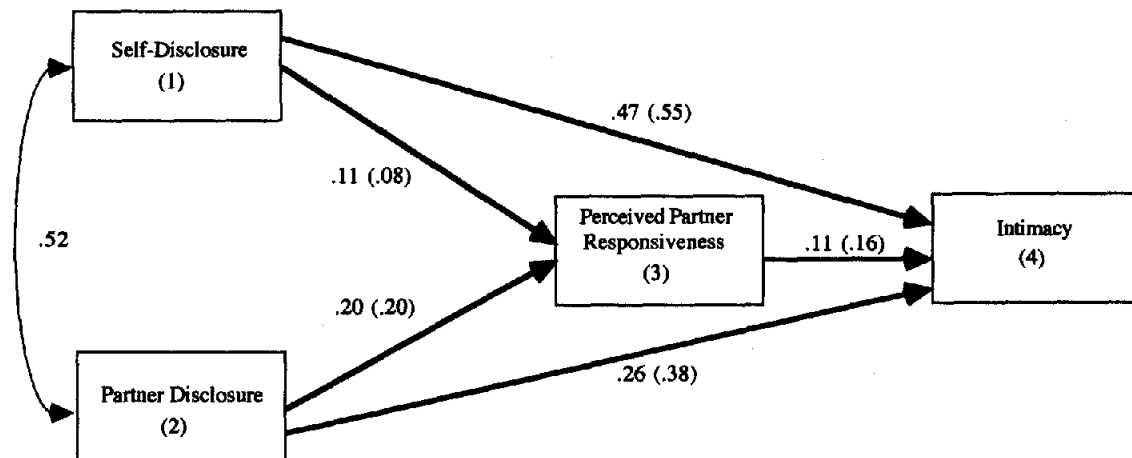
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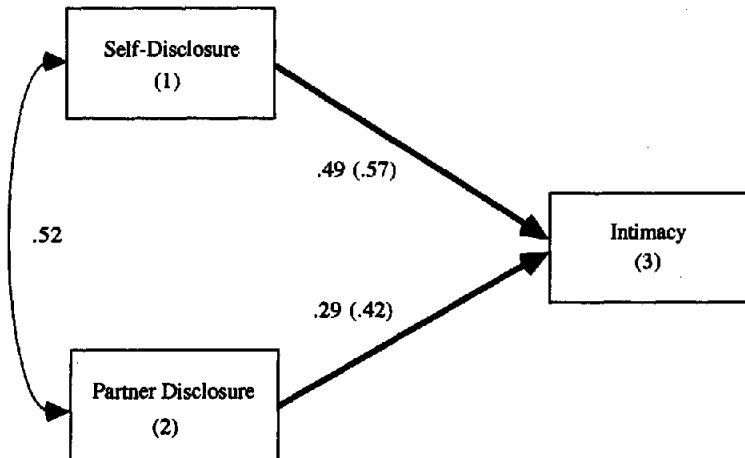
B

Figure 2. The relationship of disclosure to feelings of intimacy (A) and the estimation of perceived partner responsiveness as a mediator in the intimacy process (B), Study 1. Unstandardized coefficients are presented in parentheses. All paths were statistically significant.

tions. Both self-disclosure and partner disclosure significantly predicted intimacy across a range of interpersonal interactions and social relationships. The observed mediation effect was not as large in magnitude as we expected, however. According to Reis and Shaver (1988), the intimacy process should also depend on a person feeling understood and cared for, in addition to feeling accepted. It is possible that feeling accepted by a partner is a complex appraisal that is associated with feeling understood and cared for. One explanation for the weak mediator effect, then, is that our measure of partner responsiveness in

Study 1 (i.e., acceptance) was too narrow; a conceptually broader measure of partner responsiveness might produce a stronger mediation effect.

Study 2

The goals of Study 2 were to replicate and extend the findings from Study 1 in several ways. Overall, we used the same basic path models to evaluate the interpersonal process model of intimacy, but with three modifications. First, we increased the diary

collection period from 1 to 2 weeks. Second, we measured partner responsiveness more broadly and in a manner that more closely paralleled Reis and Shaver's (1988) conceptualization, by asking participants about the degree to which they felt understood, cared for, and accepted by their partners during social interactions. Third, we measured self-disclosure with items that distinguished descriptive self-disclosures (disclosures of facts) from evaluative self-disclosures (disclosures of feelings) to allow for a finer grained analysis of the relative contributions of different types of self-disclosure. This refined measure allowed us to follow up on previous work (i.e., Lin, 1992; Morton, 1978) that has suggested that emotional self-disclosure would be more strongly related to intimacy than would factual self-disclosure.

Method

Participants

The study began with 244 participants who were selected from a larger undergraduate subject pool, 158 sampled from the University of Massachusetts and 86 sampled from the Pennsylvania State University.[4] Twenty percent of the sample (48 participants) did not complete the study. Thirty-nine percent of the remaining sample (77 participants) reported having used their memory to complete more than 25% of the interaction records. This percentage is somewhat larger than that observed in Study 1, possibly because participants were asked to sample their social interactions for 2 weeks rather than for 1 week. We removed these participants' data from the analysis to minimize the influence of recall bias on participants' reports. Twenty-five percent (30 participants) of the remaining sample (119 participants) reported no dyadic relationships; that is, all of the interactions that they recorded involved more than one person. We suspect that many participants who appeared to have had no dyadic interactions actually made recording errors in reporting the number of interactions partners present (i.e., counting both themselves and the interaction partner rather than the interaction partner alone). Given that it was not possible to determine when such errors were made, we used a conservative approach and removed all such individuals' data from the analyses. The final sample consisted of 89 participants (51 women, 38 men) who reported a total of 3,955 dyadic interactions (68% of all interactions recorded). All participants received extra credit for their participation and had a chance to win $50 in a lottery at the end of the semester.

Interaction Record

As in Study 1, participants completed a version of the RIR after each social interaction lasting 10 min or longer and rated their interactions using 5-point scales (1 = *very little*, 5 = *a great deal*). Only the RIR items of interest for this report are presented here (see Appendix B for exact wording of Study 2 RIR items).

Self-disclosure. Participants rated the degree to which they disclosed facts (one item), how much they expressed their thoughts (one item), and how much they expressed their emotions (one item) to their partner in the interaction. An overall summary variable for self-disclosure was created using the average of these three items. Descriptive self-disclosure was operationalized using the disclosure-of-facts item; evaluative self-disclosure was operationalized using the expression-of-emotions item.

Partner disclosure. Participants rated the degree to which the interaction partner disclosed thoughts and emotions (one item).

Perceived partner responsiveness. Participants rated the degree to which they felt accepted by their interaction partner (one item), how

Table 3
Average Within-Subject Correlations for Items Used in Composite Variables (Study 2)

Variable	1	2	3	4	5	6
1. Self-disclosure of facts	—					
2. Self-disclosure of thoughts	.20	—				
3. Self-disclosure of emotions	.10	.70	—			
4. Understanding by partner	.14	.33	.29	—		
5. Acceptance by partner	.08	.24	.22	.81	—	
6. Cared for by partner	.02[a]	.33	.40	.46	.42	—

Note. All correlations are significant at $p < .005$, except as noted. Variables 1, 2, and 3 constitute the self-disclosure composite. Variables 4, 5, and 6 constitute the partner responsiveness composite.
[a] *ns.*

much they felt understood by their interaction partner (one item), and how much they felt cared for by their interaction partner (one item) during each social interaction. A summary variable was created using the average of these three items.

Intimacy. Participants rated the amount of closeness that they experienced in the interaction. We chose the term *closeness* rather than *intimacy* to ensure that participants understood that we were referring to psychological proximity and not to sexual intimacy.

Using HLM, we calculated the average within-subject correlations for items within all composite variables. These correlations are presented in Table 3.

Procedure

The procedures for data collection in Study 2 were identical to those of Study 1, with the exception that participants kept records of their social interactions for a 2-week period rather than a 1-week period.[5]

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[4] As in Study 1, the participants of Study 2 were not a randomly selected sample from the student participant pool. This sample was selected for the primary purpose of obtaining equal numbers of romantic attachment styles (27% secure, 24% fearful–avoidant, 26% preoccupied, and 24% dismissing–avoidant). To address this potential threat to the external validity of our findings, we reanalyzed the data using a random sample of participants that reflected the proportion of romantic attachment style membership consistently found in the larger undergraduate participant pool: 48% secure, 28% fearful–avoidant, 16% preoccupied, 8% dismissing–avoidant. The results were essentially identical to those that we report in the main body of the article. In addition, we inspected the distributions of the key variables and found no evidence of substantial deviation from normality.

[5] The extension of the diary recording period (from 1 to 2 weeks) increased the number of social interactions available for reporting. This increase in the number of observations per participant resulted in an increase in the reliability of the slope estimates for self-disclosure, partner disclosure, and partner responsiveness: .31, .27, and .35, respectively, in Study 1 to .53, .65, and .56, respectively, in Study 2. The reliability of these change parameters reflects the proportion of observed parameter variance that is accounted for by true parameter variance. This notion of reliability differs from that of coefficient, an index that is not appropriate for use with within-subject data of this type. The reliability of slope estimates depends on the number of observations within each participant and the variance of the predictor variable within each participant.

Results

As in Study 1, all analyses were conducted using HLM. Standardized regression coefficients were used to estimate paths. Table 4 contains the average correlations across individuals for the RIR variables in Study 2.

Self-Disclosure and Partner Disclosure in the Intimacy Process

First, we estimated the path relationships among self-disclosure, partner disclosure, and feelings of intimacy, as presented in Figure 1A. The results, presented in Figure 3A, indicated that on average, both self-disclosure and partner disclosure demonstrated significant predictive effects on ratings of intimacy across a range of social interactions. Self-disclosure and partner disclosure were significantly correlated with each other on average ($r = .60$, $p < .001$) and were significantly correlated with intimacy ($r = .55$, $p < .001$, and $r = .57$, $p < .001$, respectively). Intimacy was uniquely predicted by both self-disclosure, $p_{31} = .31$, $t = 10.71$, $p < .001$, and partner disclosure, $p_{32} = .40$, $t = 13.27$, $p < .001$. The findings, thus far, replicate those found in Study 1.

The Role of Partner Responsiveness in the Intimacy Process

Next, we examined whether perceived partner responsiveness acted as a mediator of the intimacy process, as portrayed in Figure 1B. The results, presented in Figure 3B, replicated those for Study 1. Self-disclosure was significantly correlated with perceived partner responsiveness ($r = .41$, $p < .001$) and demonstrated a unique predictive relationship, $p_{31} = .26$, $t = 9.35$, $p < .001$. Partner disclosure was also significantly correlated with perceived partner responsiveness ($r = .39$, $p < .001$) and demonstrated a unique predictive relationship, $p_{32} = .24$, $t = 8.53$, $p < .001$. Moreover, perceived partner responsiveness correlated significantly with intimacy ($r = .59$, $p < .001$) and was uniquely related to intimacy, $p_{43} = .36$, $t = 15.07$, $p < .001$. Perceived partner responsiveness partially mediated the intimacy process because both self-disclosure and partner disclosure demonstrated decreased, yet still significant, direct effects on intimacy, $p_{41} = .22$, $t = 8.69$, $p < .001$, and $p_{42} = .32$, $t = 11.26$, $p < .001$, respectively. The reduction in the direct effect of self-disclosure on intimacy (from .31 to .22), was significant ($z = 8.06$, $p < .001$), indicating that perceived partner responsiveness

partially mediated the effect of self-disclosure on intimacy. Similarly, the reduction in the direct effect of partner disclosure on intimacy (from .40 to .32) was significant ($z = 9.82$, $p < .001$), indicating that perceived partner responsiveness partially mediated the effect of partner disclosure on intimacy. It appears that measuring partner responsiveness more broadly in Study 2 served to strengthen its role as a partial mediator in the intimacy process.

The Importance of Emotional Self-Disclosure

To test the prediction that emotional self-disclosure would contribute more to intimacy than would factual disclosure, we separated these two types of self-disclosure in the same HLM analysis by using both variables as predictors of intimacy in addition to partner disclosure and partner responsiveness. We first replaced the overall self-disclosure variable, shown in Figure 1A, with two self-disclosure variables: one for disclosure of facts and one for disclosure of emotion. In this set of analyses, we use β to refer to standardized path coefficients and b to refer to unstandardized coefficients. Self-disclosure of emotion significantly predicted intimacy after controlling for effects of self-disclosure of facts and partner disclosure, $\beta = .37$ ($b = .33$), $t = 12.53$, $p < .001$, but self-disclosure of facts was not a significant predictor, $\beta = -.01$ ($b = -.01$), $t = -0.32$, ns; in addition, self-disclosure of emotion was statistically more important to the prediction of felt intimacy than was self-disclosure of facts, $\chi^2(1, N = 85) = 98.22$, $p < .001$. Because the path between self-disclosure of facts and intimacy was not significantly different from zero in this analysis, we dropped factual self-disclosure from future analyses.

Next, we tested a model in which perceived partner responsiveness mediated the relationship between self-disclosure of emotion and intimacy (i.e., we replaced the overall self-disclosure variable, shown in Figure 1B, with self-disclosure of emotion). Self-disclosure of emotion was significantly related to perceived partner responsiveness, $\beta = .25$ ($b = .17$), $t = 8.27$, $p < .001$, and perceived partner responsiveness, in turn, was significantly related to intimacy, $\beta = .33$ ($b = .42$), $t = 13.83$, $p < .001$. The direct path from self-disclosure of emotion to intimacy significantly differed from zero, $\beta = .30$ ($b = .27$), $t = 12.22$, $p < .001$, but is decreased in magnitude from the corresponding path in the model without perceived partner responsiveness as a mediator. These results suggest that the disclosure of emotion was more important to the experience of intimacy in interactions than was the disclosure of mere facts or information. Furthermore, perceived partner responsiveness partially mediated the relationship between emotional self-disclosure and intimacy. The partial mediating role of partner responsiveness is consistent with the contention that emotional self-disclosures provide opportunities for listeners to support and validate the discloser, thereby furthering the intimacy process.

General Discussion

This pair of experience-sampling studies provides the first direct test of Reis and Shaver's (1988) interpersonal process model of intimacy. Overall, the findings provide strong support

Table 4

Average Within-Subject Correlations of Rochester Interaction Record Variables for Study 2

Variable	1	2	3	4
1. Self-disclosure	—			
2. Partner disclosure	.60	—		
3. Partner responsiveness	.41	.39	—	
4. Intimacy	.55	.57	.59	—

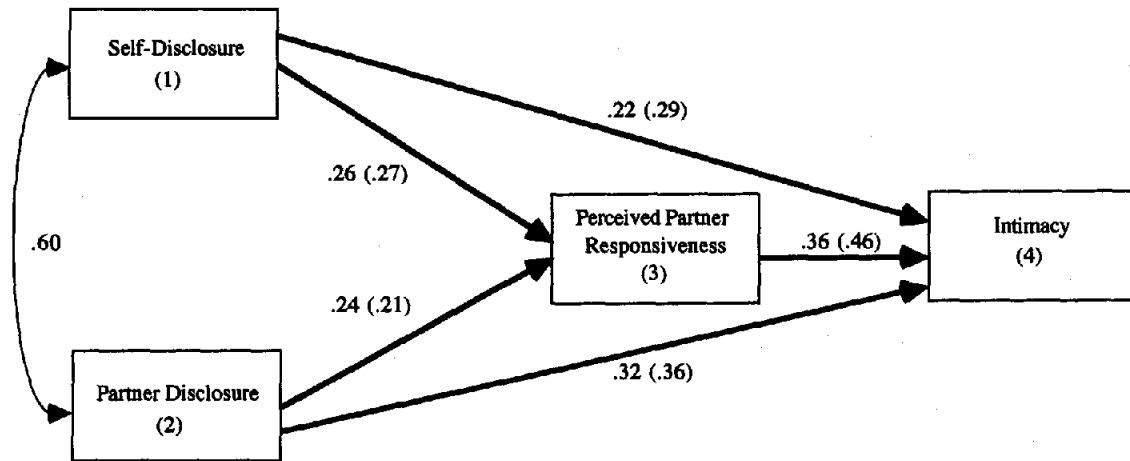*Note.* All correlations are significant at $p < .001$.

A
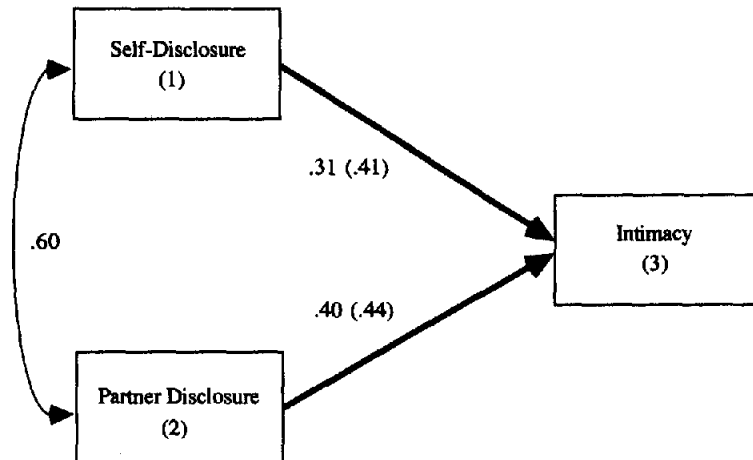
B

Figure 3. The relationship of disclosure to feelings of intimacy (A) and the estimation of perceived partner responsiveness as a mediator in the intimacy process (B), Study 2. Unstandardized coefficients are presented in parentheses. All paths were statistically significant.

for the basic tenents of the model. In both studies, self-disclosure and partner disclosure emerged as significant predictors of intimacy on an interaction-by-interaction basis. We found support for the hypothesis that self-disclosure and partner disclosure are associated with feelings of intimacy in part because this process takes place within the context of a partner being responsive. These findings indicate that mere behaviors (or perceptions of behaviors) may not be sufficient for strong feelings of intimacy to develop. The experience of intimacy in interactions was related to feeling understood, accepted, and cared for by an interaction partner, although this effect was stronger when partner

responsiveness was operationalized more broadly. Thus, intimate interactions are those that are self-revealing and impart the feeling that one is known, validated, and valued by one's partner (Reis, 1990; Sullivan, 1953).

The results of Study 2 also indicated that emotional self-disclosures are more predictive of intimacy than are factual self-disclosures. These findings lend support to the notion that disclosures of emotion are more important to the development of intimacy in social interactions than are disclosures of personal facts or information (Lin, 1992; Reis & Shaver, 1988). Self-disclosures of emotion allow for core aspects of the self to

be revealed and provide the opportunity for disclosers to be understood and validated, thus facilitating the experience of intimacy. These findings are confined, however, to global ratings of affective and factual disclosures and may not reflect the contribution of specific emotions or the content of the emotional or factual expression in the intimacy process.

Of course, these interpretations of our findings are limited in several respects. First, although the findings are consistent with the directional hypotheses following from Reis and Shaver's (1988) model, our correlational data cannot determine the causal direction of the effects. That is, reverse causal effects (i.e., intimacy causing partner responsiveness) cannot be ruled out (see Kenny et al., 1997, for a discussion of specification errors). Our data also cannot determine whether "third" variables associated with intimacy or partner responsiveness might account for the observed effects. Second, we did not explicitly test the transactional aspect of the interpersonal process model of intimacy. Our data did not include responses from both participants in the interaction or take into account the contingencies between partners' responses. Instead, our studies captured the subjective experiences of one individual and thus examined the interpersonal process model from one person's perspective. Although this methodology brings us closer to the transactional process envisioned by Reis and Shaver, it does not capture all of the complex interpersonal contingencies inherent in the model. Third, the degree to which these findings, based on the responses of U.S. college students, can be generalized to other kinds of individuals remains unclear. For example, it will be important to investigate the nature of intimacy processes in older adults in longer term, committed relationships (i.e., married spouses), and in non-Western cultures in which the self is more embedded in the social context and defined by relationships (Kitayama & Markus, 1995).

Implications and Future Directions

The present research not only provides strong support for the Reis and Shaver (1988) model of intimacy but also suggests some ways in which the model should be elaborated or modified.

The Relative Importance of Self-Disclosure and Perceived Partner Responsiveness

We interpreted the interpersonal conceptualization of intimacy as a mediated model, whereby disclosures are related to feelings of intimacy through individuals' feelings that their partner is being responsive to them. In such a model, it does not make sense to compare the relative contributions of a predictor and a mediator, and thus we did not report comparisons between the effects of self-disclosure and partner responsiveness. Reis and Shaver (1988) discussed the relative importance of these variables, however. When we compared the direct effects of self-disclosure and partner responsiveness on intimacy, findings regarding the relative importance of the two variables were inconsistent across the studies. In Study 1, the direct effect of self-disclosure was significantly larger, but in Study 2 the reverse was true. We suspect that the discrepancy in this finding is likely due to the improved operationalization of partner responsiveness

in Study 2. Partner responsiveness may become more important to intimacy in relationships as the closeness of the interaction partner increases (Berg & Archer, 1982; Davis & Perkowitz, 1979), whereas self-disclosure might be more important when getting to know new people. Accordingly, we hypothesized that the inconsistency in the two studies may have resulted from sampling differences (i.e., the proportions of interactions with close others may have varied across the two studies). We found, however, that the proportion of interactions with close others was the same in both samples, and thus, sampling differences do not explain the different findings. The inconsistency in our findings highlights that the relative importance of self-disclosure and partner responsiveness to feelings of intimacy must be explored further because it is likely that the relational context (e.g., friendships vs. marriages) plays a large role in the relative importance of the two components in the intimacy process.

Individual Variation in the Relationships Between Intimacy Components

Additional analyses (not reported in the *Results* section) indicated that significant variability existed in the size of the lower level relationships between intimacy components across different individuals. The existence of significant individual variation around estimates of lower level path coefficients indicates that the strength (and in some cases, the direction) of the relationships among self-disclosure, partner disclosure, partner responsiveness, and intimacy varies from person to person. This variation may be a function of measurable individual differences (Reis & Patrick, 1996). For example, individuals can vary in their motivation for engaging in intimate interactions and establishing intimate relationships. Individuals possess skills, goals, concerns, and other personality characteristics that affect how much they disclose to others, how they respond to others, and how they interpret disclosures and responses from others (Davis, 1982; Mikulincer & Nachshon, 1991; Miller, Berg, & Archer, 1983; Reis & Shaver, 1988). Indeed, significant individual variation existed around the estimates of the average path coefficients presented for all models; some participants had larger coefficients and some had smaller coefficients than the average coefficients for the entire sample. Some of this between-subjects variation around the average path coefficients may be due to sampling. Some of this between-subjects variation may represent meaningful differences in the path coefficients across different groups of people.

We attempted to model the variation in the lower level estimates by including between-subjects (upper level) variables in the HLM models tested. For example, we used HLM procedures to test whether sex of participant accounted for any of the observed individual variation but found that men and women did not differ significantly in the size of their path coefficients. In addition, attachment style was used as a between-subjects predictor of lower level variation. Attachment style, whether measured as set of categorical (e.g., Bartholomew & Horowitz, 1991) or as continuous (Brennan & Shaver, 1995), resulted in few and inconsistent differences from average path relationships. It will be important for future work to examine whether other individual-differences variables account for predictable

variations in the size of the associations between intimacy components.

Use of Other Populations

Both Studies 1 and 2 used college students as participants. The results presented here indicate that the interpersonal process model describes the intimacy process in college-aged students, but the model should be tested in individuals who are in committed, long-term attachment relationships. It is likely that our findings will generalize to those who are in long-standing relationships because we found identical results when we analyzed separately subsets of interactions with romantic partners and best friends (Study 2) and when we analyzed interactions with close partners more generally (Study 1). Nevertheless, this pattern of results will need to be verified in a sample of older individuals in integrated, long-term relationships (i.e., marriages). In an extension of this model to married couples, we might expect partner responsiveness to play a more prominent role in the development of intimacy.

Practical Applications of Reis and Shaver's (1988) Intimacy Model

The interpersonal process model not only explains how intimacy develops and is maintained across time but may also provide a way of understanding how to intervene when the intimacy process goes awry. For example, we found that self-disclosure and responsive behaviors from an interaction partner (i.e., partner disclosure) are linked to feelings of intimacy in part through their ability to make the participant feel understood, accepted, and cared for in an interaction. Recently, strategies that promote acceptance and validation have been added to traditional behavioral interventions used in the treatment of couple difficulties because they are thought to enhance intimacy (Christensen, Jacobson, & Babcock, 1995; Jacobson, 1992). Our findings are consistent with the developing trend that places acceptance as a central construct in the development of intimacy in couples, and they suggest that interventions should target all components of the intimacy process when attempting to enhance intimacy. The results of Study 2 suggest that acceptance of a partner is best understood in theoretically broader terms, incorporating both a sense of understanding and caring for a partner. This finding is reflected in the basic strategies of traditional behavioral couples therapy in which couples are guided to communicate effectively and establish positive reciprocity (Gottman, Notarius, Gonso, & Markman, 1976; Jacobson & Margolin, 1979). Effective communication requires the acquisition of speaker and listener skills that avoid mutual blaming and sidetracking, resulting in mutual understanding; increasing positive reciprocity consists of partners increasing and enhancing positive verbal and nonverbal behaviors, resulting in a sense of caring. Although social psychologists and clinical psychologists often approach the study of personal relationships from different perspectives, the findings in support of the Reis and Shaver model of intimacy may help to bridge the gap between these two overlapping fields. The study of personal relationships is one that lies at the inter-

face of clinical and social psychology and calls for the integration of different, but related, perspectives (Acitelli, 1995).

Conclusion

This investigation provided direct empirical support for the interpersonal process model of intimacy. Self-disclosure, partner disclosure, and partner responsiveness were all significant components of the intimacy process at an interaction-by-interaction level. Moreover, emotional self-disclosure was found to be more strongly linked to intimacy than factual self-disclosure. Furthermore, this investigation suggested possible elaborations of the model: Perceived partner responsiveness was found to mediate the predictive effects of self-disclosure and partner disclosure on intimacy. Future work should attempt to expand the empirical support of the model to studies of long-term, committed relationships and to model the individual variation found across participants in the component process. Such research endeavors will contribute to our understanding of the richness and complexity inherent in the interpersonal process that shapes the experience of intimacy in relationships over time.

References

Acitelli, L. K. (1995). Disciplines at parallel play. *Journal of Social and Personal Relationships, 12,* 589–596.

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships.* New York: Holt, Rinehart & Winston.

Argyle, M., & Dean, J. (1965). Eye contact, distance, and affiliation. *Sociometry, 28,* 289–304.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7,* 147–178.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a model. *Journal of Personality and Social Psychology, 61,* 226–244.

Berg, J. H. (1987). Responsiveness and self-disclosure. In V. J. Derlega & J. H. Berg (Eds.), *Self-disclosure: Theory, research, and therapy* (pp. 101–130). New York: Plenum Press.

Berg, J. H., & Archer, R. L. (1982). Responses to self-disclosure and interaction goals. *Journal of Experimental Social Psychology, 18,* 501–512.

Brennan, K. A., & Shaver, P. R. (1995). Dimensions of adult attachment, affect regulation, and romantic attachment. *Personality and Social Psychology Bulletin, 21,* 267–283.

Bryk, A. S., & Raudenbush, S. W. (1987). Application of hierarchical linear models to assessing change. *Psychological Bulletin, 101,* 147–158.

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods.* Newbury Park, CA: Sage.

Bryk, A. S., Raudenbush, S. W., & Congdon, R. T. (1996). *Hierarchical linear modeling with the HLM/2L and HLM/3L programs.* Chicago: Scientific Software.

Chelune, G. J., Robison, J. T., & Kommor, M. J. (1984). A cognitive interaction model of intimate relationships. In V. J. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 11–40). Orlando, FL: Academic Press.

Christensen, A., Jacobson, N. S., & Babcock, J. C. (1995). Integrative behavioral couples therapy. In N. S. Jacobson & A. S. Gurman (Eds.),

Clinical handbook of couples therapy (2nd ed., pp. 31–64). New York: Guilford Press.

Clark, M. S., & Reis, H. T. (1988). Interpersonal processes in close relationships. *Annual Review of Psychology, 39,* 609–672.

Davis, D. (1982). Determinants of responsiveness in dyadic interaction. In W. Ickes & E. S. Knowles (Eds.), *Personality, roles, and social behavior* (pp. 85–139). New York: Springer-Verlag.

Davis, D., & Perkowitz, W. T. (1979). Consequences of responsiveness in dyadic interactions: Effects of probability of response and proportion of content related response. *Journal of Personality and Social Psychology, 37,* 534–550.

Derlega, V. J., Metts, S., Petronio, S., & Margulis, S. T. (1993). *Self-disclosure.* Newbury Park, CA: Sage.

Duck, S. W., & Sants, H. K. A. (1983). On the origins of the specious: Are personal relationships really interpersonal states? *Journal of Clinical and Social Psychology, 1,* 27–41.

Feldman Barrett, L., & Pietromonaco, P. R. (1997). Accuracy of the five-factor model in predicting perceptions of daily social interactions. *Personality and Social Psychology Bulletin, 23,* 1173–1187.

Goldstein, H. (1987). *Multilevel models in educational and social research.* New York: Oxford University Press.

Gottman, J. M., Notarius, C., Gonso, J., & Markman, H. J. (1976). *A couple's guide to communication.* Champaign, IL: Research Press.

Greenberg, L. S., & Safran, J. D. (1987). *Emotion in psychotherapy.* New York: Guilford Press.

Jacobson, N. S. (1992). Behavioral couple therapy: A new beginning. *Behavior Therapy, 23,* 493–506.

Jacobson, N. S., & Margolin, G. (1979). *Marital therapy: Strategies based on social learning and behavior exchange principles.* New York: Brunner/Mazel.

Jourard, S. M. (1971). *Self-disclosure: An experimental analysis of the transparent self.* New York: Wiley.

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. (1983). Analyzing close relationships. In Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. (Eds.), *Close relationships: Development and change.* New York: Freeman.

Kenny, D. A., Kashy, D., & Bolger, N. (1997). Data analysis in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 233–265). New York: McGraw-Hill.

Kitayama, S., & Markus, H. R. (1995). Culture and self: Implications for internationalizing psychology. In N. R. Goldberger & J. B. Veroff (Eds.), *The culture and psychology reader* (pp. 366–383). New York: New York University Press.

Lin, Y. C. (1992). *The construction of the sense of intimacy from everyday social interactions.* Unpublished doctoral dissertation, University of Rochester, Rochester, New York.

McAdams, D. P. (1985). Motivation and friendship. In S. Duck & D. Perlman (Eds.), *Understanding personal relationships* (pp. 85–105). London: Sage.

McAdams, D. P., & Constantian, C. A. (1983). Intimacy and affiliation motives in daily living: An experience sampling analysis. *Journal of Personality and Social Psychology, 45,* 851–861.

Mikulincer, M., & Nachshon, O. (1991). Attachment styles and patterns of self-disclosure. *Journal of Personality and Social Psychology, 61,* 321–331.

Miller, L. C., & Berg, J. (1984). Selectivity and urgency in interpersonal exchange. In V. J. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 161–206). Orlando, FL: Academic Press.

Miller, L. C., Berg, J. H., & Archer, R. L. (1983). Openers: Individuals who elicit intimate self-disclosure. *Journal of Personality and Social Psychology, 44,* 1234–1244.

Morton, T. L. (1978). Intimacy and reciprocity of exchange: A comparison of spouses and strangers. *Journal of Personality and Social Psychology, 36,* 72–81.

Patterson, M. L. (1976). An arousal model of interpersonal intimacy. *Psychological Review, 83,* 235–245.

Patterson, M. L. (1982). A sequential functional model of nonverbal exchange. *Psychological Review, 89,* 231–249.

Patterson, M. L. (1984). Intimacy, social control, and nonverbal involvement: A functional approach. In V. J. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 13–42). New York: Academic Press.

Perlman, D., & Fehr, B. (1987). The development of intimate relationships. In D. Perlman & S. W. Duck (Eds.), *Intimate relationships: Development, dynamics and deterioration* (pp. 13–42). Beverly Hills, CA: Sage.

Pietromonaco, P. R., & Feldman Barrett, L. (1997). Working models of attachment and daily social interactions. *Journal of Personality and Social Psychology, 73,* 1409–1423.

Prager, K. J. (1995). *The psychology of intimacy.* New York: Guilford Press.

Reis, H. T. (1990). The role of intimacy in interpersonal relationships. *Journal of Social and Clinical Psychology, 9,* 15–30.

Reis, H. T. (1994). Domains of experience: Investigating relationship processes from three perspectives. In R. Erber & R. Gilmore (Eds.), *Theoretical frameworks in personal relationships* (pp. 87–110). Hillsdale, NJ: Erlbaum.

Reis, H. T., & Patrick, B. C. (1996). Attachment and intimacy: Component processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 523–563). New York: Guilford Press.

Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367–389). Chichester, England: Wiley.

Reis, H. T., & Wheeler, L. (1991). Studying social interaction with the Rochester Interaction Record. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 269–318). San Diego, CA: Academic Press.

Sullivan, H. S. (1953). *The interpersonal theory of psychiatry.* New York: Norton.

Waring, E. M. (1984). The measurement of marital intimacy. *Journal of Marital and Family Therapy, 10,* 185–192.

Appendix A

Exact Wording for Study 1 Rochester Interaction Record Items

Self-disclosure: I disclosed. . . .
                                    How much of your feelings did you express to the other(s)?
Partner disclosure: Other disclosed. . . .
                                    How much positive emotion did the other(s) express?
                                    How much negative emotion did the other(s) express?
Partner responsiveness: During the interaction (or immediately after), how much did you feel
                                        that you were accepted by your partner?
Intimacy: I experienced intimacy. . . .

Appendix B

Exact Wording for Study 2 Rochester Interaction Record Items

Self-disclosure: I disclosed my emotions. . . .
                                    I disclosed my thoughts. . . .
                                    I disclosed my facts. . . .
Partner disclosure: My interaction partner disclosed thoughts and feelings. . . .
Partner responsiveness: How much did your interaction partner understand you?
                                    How much did you feel cared for?
                                    Did the other person see you as acceptable?
Intimacy: How close was the interaction?