An Investment Model Prediction of Dating Infidelity

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Many researchers have examined the justifications individuals give after being unfaithful to their romantic partners. However, very little research has been done to determine factors that actually predict infidelity. Two studies were conducted using the investment model (C. E. Rusbult, 1980, 1983) to predict instances of physical and emotional infidelity in dating relationships. The 1st study found that commitment level at the beginning of the semester successfully predicted later emotional and physical infidelity. The 2nd study used an interaction diary method to predict the physical and emotional intimacy of nonpartner opposite-sex interactions over the course of the week-long university holiday known as spring break. Once again, commitment level before spring break successfully predicted the emotional and physical intimacy of such interactions.

Given the high percentage of individuals in married relationships who engage in some form of extradyadic sexual involvement at some point in their marriage (roughly 50% in the United States; Kinsey, Pomeroy, & Martin, 1948; Tavris & Sadd, 1975), it is not surprising that researchers have sought to discover why. A substantial amount of research has delineated the categories of explanations that individuals give when asked for the reasons they have been unfaithful to their romantic partners. The explanations are diverse and cover a great deal of interpersonal territory. However, the territory often falls within the realm of post hoc explanation, the nature of which could well be tainted by motivated bias and inaccuracy. Very little research has been done to determine facts that actually predict infidelity from variables measured before the behavior occurred. The present research represents an attempt to predict dating infidelity using a model that has successfully predicted a variety of other important relationship behaviors: the investment model (Rusbult, 1980, 1983).

Before launching into a discussion of the reasons for infidelity, it is important that we specifically explain our working definition of the concept. We maintain that infidelity is represented by the combination of (a) the feeling that one’s partner has violated a relationship norm regarding the nature of the partner’s interactions with someone else and (b) the fact that violation of this relationship norm typically elicits sexual jealousy and rivalry. Infidelity, thus, can be differentiated from behavior that is merely extradyadic but does not represent a violation of relationship norms regarding exclusivity. It is also important to note that such sexual jealousy appears to be culturally universal (e.g., Buss, 1994) and therefore may have some impact over and above specific cultural or relationship norms. Although the present research uses a North American sample of college dating relationships, we believe that the research reflects basic, universal processes that would most likely exist in any culture; that is, relationship norms can be violated in any culture, and it is likely that sexual jealousy exists everywhere even if the concept of what constitutes infidelity might be different.

Reasons for Infidelity

Research regarding infidelity can essentially be divided into three classifications: descriptive research, detailing who is unfaithful and how often (see, e.g., Kinsey et al., 1948); response research, concerning how one reacts to an unfaithful partner (see, e.g., Buss, Larsen, Westen, & Semmelroth, 1992); and explanation research, regarding reasons for unfaithfulness. Although the first two categories are interesting in their own right, they do not necessarily bear on the motivations for such infidelity. We discuss only explanation research in detail, because it offers a glimpse of why people engage in infidelity.

The justifications people give for engaging in extradyadic sexual behavior are numerous and diverse. In an attempt to provide an overall framework (albeit a somewhat oversimplified one and one based on North American research), we divide the existing literature into five categories: sexuality, emotional satisfaction, social context, attitudes—norms, and revenge–hostility. Research regarding sexuality issues has focused on hypothesized need for sexual variety (Ellis, 1969; Johnson, 1972; Neubeck, 1969; Roscoe, Cavanaugh, & Kennedy, 1988) and on sexual incompatibility with one’s partner (Buunk, 1980; Tavris & Sadd, 1975) as common reasons for engaging in extradyadic behavior. The emotional satisfaction literature has focused on new emotional satisfaction (Bell, Turner, & Rosen, 1975), ego bolstering (Johnson, 1972), and low dating or marital satisfaction (Buss & Shackelford, 1997; Roscoe et al., 1988). Social contextual factors often listed by those who have been unfaithful include opportunity, propinquity, and physical separation with current partner (Wiggins & Lederer, 1984). Research regarding attitudes toward infidelity has consistently shown that individuals with liberal sexual attitudes are more likely to say they have had extradyadic involvements (Hansen, 1987; Prins, Buunk, & VanYperen, 1993) and that both descriptive (what others do) and injunctive (what others think one should do) norms are related to previous behavior (Buunk & Bakker, 1995).
Finally, response to a partner’s unfaithfulness (infidelity as revenge) has also traditionally been given as a reason for unsuccessful behavior among married couples (Buss & Shackelford, 1997; Greene, Lee, & Lustig, 1974; Johnson, 1972).

At least three shortcomings in this literature on infidelity are addressed by the present research. The first, as mentioned earlier, is that many researchers have examined post hoc explanations for infidelity by asking participants whether they have ever been unfaithful and why. Besides these explanations’ obvious inability to predict behavior, they may reflect motivated bias on the part of participants who have been unfaithful and who may be striving to make sense of the behavior by reconstructing the past. Indeed, such reframing may be more on the side of rationalization than accurate recall. Furthermore, research regarding the recollection of motivations for even behavior based on simple decisions has demonstrated that such retrospective accounts may be entirely reconstructions (Nisbett & Wilson, 1977). Without the prediction of future behavior by current relationship measures, researchers cannot be positive of the causes of infidelity. Other researchers have looked at the correlated of intended or fantasized involvement in extradyadic relations (e.g., Buss & Shackelford, 1997). Although better than post hoc explanation studies, this research also lacks the ability to predict actual behavior.

A second, decidedly less serious limitation of previous studies is that the research is based almost exclusively on married couples and tends to ignore the occurrence and causes of infidelity among dating couples. Given the documented severe consequences of extradyadic sex in marriage, including divorce (Betzig, 1989), emotional suffering (Buunk & van Driel, 1989), and spousal homicide (Daly & Wilson, 1988), it is not surprising that researchers have focused on married couples. However, when one considers that dating behavior may lead to the establishment of behavioral patterns maintained in marriage (Rice, 1984), it makes sense that dating couples be examined. In fact, we expect the root causes of infidelity in dating relationships extend to marriage.

Finally, the body of literature on infidelity lacks some degree of theoretical cohesion regarding the underlying causes of infidelity. Although infidelity has been investigated using various theories (e.g., equity theory, evolutionary theory), the majority of research has investigated a specific explanation for infidelity without regard to how the myriad of explanations fit together. The present research offers a theoretical model to predict infidelity: the investment model (Rusbult, 1980, 1983).

The Investment Model

The investment model (Rusbult, 1980, 1983), as an extension of interdependence theory (Thibaut & Kelley, 1959), maintains that a central force within romantic relationships is commitment. Commitment represents both a psychological attachment and a motivation to continue a relationship. Three elements of relationships work together to make an individual more or less committed to the relationship: satisfaction, alternative quality, and investments. Satisfaction represents the outcomes one receives from the relationship and is positively related to commitment. Alternative quality represents the outcomes one would expect from the next best alternative (e.g., dating a particular other, dating more than one person; see Drigotas & Rusbult, 1992) to the relationship and is negatively related to commitment. Investments represent the things one would lose, both tangible (e.g., shared possessions) and intangible (e.g., shared traditions), if the relationship were to end and are positively related to commitment. Research regarding the investment model has consistently demonstrated its effectiveness in predicting a considerable number of important relationship maintenance behaviors, including relationship stability (see, e.g., Rusbult, 1983), willingness to accommodate (see, e.g., Rusbult, Verette, Whitney, Slovak, & Lipkus, 1991), and willingness to sacrifice (see, e.g., Van Lange et al., 1997).

The investment model is particularly relevant for predicting dating infidelity. It offers a theoretical cohesion to some of the previous findings regarding infidelity and places them in the context of the model. As mentioned earlier, some of the previous research has demonstrated that low satisfaction with one’s current partner and satisfaction with someone new are often given as justifications for infidelity. Both issues are represented in the investment model as satisfaction and alternative quality, respect fully. But what is important is that the model details exactly how both issues are related to infidelity: issues of satisfaction and alternative quality (and investment) affect infidelity by eroding commitment to the relationship. Thus, the central role of commitment helps explain both why a seemingly happy partner may be unfaithful (i.e., because of low investment and/or the appearance of an attractive alternative in his or her life) and why an unhappy partner might remain faithful (i.e., because he or she has too much to lose and/or no one with whom to be unfaithful). It is commitment that directly affects infidelity.

Exactly how commitment inhibits infidelity can be illustrated through a more thorough discussion of the concept of commitment. We suggest that commitment is a macromotive in relationships. Essentially, feelings of commitment (a) subjectively summarize the nature of an individual’s dependence on a relationship; (b) direct reactions to both familiar and novel situations; and (c) shape tendencies to engage in prerelationship behaviors, even when such actions may be costly, effortful, or otherwise contrary to the individual’s immediate self-interest. Thus, in the case of infidelity, feelings of commitment help (a) summarize how much people need or want their current relationship, thereby providing some sort of notion of what they might lose if they were to be unfaithful, (b) direct behavior in response to consistent advances or in response to new advances, and (c) shape the tendency to inhibit infidelity even when costly to one’s own self-interest.

Highly committed individuals tend to adopt an extended time orientation and behave in a manner that is consistent with that perspective. Thus, when making decisions regarding whether to engage in extradyadic behavior, committed individuals are more likely to consider the long-term consequences of their actions rather than the potential short-term benefits of the behavior. Such long-term consequences could range from implications for the relationship (e.g., breakup, the partner (e.g., jealousy or anger), and themselves (e.g., reduced outcomes in the relationship, lowered self-view). A highly committed individual would be more likely to reframe a potential infidelity situation by shifting his or her focus from the immediate benefits to the long-term ramifications.

Highly committed individuals are also greatly concerned with the well-being of their partners (Van Lange et al., 1997). They tend to engage in what interdependence theorists call a transformation of motivation, or the tendency for one’s own needs and wants to be
subsumed and transformed into consideration of what is best for one's relationship and for one's partner. Thus, for the highly committed, considerations of whether to be unfaithful are more likely to include how it would hurt their partner and their relationship. In a general sense, highly committed individuals have a vested interest in the well-being of their partner as well as in the future of their relationship and should act accordingly to protect such investments.

In other words, highly committed individuals are more likely to contemplate the expected outcome of their actions and consider the possible ramifications of infidelity for themselves (e.g., a lowered self-view, shame, guilt), the relationship (e.g., reduced outcomes or interdependence), and their partner (e.g., lowered self-worth, sadness, anger). Although there may be situations in which infidelity may not be problematic (e.g., relationships without exclusivity norms), one would expect in exclusive relationships certain possible negative repercussions to infidelity that highly committed individuals would not risk.

Indeed, the investment model would predict that instances of infidelity would have a detrimental effect on relationships by further undermining the central components of the model. One can imagine how such behavior could alter the perception of available alternatives, could create tensions in a relationship that would cause satisfaction to plummet, could cause the individual to divest in a relationship (or at least halt any further investment), and could thus undermine commitment to the relationship for the individual. These negative repercussions would most likely escalate if the partner were to learn of the indiscretion, depending on the partner’s response (e.g., anger, jealousy, withdrawal). Thus, the contemplated negative ramifications that may help keep a committed individual from straying would undermine the relationship once the infidelity has occurred.

The application of the investment model in the prediction of dating infidelity is important for three reasons. First, it represents a continuing line of research using the model to predict important relationship maintenance behaviors (or in this case, relationship subversive behavior). The prediction of infidelity would add to the breadth of interpersonal phenomena that the investment model (and thus, interdependence theory) effectively explains.

Second, as mentioned earlier, the consequences of infidelity are often extremely severe. Infidelity can have destructive consequences both in terms of relationship termination (it is the most cited reason for conjugal divorce; Betzig, 1989), and relationship violence (it is the most frequent cause of wife battery and wife killing; Buss, 1994; Daly & Wilson, 1988). Clearly, infidelity is an important relationship issue.

Third, given the lack of theoretical cohesion in the literature on infidelity, using the investment model to predict such behavior represents an important contribution. The model makes specific theoretical predictions regarding the relationship between central relationship constructs and extradyadic behavior. Using the reasoning outlined above, we propose the following broad predictions regarding the links between the investment model and dating infidelity. First, measures of investment model variables will significantly account for later infidelity. That is, commitment, satisfaction, and investment size will be negatively correlated with subsequent infidelity, whereas alternative quality will be positively correlated with subsequent infidelity. Second, infidelity will have detrimental effects on the relationship as indicated by changes in investment model variables and relationship termination. That is, infidelity will be negatively correlated with subsequent commitment, satisfaction, and investment size, and positively correlated with subsequent alternative quality and relationship breakup.

Research Design

Two separate studies were designed to test the effectiveness of the investment model in predicting dating infidelity. The first was a longitudinal study of participants in dating relationships at a private university in the southeastern United States whereby measures of investment model constructs at the beginning of the semester were used to predict infidelity over the course of a semester. The second study used earlier investment model measures to predict the physical and emotional intimacy of opposite-sex interactions (as measured using a diary method) over the course of the 1-week school break during the spring semester at the same university. Thus, we could predict the physical intimacy of both partner and nonpartner interactions. The use of two diverse methods (longitudinal questionnaire and diary method) should provide convergent support of the use of the investment model in predicting dating infidelity.

Study 1

Method

Participants. Eighty-four individuals involved in heterosexual dating relationships agreed to participate in a two-wave questionnaire study in partial fulfillment of a research participation requirement for introductory psychology at Southern Methodist University. All 84 completed the Time 1 questionnaire. However, 10 participants dropped out of the study before completing the Time 2 questionnaires, leaving 74 participants who completed questionnaires at both time periods. Analyses revealed no significant differences on any of the Time 1 variables for participants who completed the study versus participants who dropped out. Therefore, we present all analyses for the 74 participants (14 men and 60 women) who completed both waves of the study. Descriptive analyses revealed that participants on average were 18.20 years of age and were primarily freshmen (73%) and sophomores (20%). More importantly, the majority of participants characterized their relationship as “serious” (80%), had been dating their partner for a substantial amount of time (M = 28.16 months), and reported being in an exclusive relationship where neither they nor their partner dated others (72%).

Procedure. At Time 1 participants completed a questionnaire on campus; 2 months later they were contacted to inquire whether they were still dating their partner from Time 1. At Time 2 participants still dating their partner completed a similar questionnaire, while those who had broken up completed a separate questionnaire. Participants were assured at all times that their responses would be confidential—all responses were coded and stored by number rather than name.

Time 1 questionnaire. The Time 1 questionnaire was designed to assess demographic information concerning status of relationship: traditional investment model constructs (see Rusbuilt, 1983), including five items measuring level of commitment to the relationship (e.g., “Do you feel committed to maintaining your relationship with your partner?”; 9-point Likert-type scale ranging from 0 to 8; $\alpha = .82$), four items measuring satisfaction with the relationship (e.g., “Do you feel satisfied with your relationship?”; $\alpha = .85$), four items measuring alternative quality (e.g., “How attractive are the people other than your partner with whom you could become involved?”; $\alpha = .68$), and four items measuring investment size (e.g., “Have you put things into your relationship that you would in some sense lose if the relationship were to end?”; $\alpha = .76$). On the basis
of these items, composite measures were computed for commitment level, satisfaction level, alternative quality, and investment size for all 74 participants. It is important to note that at no point did we measure or even mention extradyadic behavior at Time 1. Means and standard deviations for the measured variables are presented in Table 1.

Time 2 procedures. Two months after completing the Time 1 questionnaire, participants were contacted regarding the Time 2 activities. At Time 2 they completed one of two questionnaires, depending on whether they were still involved with their partner from Time 1. Fifteen participants’ relationships had broken up by Time 2; 59 relationships persisted. Obviously, the Time 2 questionnaires for persisted versus ended relationships differed in many ways. However, they were identical in one way vital to this study: The questionnaire measuring infidelity was identical for both persisted and ended relationships.

Infidelity Scale. Given the social undesirable nature associated with infidelity, we used great caution in developing a scale that could capture this behavior in such a manner that participants would be likely both to divulge information and to do so honestly. Great pains were taken to ensure the sense of confidentiality of responding to the items in the questionnaire. In addition, we structured the questionnaire in a sort of "foot-in-the-door" (F Freedman & Fraser, 1966) manner. Rather than jumping in with "Were you unfaithful?" and "What did you do?", we allowed participants to ease into admissions of infidelity by admitting to "smaller" infidelity first and then slowly admitting to more serious infidelities. Furthermore, rather than focus on the number of extradyadic partners, we were interested in the intensity of activity with the person to whom they were most attracted during the course of the semester. Finally, because we wanted to use the Time 1 measures to predict later infidelity, we asked for behavior since the Time 1 activities. The infidelity questionnaire, completed by both relationship-persisted and relationship-ended participants, is found in Appendix A.

The specific items of importance for this study were the two that measured degree of emotional and physical intimacy with the extradyadic partner (Items 9 and 11, respectively). We used both emotional and physical intimacy because women tend to value emotional intimacy and view it as betrayal more than do men (Buus et al., 1992). In addition to using the emotional infidelity and physical infidelity scores, we performed factor analyses, which revealed that 9 of the 11 items loaded highest on a single factor that we labeled "Composite Infidelity." The two items that did not seem to relate to this factor were Items 2 and 6, which measured the speculation of how much the other person was attracted to the participant and initiation of the mutual attraction. However, because the other 9 items loaded so strongly on Composite Infidelity (factor loadings ranging from .61 to .85) the 9 items were averaged to form a Composite Infidelity score ($\alpha = .93$). Although this score may or may not reflect physical behavior (although the score is certainly correlated with the behavior, $r = .80$), we believe that it captures the nature of the involvement for the participants. Participants who scored higher on the composite score were more emotionally, cognitively, and physically intimate with their extradyadic attraction partner.

It is important to identify how participants responded to these items. The means and standard deviations for composite, emotional, and physical infidelity are presented in Table 1. Although the means for emotional and physical intimacy are somewhat low for a 9-point scale, there was considerable variation in the occurrence of such behaviors. Frequency analyses revealed that 72% of the participants had at least some degree of emotional intimacy with their extradyadic partner and 48% had at least some degree of physical intimacy. $^1$ When one considers the short time frame for the behavior to occur (2 months), these frequencies are more revealing. Furthermore, there were answers reflecting the entire range of response categories for both emotional and physical infidelity. Finally, a full 31% of emotional responses and 27% of physical responses were at the midpoint of the scale or higher. This pattern of responses suggests that there was intimate, physical extradyadic behavior occurring during the course of the 2 months to which most participants were willing to admit.

The question then is whether these behaviors can be called infidelity in the sense that they violate relationship norms. We believe that they reflect infidelity for two reasons. First, the vast majority of our participants reported being in relationships that were both very serious (80%) and exclusive (72%) in the sense that neither they nor their partner were dating others. Such exclusivity suggests that the behaviors they admitted to represented infidelity. Second, we asked 67 introductory psychology students (who were not in any other sample included in this article) at Southern Methodist University to report whether they would feel that their romantic partner had been unfaithful if they had been emotionally or physically intimate with another person as reflected by a midpoint scale response to the infidelity scale items. Seventy-six percent of the participants responded that they would consider it infidelity. This very high percentage using a similar sample suggests that such behavior reflected infidelity for our participants as well. Using these two lines of reasoning, we describe the behaviors in question as infidelity rather than simply extradyadic intimacy.

Relationship persisted or ended Time 2 questionnaires. In addition to completing the Infidelity Scale, participants whose relationships persisted completed measures identical to Time 1 questionnaires concerning relationship demographics and investment model variables. Once again, the alphas for commitment level (.88), satisfaction level (.90), alternative quality (.72) and investment size (.81) proved acceptable, and the items were averaged to form composite scores for each. Means and standard deviations are presented in Table 1. Participants whose relationships ended completed the Infidelity Scale, demographic items concerning responsibility for breakup (primarily self, mutual breakup, primarily partner) and time since breakup.

Results

Investment model correlations. The first order of business is to establish that previous results concerning investment model variables pertain to this sample. As in previous research, at both Time 1 and Time 2 commitment was positively correlated with satisfaction ($r = .77$ and .78, respectively) and investment level ($r = .49$ and .56) and negatively correlated with alternative quality ($r = -.39$ and -.53). Satisfaction was negatively correlated with alternative quality ($r = -.40$ and -.53) and positively

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1 An analysis of skewness revealed acceptable levels of skew in the distributions of all three infidelity scores (composite = -.10, emotional = .03, physical = .88). Therefore the results are presented using these scores as continuous variables. Additional analyses dichotomizing each infidelity score revealed a similar pattern of findings regarding links to commitment, satisfaction, and other variables.
correlated with investment level ($r = .47$ and $.48$), whereas alternative quality was negatively correlated with investment level ($r = -.32$ and $-.45$; all ps < .01). Time-lagged correlations indicate the same pattern of results among Time 1 investment variables and Time 2 investment variables. Thus, the predicted links among investment model variables are established in this sample.

**Predicting infidelity.** Results regarding the relationship between investment model variables and infidelity are presented in Table 2. It is important to note before exploring the table that the Time 1 measures were conducted without mention or measure of infidelity and that the infidelity measures were collected for a specific extradyadic relationship that occurred between the Time 1 and Time 2 measures. Therefore, we believe the behaviors occurred after the Time 1 measures but before the Time 2 measures. This distinction is important because, in a strictly time-oriented sense, the prediction of infidelity from Time 1 variables and the subsequent effect of infidelity can be considered on the same constructs as measured at Time 2. However, it is also important to point out that we have no knowledge of whether any extradyadic behavior had occurred prior to participation in the study. That is, any or all of the participants may have been engaging in such behavior with the person for whom they completed the Infidelity Scale even before the Time 1 measures. Whether or not this is true, we do know the degree to which infidelity occurred during the time period and can use the measures to predict that specific behavior.

Table 2 presents the simple associations between investment model variables and the infidelity measures, as well as regression analyses reflecting the association of each predictor with each criterion, including gender and interactions with gender. The few effects involving gender that were significant are reported in the following text.

Simple associations between Time 1 investment model variables and infidelity were in the predicted direction. Time 1 commitment level, satisfaction level, and investment level were all negatively correlated (eight of nine correlations were at least marginally significant) with composite infidelity, emotional infidelity, and physical infidelity measures. Time 1 alternative quality was positively correlated with all three measures of infidelity. Individuals who were more committed, more satisfied, had fewer alternatives, and were more invested in their relationships were less likely to be unfaithful to their partners.

Consideration of the regression analyses including gender and Gender × Predictor interactions reveals a similar pattern of findings. Reports of commitment, satisfaction, and investments at Time 1 were negatively associated with subsequent infidelity (eight of nine betas were at least marginally significant). Reports of alternative quality were positively associated with subsequent infidelity (two of three betas were at least marginally significant). In addition, a few main effects for gender emerged in the analyses predicting composite infidelity. However, the findings should be considered cautiously given the small number of men in the sample.

2 In addition to examining the predictive power of each investment model variable individually, we used further analyses to test whether commitment mediated the effects of the more distal variables of satisfaction, alternatives, and investments. Simultaneous regression analyses including commitment and each distal variable in the prediction of each infidelity score revealed results indicating mediation. That is, commitment remained significantly predictive of infidelity, whereas the distal variables' predictive power dropped substantially.

3 Separate analyses conducted using only women revealed similar support for the model in predicting infidelity.
model that included gender and interactions with gender, there were marginally significant main effects for gender in the models testing satisfaction (β for gender main effect = −.53), alternative quality (β = −.54), and investment level (β = −.46; all three ps < .10). The findings suggest that men were somewhat less likely to engage in extradyadic behavior than women overall, as measured by the composite infidelity scores. No other main effects or interactions for sex emerged.

In addition, we also asked participants at Time 1 whether their relationships were long-distance so we could check whether there were differences in rates of infidelity for proximal versus long-distance relationships. However, it is not clear how distance affects infidelity. Long-distance relationships may allow for more maneuverability in terms of infidelity than proximal relationships allow, and thus infidelity may be more common. On the contrary, maintaining a long-distance relationship may be a sign of deeper commitment, and thus infidelity may be less common. Both lines of reasoning suggest that, at the very least, there may be more variance in both infidelity and investment model constructs for long-distance relationships. In the end, however, there were no significant analysis of variance (ANOVA) results regarding infidelity for proximal versus long-distance relationships and no significant differences in the variances for each type of relationship.

The aftermath of infidelity. Consideration of infidelity and its subsequent effects (again, in a strictly time-oriented sense) on investment constructs reveals a similar pattern (see Table 3). Simple correlation results indicate that individuals who engaged in extradyadic behavior reported less commitment, satisfaction, and investment, and greater alternative quality at Time 2 (11 of 12 correlations were significant; see rs under “zero order” in Table 3). However, this relationship between infidelity and Time 2 investment constructs may simply be the result of the Time 1 investment model variables and not an infidelity effect at all. To test this consideration we correlated the infidelity measures with each Time 2 investment model variable while partialing the participant’s Time 1 score for that variable. These analyses test the effects of infidelity on the Time 2 levels of each variable independent of how the participant stood on that variable at Time 1. Results of these analyses are also presented in Table 3 (see rs under “Partial” in Table 3). Results indicate greater infidelity was significantly related to increases in perceived alternative quality and decreases in commitment level, satisfaction level, and investment level at Time 2 even when we accounted for Time 1 levels of these variables (10 of 12 correlations were at least marginally significant). Given that the infidelity ostensibly occurred before measuring the Time 2 variables, the findings suggest that infidelity leads to an erosion of important relationship constructs.

Analyses of breakups. Fifteen relationships terminated during the course of the study. ANOVAs comparing individuals whose relationships persisted with those whose relationships ended on investment as measured at Time 1 and infidelity as measured at Time 2 are presented in Table 4. Results clearly indicate that participants whose relationships persisted were more committed, satisfied, and invested and had fewer alternatives at Time 1 than participants whose relationships ended.

Results concerning the infidelity measures reveal means in the

<table>
<thead>
<tr>
<th>Variable</th>
<th>Persisted (n = 59)</th>
<th>Ended (n = 15)</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite infidelity</td>
<td>3.93</td>
<td>4.70</td>
<td>1.78</td>
<td>1, 70</td>
<td>&lt;.187</td>
</tr>
<tr>
<td>Emotional infidelity</td>
<td>2.60</td>
<td>4.07</td>
<td>4.25</td>
<td>1, 70</td>
<td>&lt;.043</td>
</tr>
<tr>
<td>Physical infidelity</td>
<td>2.19</td>
<td>2.07</td>
<td>0.02</td>
<td>1, 70</td>
<td>&lt;.877</td>
</tr>
<tr>
<td>Time 1 commitment</td>
<td>5.80</td>
<td>4.09</td>
<td>11.18</td>
<td>1, 68</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Time 1 satisfaction</td>
<td>6.23</td>
<td>4.81</td>
<td>10.53</td>
<td>1, 72</td>
<td>&lt;.002</td>
</tr>
<tr>
<td>Time 1 alternative quality</td>
<td>4.69</td>
<td>5.36</td>
<td>3.40</td>
<td>1, 72</td>
<td>&lt;.069</td>
</tr>
<tr>
<td>Time 1 investment</td>
<td>4.96</td>
<td>3.97</td>
<td>5.18</td>
<td>1, 72</td>
<td>&lt;.026</td>
</tr>
</tbody>
</table>
predicted direction for composite and emotional measures but reveal a significant effect for emotional infidelity only. Individuals whose relationship ended had greater levels of emotional intimacy with a person other than their partner. In addition, comparison of individuals who were abandoned by their partner (n = 4) versus those who terminated the relationship ("leavers"; n = 7) or had a mutual breakup (n = 4) reveals that leavers and those in mutual breakups had greater physical infidelity scores than the abandoned: leavers, M = 3.14; mutual, M = 2.25; abandoned, M = 0.00; F(1, 13) = 5.63, p < .035. Although findings based on such small ns should be interpreted with caution, these particular findings are not surprising given previous research that demonstrated that abandoned participants "look" more like participants whose relationships persisted than leavers (Drigotas & Rusbult, 1992).

Finally, because we have no data identifying when exactly a participant's relationship ended (other than that it ended between Time 1 and Time 2), it is possible that participants did not become involved with their "other" listed in the infidelity scale until after having broken up with their original partner, and thus their behavior would not be considered extradyadic. Therefore, we conducted regression analyses identical to those reported above using only those participants for whom we were positive their behavior could be considered extradyadic (i.e., participants whose relationship had not terminated). Results indicated a similar pattern of findings.

Discussion

Study 1 provided relatively strong support for the investment model in the prediction of relationship infidelity. The investment model measures of commitment, satisfaction, alternative quality, and investments significantly predicted subsequent extradyadic behavior over the course of the semester. Results also indicate that such behavior tended to erode the relationship, with some participants' relationships terminating and others reporting lower commitment, satisfaction, and investments and greater alternatives.

However, despite the strengths of the study, there are several limitations. First, as mentioned earlier, one could argue that the behaviors measured by the Infidelity Scale do not represent infidelity at all, in that they include no measure of whether such behavior violated implicit or explicit relationship norms for our participants. This is a valid concern. Without consideration of relationship norms, the behaviors could be simply extradyadic behavior that is allowed in the relationship. However, we are less concerned with this line of argument for two reasons. First, we do know that the vast majority of participants characterized their relationship as both exclusive (neither they nor their partner dates others; 72%) and serious (80%). Such exclusivity, in the context of the culture of the participants in our sample, would implicitly preclude high levels of extradyadic physical or emotional intimacy. Second, analyses considering relationship exclusivity revealed findings similar to those for the whole sample for both participants who claimed that their relationship was exclusive and those who did not. These findings suggest that the investment model predicts both behavior that can be characterized as infidelity and behavior that can be characterized as merely extradyadic.

A second limitation regarding the strict use of the Infidelity Scale is that it asked participants to recall behavior that had occurred over the course of a 2-month period. Such recollections may be consciously or unconsciously biased regarding participants' behavior. Although we took great pains both to prompt participants gently into admitting such behavior and to assure them their answers were confidential, such recollections regarding such a long time frame may be clouded. In addition, infidelity behaviors can be very arousing, and research on eyewitness testimony indicates that arousal often hurts accuracy (e.g., Williams, Loftus, & Deffenbacher, 1992). We suspect that most participants could accurately recall such important interpersonal behavior, but the potentially long time frame to remember may have been an issue for some participants.

Finally, Study 1 could be criticized for its reliance on self-report measures. As far as the investment model measures go, we are somewhat comforted by the long history of their use in the prediction of behaviors such as accommodation (Rusbult et al., 1991) and willingness to sacrifice (Van Lange et al., 1997). Their predictive power in Study 1 further strengthens an already firmly established model and its basis in interdependence theory. In regard to the self-report nature of the infidelity scale, we are encouraged that it does try to at least measure behavior (albeit self-reported behavior) and not simply a state of mind.

Study 2 was designed to alleviate some of the concerns with Study 1. Study 2 more closely measured extradyadic behavior as it occurred, without the inherent problem of self-reported data gathered based on memory of a 2-month period. The study used the interaction record technique developed at the University of Rochester (for a description of this method, see Reis & Wheeler, 1991). Participants were asked to keep a record of the emotional and physical intimacy of all their opposite-sex interactions lasting 10 min or more over the course of a 10-day period during the university holiday known as spring break.4 This data collection technique is also self-report in nature but has the advantage of participants recording their behavior close to when it occurs, thus minimizing the problem of memory and more closely capturing real behavior.

Study 2

Method

Participants. Thirty-eight individuals involved in heterosexual dating relationships agreed to participate in a two-wave study in partial fulfillment of a research participation requirement for introductory psychology at Southern Methodist University. All 38 completed the Time 1 questionnaire. However, 1 participant dropped out of the study before completing the diary activity and the Time 2 questionnaire, leaving 37 participants who completed all activities (12 men and 25 women). Descriptive analyses revealed that participants, on average, were 19.11 years of age and were primarily freshmen (68%) and sophomores (18%). More important, as in Study 1, the majority of participants characterized their relationship as "serious" (79%), had been dating their partner for a substantial amount of time (average = 18.37 months), and reported being in an exclusive relationship where neither they nor their partner dated others (92%).

Procedure. At Time 1, 2 days before the start of spring break, participants completed a questionnaire on campus and were given instructions concerning the diary activity to be completed over the 9 days of spring break. On the Monday after spring break participants turned in their diary

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4 Spring break represents a one-week period during March when classes are canceled and the university is essentially shut down. Typically, students either (a) return home; (b) remain on campus, or (c) go on vacation.
sheets and completed the Time 2 questionnaire. Participants were assured at all times that their responses would be confidential—all responses were coded and stored by number rather than name.

**Time 1 questionnaire.** The Time 1 questionnaire was identical to that used in Study 1 and was essentially designed to measure demographic variables and investment model variables. Given the high reliabilities of the measures of commitment (α = .83), satisfaction (α = .84), alternative quality (α = .77), and investment size (α = .72), composite averaged scores were created for each variable. As in Study 1, it is important to note that at no point did we measure or even mention extradyadic behavior at Time 1. Means and standard deviations for the measured variables are presented in Table 5.

**Diary procedures.** Immediately after the completion of the Time 1 questionnaire, participants were given instructions and materials for the Southern Methodist University Interaction Record (SIR) portion of our study. The procedures and materials for this study were modeled after those used for the Rochester Interaction Record (for a description of this method, see Reis & Wheeber, 1991). During the Time 1 session we explained that we were interested in the opposite-sex social interactions of college students during spring break. SIR cover sheets asked participants to “complete one sheet for each opposite-sex interaction lasting 10 minutes or longer.” During the Time 1 session participants received instructions about how to use the SIR record sheets (see Appendix B for an example of a record sheet), were asked to complete a record sheet for each opposite-sex interaction as soon as possible after the interaction, were urged to complete the sheets honestly and accurately, and were repeatedly asked not to discuss with their interaction partners any aspect of their participation.

Each participant was given three booklets containing 20 interaction sheets. For each opposite-sex interaction that lasted 10 min or longer, the participant recorded the day and date of the interaction and the time and length of the interaction. In addition, participants recorded the interaction partner’s initials (if unknown, they assigned them a code that they could consistently use for each interaction with that specific person), described their relationship with that person (partner, relative, friend, stranger), and circled their acquaintance level with them (1 = unacquainted, 2 = acquainted but not close, 3 = close acquaintance). Participants then reported, using 9-point Likert-type scales, the quality of the interaction and the amount of arousal, flirting, emotional intimacy, and physical intimacy they experienced during the interaction.

**Calculation of SIR dependent measures.** Participants described a mean of 23.49 opposite-sex interactions during the 9 days of spring break (range = 11 to 54). For the purposes of this study, interactions were divided into two categories on the basis of the description of the participants’ relationship with their interaction partner. The first category represents interactions that occurred with their romantic partner (termed SIR partner). The second category represents interactions that occurred with opposite-sex friends or strangers (excluding partner or relatives; termed SIR friend/stranger). We developed five types of measures representing averages across incidents in the context of these two categories: number of interactions, average quality of interactions, average physical intimacy of interactions, average emotional intimacy of interactions, and a composite intimacy score representing the average of the flirting, emotional intimacy, and physical intimacy scores. (Analyses revealed that amount of arousal was uncorrelated with any of the other three measures; and the alpha for composite score was .72.) Means and standard deviations for these variables are presented in Table 5.

It is important to identify how participants responded to these items, especially for interactions with opposite-sex friends or strangers. Although the means for emotional and physical intimacy are somewhat low for a 9-point scale, there is considerable variation in the occurrence of such behaviors.5 Frequency analyses revealed that 80% of the participants had at least one instance of emotional intimacy during an SIR friend/stranger interaction and 43% had at least one interaction with some degree of physical intimacy. When one considers the extremely short time frame for the behavior to occur (9 days), these frequencies are more revealing.

**Time 2 procedures.** On the Monday after spring break participants turned in their completed SIR packets and completed a questionnaire measuring investment model variables, the Study 1 Infidelity Scale modified for the spring break time period to measure infidelity, and the various measures concerning participants’ diligence and accuracy in completing the record forms described earlier. Composite scores were computed for commitment (α = .79), satisfaction (α = .88), alternative quality (α = .79), and investment level (α = .84).

**Infidelity Scale.** The Infidelity Scale was slightly revised to investigate the intensity of activity with the person to whom they were most attracted during spring break. Otherwise, the questions were identical to those used in Study 1. As in that study, three scores were computed for analyses: emotional infidelity, physical infidelity, and a composite infidelity score representing the average of the nine items used in Study 1 (α = .93). As in Study 1, these three infidelity scores were highly correlated with one another.

It is important to identify how participants responded to these items. The means and standard deviations for composite, emotional, and physical infidelity are presented in Table 5. Although the means for emotional and physical infidelity are somewhat low for a 9-point scale, there is considerable variation in the occurrence of such behaviors. Frequency analyses also revealed that 76% of the participants had at least some degree of emotional intimacy with their extradyadic partner and 41% had at least some degree of physical contact. When one considers the short time frame

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5 An analysis of skewness revealed somewhat elevated, but acceptable, levels of skew in the distributions of the three friend or stranger intimacy scores (composite = 1.75, emotional = 1.44, physical = 1.83). Therefore the results are presented using these scores as continuous variables. Additional analyses dichotomizing each infidelity score revealed a similar pattern of findings regarding links to commitment, satisfaction, and other variables.
for the behavior to occur (9 days), these frequencies are more revealing. Furthermore, some answers reflected the entire range of response categories for both emotional and physical infidelity. Finally, a full 35% of emotional intimacy responses and 17% of physical intimacy responses were at the midpoint of the scale or higher. This pattern of responses suggests that infidelity occurred during the course of spring break and that participants were willing to admit it.

Validity of SIR measures. Validity regarding the SIR measures was assessed in two ways. Examination of the Time 2 measures of diary accuracy and participation vigilance provides one way of assessing whether the diaries provide accurate information regarding how participants completed the task. Participants indicated that they reliably completed diary forms for opposite-sex interactions (0 = none of the incidents, 5 = all incidents; M = 4.00) and reported having completed forms for 83% of the opposite-sex interactions they had had over the course of spring break. They reported completing the diary forms shortly after each incident (0 = a long time afterward, 5 = immediately afterward; M = 2.95), and 95% reported that the forms accurately reflected the incidents that took place during spring break. Moreover, participants reported that they had accurately followed instructions (0 = extremely inaccurate, 5 = extremely accurate; M = 4.43), that their accuracy changed little over time (0 = changed, 5 = stayed the same; M = 4.19), that it was not especially difficult to complete the forms (0 = not at all difficult, 5 = extremely difficult; M = 1.35), that completing forms had little impact on the interactions they experienced (0 = little or no impact, 5 = extreme impact; M = 1.03), and that completing forms did not affect the way they behaved (0 = little or no effect, 5 = extreme effect; M = 0.81), and 95% reported that their partner never saw any of their completed sheets. Although such self-reports cannot be taken as objective indicators of accuracy, given that the questionnaire was completed at the end of the study in an atmosphere of cooperation (i.e., stressing anonymity of responses and the importance of honesty), these statistics at the very least suggest that participants did not experience serious difficulties with our procedures. In addition, Reis and Wheeler (1991) reported the results of numerous studies providing support for the diary method.

In addition, we would also expect there to be a relationship between the SIR friend/stranger interactions and Infidelity Scale scores. That is, if participants were accurately recording their interactions, there should be some sort of association between their intimacy and the infidelity scores reflecting intimacy with the one person to whom they were most attracted during the same time period. In fact, correlation results indicate some agreement between corresponding measures. Composite intimacy of SIR friend/stranger interactions was positively correlated with composite infidelity (r = .52, p < .01), emotional intimacy of SIR friend/stranger interactions was positively correlated with emotional infidelity (r = .33, p < .01), and physical intimacy of SIR friend/stranger interactions was positively correlated with physical infidelity (r = .40, p < .05). These correlations are quite compelling given the diverse nature of the measurement technique and provide some sense of validation that both are getting at similar, but not identical, constructs regarding extradyadic behavior.

Results

The analysis strategy for Study 2 paralleled that for Study 1 in that we used Time 1 investment model scores to predict later extradyadic behavior as measured by both the SIR friend/stranger diary scores and the Infidelity Scale. As in Study 1, analyses included simple associations between variables and regression analyses including predictor, gender, and Gender × Predictor interactions. In addition, we examined the effects of extradyadic behavior (using scores from both the SIR friend/stranger diary and the Infidelity Scale) on subsequent investment model scores as measured at Time 2. Finally, we explored the relationship between SIR partner diary scores and both Time 1 investment measures and the SIR friend/stranger diary scores.

Predicting SIR friend/stranger interactions. Results regarding the prediction of both number and quality of friend or stranger interactions over the course of spring break indicate that commitment is a strong predictor (again, in a time-oriented sense) of such interactions (see Table 6). In terms of simple correlations, there are strong negative correlations between commitment level before spring break and both physical intimacy and composite intimacy of friend or stranger interactions (the correlation regarding emotional intimacy was in the predicted direction but not significant) and the number of such interactions. In other words, individuals who reported more commitment to their relationships before spring break had fewer friend or stranger interactions during spring break than those who reported being less committed to their relationships, and their friend or stranger interactions were less intimate as measured by both the physical intimacy score and the composite score. The results remained significant when gender and Gender × Commitment interactions were considered in a regression analysis. Results regarding other investment model variables reveal correlations that are for the most part in the intended direction but are not significant other than the marginally significant negative correlations between investment level and both composite and emotional intimacy. Given that the opposite-sex stranger interactions contained a great many nonintimate interactions, it is not surprising that the central construct of commitment would be the only variable that could capture the infidelity element found in these interactions.

As in Study 1, a number of gender main effects in the analyses were found; however, no interaction effects for Gender × Predictor were found. (As in Study 1, these gender effects should be interpreted with caution, given the small number of men.) A stable main effect was found for gender in the prediction of composite intimacy such that men had less intimate friend or stranger interactions than did women (β = −.15, p < .05). There was also a stable main effect for gender in the prediction of emotional intimacy such that men had less intimate friend or stranger interactions than did women (β = −.08, p < .10). There were no significant effects for gender in the prediction of physical intimacy or number of interactions.

Given the different ways that participants may have spent spring break (see Footnote 3), one could argue that there may be differences in extradyadic behavior for participants who traveled on vacation versus those who went home or stayed on campus. We collected some data regarding how they spent their break, which was coded using a "vacation" versus "home" versus "campus" strategy. ANOVA results revealed no significant differences regarding how participants spent their break for any of the central measures used in the study. We also collected data regarding whether they spent the time with their partner during the course of spring break. Only 2 participants spent no time at all with their

6 As in Study 1, an analysis of skewness revealed acceptable levels of skew in the distributions of all three infidelity scores (composite = 0.06, emotional = 0.34, physical = 1.40). Therefore the results are presented using these scores as continuous variables. Additional analyses dichotomizing each infidelity score revealed a similar pattern of findings regarding links to commitment, satisfaction, and other variables.
partner during the break. One could speculate that amount of time spent with partner could moderate some of the effects reported, ostensibly because those who less time spent with their partner would have greater opportunity for extradyadic behavior. Unfortunately, we expected more participants to spend no time with their partner over the course of spring break, and thus our technique of measurement was too broad to allow for meaningful comparison.

Predicting infidelity using the Infidelity Scale. Results regarding the prediction of infidelity using the scale concerning the one person to whom participants had been most attracted during the course of spring break are presented in Table 7 and represent,

<table>
<thead>
<tr>
<th>Table 6</th>
<th>Regression Analyses Predicting SIR Friend or Stranger Interactions From Investment Model Scores: Study 2</th>
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</thead>
<tbody>
<tr>
<td>Infidelity type and investment model variable</td>
<td>Simple association ( (r) )</td>
</tr>
<tr>
<td>SIR friend or stranger composite intimacy</td>
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<tr>
<td>Commitment</td>
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<td>Satisfaction</td>
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<tr>
<td>Alternative quality</td>
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<tr>
<td>Investment</td>
<td>-.28†</td>
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<tr>
<td>SIR friend or stranger physical intimacy</td>
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<td>Commitment</td>
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<tr>
<td>Satisfaction</td>
<td>-.03</td>
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<td>Alternative quality</td>
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<td>SIR friend or stranger emotional intimacy</td>
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<td>Satisfaction</td>
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<tr>
<td>Investment</td>
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<tr>
<td>SIR friend or stranger interaction frequency</td>
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<td>Alternative quality</td>
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</tr>
<tr>
<td>Investment</td>
<td>-.08</td>
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</tbody>
</table>

Note. Simple association statistics reflect the simple association of each predictor with each variable. Regression analyses statistics reflect the association of each predictor with each variable, including gender and interactions with gender.

† \( p < .10 \) (marginally significant). ^* \( p < .05 \). ^** \( p < .01 \).

<table>
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<tr>
<th>Table 7</th>
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</tr>
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<tbody>
<tr>
<td>Infidelity type and investment model variable</td>
<td>Simple association ( (r) )</td>
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<tr>
<td>Composite infidelity</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>-.55^**</td>
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<tr>
<td>Satisfaction</td>
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<tr>
<td>Alternative quality</td>
<td>.52^**</td>
</tr>
<tr>
<td>Investment</td>
<td>-.27†</td>
</tr>
<tr>
<td>Physical infidelity</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>-.42^**</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>-.27†</td>
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<tr>
<td>Alternative quality</td>
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</tr>
<tr>
<td>Investment</td>
<td>-.05</td>
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<tr>
<td>Emotional infidelity</td>
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<tr>
<td>Commitment</td>
<td>-.64^**</td>
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<tr>
<td>Satisfaction</td>
<td>-.49^**</td>
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<tr>
<td>Alternative quality</td>
<td>.36^*</td>
</tr>
<tr>
<td>Investment</td>
<td>-.33^*</td>
</tr>
</tbody>
</table>

Note. Simple association statistics reflect the simple association of each predictor with each variable. Regression analyses statistics reflect the association of each predictor with each criterion, including gender and interactions with gender.

† \( p < .10 \) (marginally significant). ^* \( p < .05 \). ^** \( p < .01 \).
essentially, a replication of Study 1. As in Study 1, investment model variables predicted composite, physical, and emotional infidelity in the predicted direction (11 of 12 correlations were at least marginally significant). Regression analyses including predictor, gender, and Gender × Predictor interactions illustrate similar findings. There were no significant main effects or interactions with gender.

The aftermath of infidelity. As in Study 1, the effects of infidelity were examined in terms of both simple correlations with Time 2 investment scores and the same correlations partialing for Time 1 investment scores (see Table 8). In terms of the simple association between Infidelity Scale measures and Time 2 investment model variables, the results mimic Study 1 results. On the one hand, earlier infidelity was consistently negatively correlated with later commitment, satisfaction, and investment and positively correlated with alternative quality. On the other hand, partial correlation results revealed few remaining associations between infidelity and later investment measures. However, there is a high degree of colinearity between Time 1 and Time 2 investment measures (rs ranged from .84 to .92). As a result, once the earlier level for a variable is partialed, not much is left to predict. Results examining the effects of the extradyadic behavior as measured by SIR friend/stranger intimacy reveal very weak support in terms of both simple correlations and those partialing for earlier investment measures. Given the short time frame of Study 2, it is not surprising that there were no significant effects. We suspect that the behaviors that occurred during spring break take some time to have serious erosion effects on the relationship. Whereas in Study 1 there was ample time for infidelity to erode commitment, in Study 2 no such time was afforded for change in investment constructs.

Predicting SIR partner interactions. Although the purpose of the present study was to investigate friend or stranger interactions over the course of spring break, we also collected data regarding partner interactions and conducted some exploratory analyses regarding interactions with friends or strangers. Given that commitment can be considered a macromotive that predicts a variety of relationship maintenance behaviors, one would expect that it should predict the number and quality of partner interactions that occurred over spring break as well. Although there were no significant effects for number of partner interactions, there were significant correlations for both reported commitment and satisfaction with composite intimacy (r = .33, p < .10; and r = .37, p < .05, respectively) and emotional intimacy (r = .36, p < .05; and r = .38, p < .05, respectively). Results regarding physical intimacy are in the predicted direction but are not significant. Thus, pre–spring-break commitment and satisfaction were related to the quality of partner interactions during spring break.

Results regarding the relationships between the number and quality of friend or stranger and partner interactions contain two significant findings. First, there was a negative correlation between the number of friend or stranger interactions and the number of partner interactions experienced over the course of spring break (r = −.37, p < .05). However, because there was no significant relationship between the number of friend or stranger interactions and the intimate nature of such relationships (e.g., number with composite intimacy, r = −.06), this negative relationship may not directly contribute to any infidelity phenomena. Second, there is a significant positive relationship between the physical intimacy of friend or stranger interactions and the physical intimacy of partner interactions that occurred over the course of spring break (r = .43, p < .05). It appears that some participants were just more physically intimate across both types of interactions. This finding could merely be because of response bias or could possibly be accounted for by the more psychologically meaningful explanations of either a physiological characteristic, such as high testosterone (Dabbs, Ruback, & Evans, 1993), or a personality characteristic, such as unrestricted sociosexuality (Seal, Agostinelli, & Hannett, 1994; Simpson & Gangestad, 1991).
General Discussion

The results of two studies using different methods indicate strong support for the use of the investment model in the prediction of infidelity within heterosexual dating relationships. In Study 1, commitment strongly predicted later infidelity across a semester. In Study 2, commitment predicted the physical and emotional intimacy of participants' opposite-sex, nonpartner interactions over the course of spring break. Furthermore, commitment also predicted infidelity over the course of spring break using the Infidelity Scale.

These studies are important for three specific reasons. First, they represent an important addition to both the investment model and infidelity literatures. The use of the investment model in predicting infidelity adds to the growing list of relationship behaviors that the model successfully predicts, which range from relationship breakup (Rusbult, 1983; Drigotis & Rusbult, 1992) to accommodation (Rusbult et al., 1991) to willingness to sacrifice (Van Lange et al., 1997). The fact that the investment model effectively predicts dating infidelity helps deepen support for the model and its theoretical underpinnings in interdependence theory, adding to both the theory's and the model's breadth of application. The studies represent an important addition to the infidelity literature in that they offer the prediction of actual infidelity rather than post hoc explanations of why such behavior occurred or the prediction of fantasized infidelity. Both studies used investment model constructs to predict later infidelity. Although other variables previously linked to infidelity may have played a role in our participants' behavior (e.g., attitudes–norms, ego bolstering), the model predicted a significant amount of the variance in behavior.

Second, the studies provide a glimpse into infidelity in an understudied population: those in dating relationships. Previous research has focused almost exclusively on infidelity among married individuals. Given that patterns of relating are often established in dating relationships and given that the rates of infidelity in the two samples were relatively high, such relationships are an important population to study.

Third, the investment model provides some theoretical cohesion in the prediction of dating infidelity. The literature up to this point has remained somewhat phenomenological in nature, sometimes using a theory (e.g., equity theory) to test variables one at a time without regard to where they fit in the larger scale of interpersonal relationships. The investment model makes specific predictions regarding the nature of commitment and its links to infidelity.

The prediction of infidelity by investment model constructs has additional implications for issues of infidelity beyond those studied in this article. Recent research has used an evolutionary perspective to delineate gender differences in cues to infidelity (Shackelford & Buss, 1997). Results of self-report studies imagining what one would look for to see if one's partner is being unfaithful fall on evolutionary lines: Men think sexual behavior is more diagnostic of potential infidelity, whereas women find emotional behavior to be more diagnostic. Our results suggest that paying attention to one's partner's commitment would be a very diagnostic tool in the prediction of partner infidelity. In both studies, participants with low commitment were more likely to be both emotionally and physically intimate with someone other than their partner. Thus, to find out whether a partner would be unfaithful, one should see how committed one's partner is.

In a related vein, issues of commitment could also be used to help keep partners from being unfaithful. Given that commitment represents a psychological attachment to the relationship, keeping that attachment salient can only bolster resistance to temptation. Therefore, keeping commitment salient for a partner who may be given the opportunity to stray (e.g., when away on spring break) may help keep him or her from straying. Indeed, the Time 1 measures of commitment in both studies may have helped make commitment salient for the participants, thus lowering the level of infidelity that occurred (although such priming would probably not be a confound, because all participants received the same prime). Future research could experimentally test the effects of such commitment salience on dating infidelity.

Because commitment is a macromotive in relationships, the decision to remain faithful as a result of being committed to the relationship has implications beyond the specific behavior. For highly committed individuals, decisions to engage in prorelationship behaviors (such as being faithful) may yield direct benefits for the individual on later occasions. For example, given the strength of reciprocity norms, earlier cooperative acts are likely to yield later reciprocal cooperation from one's partner, especially in the context of an extended interdependent relationship (Axelrod, 1983). Thus, a decision to remain faithful may make it more likely for one's partner to behave accordingly when confronted by a similar situation. At the very least, a decision to remain faithful provides a benchmark for future behavior, establishing an implicit (or possibly explicit) norm for behavior for self and partner. The formation of such norms helps guide decisions in often uncertain encounters, providing a basis for behavior (e.g., Buunk & Bakker, 1995).

Restraint in the face of temptation should also lead to greater interpersonal trust on the part of one's partner (if he or she comes to know about such restraint) and thus a greater willingness by one's partner to invest in the relationship. The development of trust is considered a basic tenet of successful relationships (Holmes & Rempel, 1989). Previous research has demonstrated that prorelationship acts that communicate the individual's commitment (such as resisting an attractive alternative) enhance a partner's trust, paving the way for prorelationship risk taking involving further advances in commitment (e.g., Rusbult, Wieselquist, Foster, & Witcher, in press). Such acts may also help lead to prorelationship transformations of motivation for both partners, whereby partners subsume their own needs into consideration of what is good for the relationship. Such transformations are associated with positive relationship and individual health. At the very least, the decision to remain faithful serves as a good indicator of one's commitment to the relationship.

The research also illustrates some of the ramifications of infidelity, both in terms of relationship stability and the erosion of investment model variables. In Study 1, individuals whose relationships terminated had higher scores on the Infidelity Scale (and the results are even more impressive when one considers who terminated the relationship). In both studies, acts of infidelity as measured by the scale were related to subsequent declines in satisfaction, investment, and commitment and increased perceptions of alternative quality. In interdependence terms, engaging in such behavior was associated with further threats to the stability of the relationship, even for those still dating at the end of the studies.
There are a number of limitations within these studies. First, the behavioral measures of infidelity are self-report in nature and subject to the biases inherent in self-report. Although we tried to eliminate evaluation apprehension for participants, we cannot be positive whether any apprehension tainted responses. We are comforted that the diary results are strongly related to the Infidelity Scale in Study 2, thus giving some validation of the Infidelity Scale through reports of actual interactions.

A second limitation revolves around the issue of relationship norm violation and the lack of direct evidence that the behaviors measured in both studies represented “infidelity” per se. As mentioned earlier, infidelity implies the violation of an implicit or explicit relationship norm regarding extradyadic behavior. What is not clear from the present research is whether participants were in relationships that allowed the types of extradyadic behavior measured. Both studies would have benefited from the inclusion of specific measures of relationship norms regarding extradyadic behavior. However, we do know that the majority of participants reported being in exclusive relationships and that analyses based on these exclusive relationships showed similar findings. Although the term exclusive implies an implicit norm regarding extradyadic behavior, we cannot be sure that our participants’ behavior violated any relationship norm and thus could be characterized as “infidelity.”

Some may also find it problematic that participants were not asked directly what specific infidelity behaviors were committed over the course of the semester. Instead, participants reported infidelity using a 9-point scale. Because of this we can only be sure of infidelity on a relative basis; for example, we know that a 7 on the scale is higher than a 3. But we do not know specifically what the 7 represents behaviorally, and different participants most likely used the scale differently. However, the relative scale approach was adopted to avoid the apprehension inherent to the listing of behaviors. Given the range and pattern of response, we are confident that the scale reflected actual infidelity and are excited that the model predicted infidelity so well.

The makeup of the sample is problematic for three reasons. First, the results are based exclusively on a sample of North American college students. It is not clear whether the findings can be generalized to other cultures. We are somewhat comforted by the fact that the investment model has successfully been used to predict various relationship phenomena in other cultures, including Taiwan (Lin & Rusbult, 1995) and the Netherlands (Van Lange et al., 1997). However, it is not definitively clear that the findings regarding infidelity would generalize to other cultures. As we mentioned in the introduction, we believe that the underlying processes inherent to infidelity (norm violation and sexual jealousy) are universal in nature. Thus, although the specific behaviors that constitute infidelity may change from culture to culture, such underlying processes will remain the same. We expect that the investment model would effectively predict infidelity in any culture. However, such research remains to be conducted.

Second, the overrepresentation of women in the two samples is also somewhat problematic. It is generally not wise to rely too heavily on one gender to examine any phenomenon. However, a great deal of literature indicates that women pay more attention to relationships (Jacobson, Follette, & McDonald, 1982; Levinger, 1966) and thus may possibly give a more accurate view of relationship dynamics. What is more troubling about our female-dominated samples is the evolutionary psychology evidence for sex differences in rates of physical versus emotional infidelity in marriage. Research has indicated that men are more likely to engage in extramarital sex with little or no emotional involvement, whereas women are more likely to engage in extramarital emotional involvement without sexual intercourse (Glass & Wright, 1985). The overabundance of women in our studies somewhat taints the analyses of gender differences for either physical or emotional infidelity in our samples. The gender effects that were demonstrated in the diary study are somewhat aligned with evolutionary theory, in that women were more likely to be emotionally unfaithful to their partners than men were. (There were no gender differences regarding physical infidelity.)

Finally, we must admit that we have no way of knowing whether any behavior with the person identified by the Infidelity Scale had occurred prior to our Time 1 measures in either study. In other words, the intimate behavior identified by the scale could have also occurred prior to our measures, and thus the behavior may have been an ongoing theme in the relationship and not something new to it. Although we recognize that this information would have been valuable, it does not diminish the fact that the Time 1 measures did effectively predict later behavior. However, for some subset of the sample earlier behavior could have eroded commitment as measured at Time 1 and made it more likely that further infidelity occurred during the time period we measured.

Conclusions

The research presented in this article represents an important contribution to the literature in two areas of research. First, it provides evidence for the theoretical prediction of actual dating infidelity heretofore missing. Although there is a good deal of evidence regarding the post hoc explanations for infidelity, there has been very little systematic prediction of such behavior. The present studies demonstrate that such behavior can be successfully accounted for using the investment model. Second, this research represents another important relationship behavior that the investment model successfully predicts. It adds to the growing list of things that people do (and do not do) as a result of being committed to their relationships, thereby broadening the landscape of empirical evidence supporting the model. Although future research may need to delineate the specific nature of infidelity (i.e., measure particular sexual and emotional behaviors) and study other populations (e.g., married couples, non–North American cultures), the present studies provide a solid basis for such exploration.

References


There are times within romantic relationships when we are attracted to other people. Part of being human is being aware of and attracted to people. Sometimes that attraction is mutual and sometimes it is not. When it is mutual it often leads to certain flirting behaviors. We want you to think of a person since Time One that you were most attracted to besides your partner. We do not want you to name the other person, but please respond to the following general questions about this other person you were attracted to.

1) How attractive did you find this person?
   0 Not At All Attractive
   1 2 3 4 5 6 7 8 Extremely Attractive

2) How attractive do you think this person found you?
   0 Not At All Attractive
   1 2 3 4 5 6 7 8 Extremely Attractive

3) How much arousal did you feel in their presence?
   0 No Arousal
   1 2 3 4 5 6 7 8 A Great Deal of Arousal

4) How much time did you spend thinking about this person?
   0 No Time
   1 2 3 4 5 6 7 8 A Great Deal of Time

5) How much flirting occurred between the two of you?
   0 No Flirting
   1 2 3 4 5 6 7 8 A Great Deal of Flirting

6) Who initiated the mutual attraction between the two of you? 0 = Other person 1 = Equal 2 = Me

7) How often did you and this person do “couple” things together (e.g., spend time together, talk on phone)?
   0 Never
   1 2 3 4 5 6 7 8 Very Often

8) How tempted were you to be emotionally intimate (e.g., shared feelings, emotions) with this person?
   0 Not At All Tempted
   1 2 3 4 5 6 7 8 Extremely Tempted

9) How emotionally intimate were you with this person?
   0 Not At All Emotionally Intimate
   1 2 3 4 5 6 7 8 Extremely Emotionally Intimate

10) How tempted were you to be physically intimate (e.g., kissing, sexual activity) with this person?
    0 Not At All Tempted
    1 2 3 4 5 6 7 8 Extremely Tempted

11) How physically intimate were you with this person?
    0 Not At All Physically Intimate
    1 2 3 4 5 6 7 8 Extremely Physically Intimate

(Appendices continue)
Appendix B

Interaction Record Diary Sheet

*Please fill out form for each interaction lasting 10 minutes or longer*

**SOCIAL INTERACTION STUDY**

Your code: ___  Day of the week: ___  Date: ___

Time: ___ am/pm  Length of interaction: ___ hrs ___ minutes

Interaction partner’s initials: ___

Description of relationship: _____________________________

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<tr>
<td>2. acquainted but not close</td>
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**About the Interaction:**

**Quality**

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**Arousal**

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**Flirting**

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**Emotional Intimacy**

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**Physical Intimacy**

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