

Attributions and Behavior in Functional and Dysfunctional Marriages

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The study examined whether spouses' attributions for partner behavior are related to their own behavior by assessing their attributions and observing the problem-solving discussions of couples in which (a) neither spouse was depressed or maritally distressed, (b) the wife was depressed and both spouses were maritally distressed, and (c) the wife was not depressed and both spouses were maritally distressed. To the extent they made maladaptive attributions, wives displayed less positive behavior and more negative behavior. Husbands' attributions and behavior were unrelated, and associations between attributions and behavior were not moderated by marital distress and depression. These results highlight the need to clarify how partner behavior contributes to the attributions spouses make and to reexamine interventions designed to modify attributions in marital therapy.

Accumulating evidence indicates that spouses' maladaptive attributions for events in their relationship covary with lower levels of marital satisfaction and predict declines in the quality of the marriage (see Bradbury & Fincham, 1990; Epstein & Baucom, 1993; and Fincham, 1994). Distressed spouses, for example, are more likely than nondistressed spouses to blame the partner for marital difficulties and to see the partner's negative actions as intentional and selfishly motivated. These findings appear to be robust, but a primary reason for studying attributions—that they might help to explain why distressed and nondistressed spouses differ in the behaviors they exhibit when discussing marital difficulties—has yet to be examined systematically.

Behavioral marital therapy recognizes that the reinforcing or punishing value of a spouse's behavior varies with the partner's attribution for that behavior (e.g., see Jacobson & Margolin, 1979). The behavioral model also maintains that attributions for partner behaviors can influence subsequent behavioral responding, but it was only when this model was expanded to include intrapersonal variables that this assumption became fully articulated. Attributions themselves then became a target of

clinical change as a means to modify marital interaction and increase marital quality (e.g., Fincham, 1983; Weiss, 1980). Much has been written about attributions in the development and alleviation of marital discord, and clinical treatment studies have been undertaken to evaluate their significance.

Outcome studies involving cognitive-behavioral marital therapy are not conducted to directly investigate the association between attributions and behavior, but they do shed light on this issue. A series of studies has indicated that although attributional and related "cognitive restructuring" interventions can yield improvements in marital satisfaction, they add little beyond the effects of traditional forms of behavioral marital therapy (see Baucom & Epstein, 1990; Coyne, 1990; and Fincham, Bradbury, & Beach, 1990). More important, the cognitive interventions have produced increases in satisfaction without consistent improvements in interpersonal behavior (Baucom & Lester, 1986; Baucom, Sayers, & Sher, 1990; Emmelkamp et al., 1988; cf. Margolin & Weiss, 1978). Although the effects of these interventions may have been compromised by various methodological and procedural factors (e.g., inadequate measurement of attributions), it is also possible that clinically generated change in attributions does not lead to behavioral change. Such a possibility suggests that attributions are not an important determinant of behavior in marital interaction. Thus, in view of the discrepancy between the available outcome data and a basic assumption of cognitive-behavioral models of marital intervention—that cognitive changes should lead to behavioral changes—the present study was designed to provide a more direct test of the association between attributions and the behaviors that spouses exchange.

According to emerging models of marriage, the widely documented behavioral correlates of marital dysfunction (see Weiss & Heyman, 1990) are hypothesized to reflect, in part, the attributions that spouses make for partner behaviors and relationship conflicts (e.g., Arias & Beach, 1987; Bradbury & Fincham, 1991; Holtzworth-Munroe & Jacobson, 1987). An important

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premise in several of these analyses is that spouses who attribute responsibility for marital problems to the partner are less likely to engage in behaviors that facilitate resolution of those problems and more likely to engage in behaviors that hinder problem resolution. Bradbury and Fincham (1992) addressed this premise in two studies and found that relatively maladaptive responsibility attributions covaried with behaviors that are likely to hinder conflict resolution, independent of marital satisfaction. For example, husbands and wives who made relatively maladaptive attributions for marital problems were less likely to discuss those problems constructively and were more likely to exhibit negative behavior. Additional findings, significant only for wives, indicated that maladaptive attributions covaried with a tendency to reject the partner's point of view and to exhibit less positive behavior.

Despite the relevance of these findings to cognitive-behavioral models of marriage, their validity is threatened by at least three factors. First, because Bradbury and Fincham (1992) asked spouses to make attributions for the same problem that was discussed in the interaction, some of the observed behaviors may have been simple verbalizations of the responsibility attributions that spouses endorsed on the self-report measure; this may have led to inflated relationships between attributions and behavior. Second, it remains unclear whether the findings will hold only when attributions are made for a specific incident in the marriage or whether there is a more pervasive and important link between attributions made for the partner's behavior in general and behaviors exhibited in a discussion of a specific marital conflict. Recent research with newlywed couples, in which attributions were not made for the marital problem under discussion, suggests a more pervasive association (Miller & Bradbury, 1995). However, these data, like those reported by Bradbury and Fincham, are susceptible to a third criticism: that depression accounts for the attribution-behavior association. Depression and depressive symptoms covary with attributions (e.g., Fincham & Bradbury, 1993; see also Fincham, Beach, & Bradbury, 1989) and with behavior in marital interaction (e.g., Biglan et al., 1985; Nelson & Beach, 1990; see Beach, Whisman, & O'Leary, 1994) and therefore is a plausible rival explanation in this context.

The present study examined whether responsibility attributions made for partner behaviors that are not directly implicated in specific marital problems are associated with behaviors observed in a problem-solving discussion. To build further on prior research, marital satisfaction and depression were controlled in examining the attribution-behavior association by using three groups of couples: those in which both spouses were neither maritally distressed nor depressed, those in which both spouses were seeking therapy for marital distress but neither was depressed, and those in which both spouses were seeking therapy for marital distress and the wife was diagnosed as being in a major depressive episode.¹

Three hypotheses were tested. First, to the extent that spouses make relatively maladaptive attributions, they are expected to exhibit more negative behavior and less positive behavior, independent of group assignment. Second, following Bradbury and Fincham (1992) and Miller and Bradbury (1995), the association between attributions and behavior is expected to be stronger for wives than husbands. Finally, the three-group de-

sign employed here allows us to examine whether the association between attributions and behavior varies by group. Consistent with the premise that attributions enable individuals to understand undesirable circumstances that they encounter and to enact behaviors that will help to modify them (e.g., Kelley, 1973), the third hypothesis is that spouses in the two maritally distressed groups—who are presumed to be experiencing undesirable circumstances and are seeking therapy to change them—will demonstrate stronger associations between attributions and behavior than spouses in the maritally nondistressed group.

Method

Participants

Participants were 52 cohabiting married couples. The nondistressed and nondepressed group (ND; $n = 19$) was formed by screening 43 couples responding to a newspaper advertisement; couples were included if both spouses' Dyadic Adjustment Scale (DAS) scores were above 100 (see Spanier, 1976) and both spouses' Beck Depression Inventory (BDI) scores were below 14 (see Kendall, Hollon, Beck, Hammen, & Ingram, 1987). The distressed and nondepressed (or "distressed only") group (DO; $n = 13$) was formed by screening 58 couples seeking marital therapy; couples were included if both spouses' DAS scores were below 100 and both spouses' BDI scores were below 14. The distressed and depressed group (DD; $n = 20$) was formed by screening 87 couples responding to an advertisement offering therapy for women troubled by both depression and marital dissatisfaction; couples were included if both spouses' DAS scores were below 100, husbands' BDI scores were below 14, wives' BDI scores were above 14, wives met the criteria for a major depressive episode outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-III*; American Psychiatric Association, 1980) as assessed by a structured clinical interview (Spitzer & Williams, 1984), and wives did not report symptoms of psychosis or meet *DSM-III* criteria for alcohol or substance dependence.

Multivariate analysis of variance on the demographics of the three resulting groups was nonsignificant, and the groups were therefore combined for descriptive purposes. On average, husbands were 39.5 years old ($SD = 9.7$) and had 14.8 years of education ($SD = 3.1$); wives averaged 37.1 years of age ($SD = 7.9$) and 14.2 years of education ($SD = 2.7$). Couples averaged 12.7 years of marriage ($SD = 9.5$), 2.2 children ($SD = 1.7$), and a household income of \$36,210 ($SD = 16,300$).²

Instruments

Dyadic Adjustment Scale (DAS). Marital satisfaction was measured with the DAS (Spanier, 1976), a 32-item instrument that assesses spouses' perceptions of the cohesion, consensus, satisfaction, and affective expression in their marriage. The DAS has high internal consistency (coefficient $\alpha = .96$), and higher scores on the DAS are indicative of greater marital satisfaction.

Beck Depression Inventory (BDI). Symptoms of depression were

¹ The focus on depression in wives in the latter group follows from the findings that attributions and behavior are related more strongly among wives than husbands (Bradbury & Fincham, 1992) and that depression is more prevalent among wives than husbands (e.g., Nolen-Hoeksema, 1987), thus suggesting that the attribution-behavior association among wives may be especially susceptible to depression as a rival interpretation.

² Previous analyses of this sample are reported by Fincham et al. (1989) and by Nelson and Beach (1990).

measured with the 21-item BDI, which assesses somatic complaints, negative attitudes toward the self, and impairment in performance. For nonpsychiatric samples, coefficient alpha on the BDI exceeds .80 and test-retest correlations exceed .75 over 2- to 3-week intervals (see Beck, Steer, & Garbin, 1988).

Structured Clinical Interview for the DSM-III—Patient Version (SCID-P). Because BDI scores are viewed as sufficient for indicating the symptoms of depression but not for meeting diagnostic criteria (Kendall et al., 1987), the SCID-P was also administered to wives being considered for the distressed and depressed group. Interviewers were trained to a criterion of .90 reliability on decisions of presence versus absence of symptoms within each diagnostic category. All symptom ratings were reviewed by a second interviewer, and participants had to receive a consensus diagnosis of major depressive episode before being included in the study.

Marital Attribution Style Questionnaire (MASQ). As in previous studies (e.g., Fincham & Bradbury, 1987), responsibility attributions were assessed by asking spouses to indicate on 7-point scales, for each of three positive and three negative hypothetical partner behaviors, the extent to which (a) the partner's behavior was intentional versus unintentional; (b) the partner deserved to be blamed versus praised for the behavior; and (c) the behavior was motivated by entirely selfish versus not-at-all-selfish concerns (for discussions of the rationale of this procedure and these dimensions, see Bradbury & Fincham, 1990, and Fincham & Bradbury, 1992).³ The three positive (e.g., "Your spouse responds positively to your suggestion to cuddle") and three negative (e.g., "Your spouse cuts down on the amount of time he spends with you in favor of an independent activity") partner behaviors were adapted from the Spouse Observation Checklist (Weiss & Perry, 1979) and are reported to occur in nearly all marriages (Fincham & Bradbury, 1992). A composite attribution index was formed by rescaling all items in the adaptive or benign direction and then summing across items and stimulus behaviors; this yielded indices with acceptable coefficient alpha (for husbands: .84; for wives: .83).

Procedure

Couples participated in a laboratory session in which spouses individually completed a consent form, a demographics questionnaire, and the attribution measure. DO and DD couples participated before beginning treatment. Spouses were reunited and asked to discuss for 10 min a topic that both saw as a problem in their marriage. An interviewer assisted couples in identifying this problem and instructed them to work toward resolving it in a mutually satisfying manner. Interactions were audiotaped and later coded.

Behavioral Coding and Analysis

The behavior of each spouse was coded by trained observers using the KPI (Kategoriensystem für Partnerschaftliche Interaktion), which discriminates between distressed and nondistressed spouses and is sensitive to behavioral changes that occur in marital therapy (Hahlweg, Reisner, et al., 1984). With the KPI, coders assign to each unit of speech 1 of 3 nonverbal codes (positive, negative, neutral) and 1 of 12 verbal codes. A common procedure in analyzing KPI data (e.g., Hahlweg, Revenstorf, & Schindler, 1984) is to reduce the 12 verbal codes into five categories in the following manner: Self-disclosure and positive solution combine to form direct expression; acceptance of partner, agreement, and positive or neutral listening (listening codes are assigned to a spouse on rare occasions when the partner receives two codes, to ensure that spouses alternate as speakers in the behavioral data file) combine to form acceptance-agreement; problem description and metacommunication combine to form neutral information; criticism and negative solution combine to form criticism; justification, disagreement, and negative listening combine to form refusal; and the rest category, which is

assigned when no other code is appropriate or when the speaking turn is inaudible, remains separate, and is not considered further. Reliability of the coding was established by having three coders observe 20% of the interactions and computing Cronbach's coefficient alpha to assess their consistency. The resulting coefficients were acceptable for the nonverbal codes (.80 for husbands, .85 for wives) and for the verbal codes (.82 for husbands, .83 for wives). To control for variation across spouses in their number of speaking turns, variables are computed by dividing the number of times each behavior is exhibited by a spouse by the total number of speaking turns for the spouse.

Although it is informative to analyze the three nonverbal and five verbal codes, this set of codes is typically reduced further to consider simultaneously the nonverbal and verbal codes for each given unit of speech. The first step in doing so is to create three verbal codes by collapsing direct expression and acceptance-agreement into positive communication and by collapsing criticism and refusal into negative communication; neutral information remains as the neutral communication category (see Hahlweg, Revenstorf, & Schindler, 1984). For each unit of speech, the nine possible combinations of the three verbal and three nonverbal codes are reduced further into a positive composite (which includes positive verbal behaviors expressed with positive or neutral nonverbal behavior and neutral verbal behaviors expressed with positive nonverbal behavior), a negative composite (which includes negative verbal behaviors expressed with positive, negative, or neutral nonverbal behavior and positive and neutral verbal behaviors expressed with negative nonverbal behavior), and a neutral composite (which includes neutral verbal behaviors expressed with neutral nonverbal behavior). Associations between attributions and behavior are reported for the five verbal codes, the three nonverbal codes, and the three composite codes.

Results

Preliminary Analyses

Univariate comparisons of group means on measures of depressive symptoms, marital satisfaction, and attributions are presented in Table 1.⁴ As expected, these results indicate that the recruitment procedures were successful in establishing groups of ND, DO, and DD couples that differed in their levels of depression and marital satisfaction. Planned contrasts indicated that on the BDI and the DAS, the three groups of wives differed significantly from one another (all $ps < .05$) and that the ND husbands differed significantly from both the DO and DD husbands ($p < .05$), who did not differ from one another. Results on the MASQ indicated that the attributions made by ND spouses are more benign than those made by either DO or DD spouses (for husbands and wives, $p < .05$), who did not differ from one another. This finding is consistent with the extensive literature on attributions and marriage and suggests that the attribution-satisfaction association does not vary as a function of depression (see Fincham et al., 1989, for a related analysis of the wives' data). Using BDI scores as a covariate, these tests remained significant for husbands, $F(2, 46) = 8.7, p <$

³ Causal attributions, which appear to have a weaker relation to observed behavior compared with responsibility attributions (see Bradbury & Fincham, 1992; Miller & Bradbury, 1995), were not assessed in this study.

⁴ As a result of missing attribution data, one husband was dropped from the ND group and one husband was dropped from the DD group, leaving complete data for 50 husbands and 52 wives.

Table 1
Group Comparisons on Dyadic Adjustment Scale, Beck Depression Inventory, and Marital Attribution Style Questionnaire

Variable	<i>M (and SD) for group</i>			<i>F</i>	<i>p</i>
	ND	DO	DD		
Beck Depression Inventory					
Husbands	4.5 _a (4.1)	7.4 _b (4.3)	8.3 _b (4.4)	4.0	<.05
Wives	5.8 _a (3.5)	9.5 _b (2.8)	28.1 _c (7.0)	109.1	<.0001
Dyadic Adjustment Scale					
Husbands	116.9 _a (10.8)	93.6 _b (11.9)	86.4 _b (9.4)	41.0	<.0001
Wives	118.2 _a (8.5)	86.7 _b (10.0)	67.5 _c (19.3)	67.5	<.0001
Marital Attribution Style Questionnaire					
Husbands	101.0 _a (10.4)	82.0 _b (10.2)	85.9 _b (14.9)	11.5	<.0001
Wives	94.0 _a (10.5)	77.5 _b (8.7)	80.5 _b (18.0)	7.6	<.001

Note. For husbands, $df = 2, 47$. For wives, $df = 2, 49$. Means within gender that have the same subscript do not differ ($p < .05$). Higher scores on the Beck Depression Inventory and the Dyadic Adjustment Scale reflect more depressive symptoms and greater marital satisfaction, respectively, and higher scores on the Marital Attribution Style Questionnaire reflect more benign or adaptive attributions. ND = nondistressed, nondepressed group; DO = distressed, nondepressed (distressed only) group; DD = distressed and depressed group.

.001, and for wives $F(2, 48) = 7.3, p < .002$; in both cases, the same pattern of significant differences among groups was obtained. Thus, neither clinical (DO vs. DD) nor nonclinical (ND vs. DO) levels of depressive symptoms accounted for the association between attributions and satisfaction.

Attributions in Relation to Separate Verbal and Nonverbal Variables

A series of hierarchical multiple regressions was conducted to examine whether attributions predicted behavior, after controlling for group (i.e., ND, DO, DD) status. Dummy coding was used to represent group status in the equations, and these values were multiplied by attribution scores to form the Group \times Attribution interaction terms, which were entered last in each equation. If the interaction term contributes significantly to an equation, it indicates that the nature of the association between attributions and the specified behavioral variable differs across groups. Regression equations were computed separately for husbands and wives.

The results of these analyses, presented in Table 2, indicate that after controlling for group status, attributions and behavior covaried reliably for wives but not husbands and that the association between attributions and behavior was not moderated by group.⁵ Specifically, wives making maladaptive attributions tended to exhibit less direct expression (partial $r = .35, p < .01$) and acceptance-agreement (partial $r = .34, p < .05$) and more criticism (partial $r = -.45, p < .001$). All equations in which there was a significant effect for attributions were significant overall, and all Group \times Attribution interactions were nonsignificant.

Attributions in Relation to Composite Variables

Regression analyses identical to those computed for the verbal and nonverbal behaviors were conducted on the three composite variables, in which the verbal and nonverbal code for each turn were combined. As would be expected, these results closely par-

alleled those obtained with the verbal and nonverbal variables (see Table 3).⁶ Specifically, after controlling for group status, wives making maladaptive attributions were found to exhibit less positive behavior (partial $r = .33, p < .05$) and more negative behavior (partial $r = -.40, p < .005$). Husbands' attributions were unrelated to their behavior. Equations in which there was a significant result for attributions were significant overall, and all Group \times Attribution interactions were nonsignificant.

Tests for Gender Differences on Verbal, Nonverbal, and Composite Variables

Husbands and wives were compared using Fisher's r -to- z transformations for dependent variables on which at least one

⁵ A simple effects test on the significant group effect for husbands' nonverbal negative behavior indicated that DD husbands ($M = .15$) and ND husbands ($M = .04$) differed significantly from one another ($t = -2.69, p < .01$) but not from DO husbands ($M = .10$). Similar tests conducted for wives' group effects indicated that DD and ND wives differed from one another but neither differed from DO wives for neutral information (M s: DD = .27, DO = .34, ND = .39; $t = 2.86, p < .01$), nonverbal positive behavior (M s: DD = .04, DO = .06, ND = .10; $t = 3.13, p < .005$), and nonverbal negative behavior (M s: DD = .29, DO = .18, ND = .08; $t = -3.09, p < .005$). On criticism, DD and DO wives did not differ but both differed significantly from ND wives (M s: DD = .28, DO = .25, ND = .13; for DD vs. ND, $t = -3.24, p < .005$; for DO vs. ND, $t = -2.35, p < .05$).

⁶ Simple effects tests on the significant group effects for wives' positive and negative composites indicated that DD and DO wives did not differ and that both groups differed from ND wives (for the positive composite, M s: DD = .20, DO = .20, ND = .25; for DD vs. ND, $t = 3.24, p < .005$; for DO vs. ND, $t = 2.81, p < .01$; for the negative composite, M s: DD = .46, DO = .38, ND = .25; for DD vs. ND, $t = -3.30, p < .005$; for DO vs. ND, $t = -2.64, p < .02$). Taken together, these results are consistent with the view that the ratio of negative:positive behaviors exceeds 1.0 in maritally distressed persons and falls at 1.0 or below in maritally satisfied couples (see Gottman, 1979).

Table 2
Results of Hierarchical Multiple Regression of Behavior on Group, Attributions, and Group \times Attributions

Behavior	Group		Attribution		Group \times Attribution	
	R ² change	F change	R ² change	F change	R ² change	F change
Husbands						
Direct expression	.06	1.53	.00	<1	.05	1.31
Acceptance-agreement	.03	<1	.00	<1	.01	<1
Neutral information	.03	<1	.01	<1	.07	1.64
Criticism	.10	2.73	.07	3.63	.00	<1
Refusal	.03	<1	.00	<1	.00	<1
Nonverbal positive	.06	1.62	.00	<1	.12	3.10
Nonverbal negative	.13	3.62*	.01	<1	.00	<1
Nonverbal neutral	.08	2.09	.01	<1	.01	<1
Wives						
Direct expression	.10	2.87	.11	6.64**	.01	<1
Acceptance-agreement	.10	2.76	.10	6.31*	.03	<1
Neutral information	.14	4.10*	.01	<1	.01	<1
Criticism	.19	5.78**	.17	12.37****	.04	1.45
Refusal	.05	1.17	.04	2.05	.08	2.18
Nonverbal positive	.15	4.32*	.00	<1	.04	1.14
Nonverbal negative	.18	5.48**	.05	2.91	.04	1.13
Nonverbal neutral	.10	2.60	.04	2.32	.04	1.04

Note. For husbands, *dfs* = 2, 47 for Step 1 (group); 1, 46 for Step 2 (attribution); and 2, 44 for Step 3 (Group \times Attribution). For wives, *dfs* = 2, 49 for Step 1; 1, 48 for Step 2; and 2, 46 for Step 3.
p* < .05. *p* < .01. *****p* < .001.

gender attained a significant effect for attributions (see Tables 2 and 3). Results of these tests indicated that the association between attributions and behavior was greater among wives than husbands for direct expression, acceptance-agreement, the positive composite, and the negative composite ($z = 1.80, p < .05$; $z = 1.85, p < .05$; $z = 1.85, p < .05$; and $z = 2.70, p < .005$, respectively, one-tailed).

Discussion

This study tested the premise, evident in cognitive-behavioral models of marriage and marital therapy, that attributions

covary with behavior in marital interaction. Consistent with the first hypothesis, wives' relatively maladaptive attributions covaried with less positive behavior and more negative behavior in a marital problem-solving discussion. These data lend specificity to prior findings by showing that attributions (a) are associated with verbal but not nonverbal behavior, (b) covary with positive behaviors reflecting self-disclosure and proposal of positive solutions (i.e., direct expression) as well as acceptance of and agreement with the partner (i.e., acceptance-agreement), and (c) are associated with criticism and negative solutions (i.e., criticism) but not with disagreements or justifications of one's own behavior (i.e., refusal). These results, and the finding that

Table 3
Results of Hierarchical Multiple Regression of Behavior on Group, Attributions, and Group \times Attributions, Using the Composite Behavioral Indices

Behavior	Group		Attribution		Group \times Attribution	
	R ² change	F change	R ² change	F change	R ² change	F change
Husbands						
Positive composite	.06	1.54	.00	<1	.05	1.27
Negative composite	.11	2.78	.01	<1	.00	<1
Neutral composite	.03	<1	.01	<1	.07	1.70
Wives						
Positive composite	.21	6.45***	.09	5.99*	.00	<1
Negative composite	.21	6.58***	.13	9.25***	.01	<1
Neutral composite	.09	2.33	.06	3.18	.00	<1

Note. For husbands, *dfs* = 2, 47 for Step 1 (group); 1, 46 for Step 2 (attribution); and 2, 44 for Step 3 (Group \times Attribution). For wives, *dfs* = 2, 49 for Step 1; 1, 48 for Step 2; and 2, 46 for Step 3.
p* < .05. **p* < .005.

attributions account for about as much variance as group effects in most of the verbal behavior categories (see Table 2), lend support to the emphasis placed on attributions in clinical and basic research on marital dysfunction.

Interpretation of these findings must be qualified by two additional results. First, the association between attributions and behavior did not differ across groups. This finding is contrary to our third hypothesis and indicates that the attributions made by spouses in dysfunctional marriages are no more nor less associated with their behavior than are the attributions made by spouses in well-functioning marriages. Although unexpected, this result suggests that basic models of attribution and behavior can be explored across levels and perhaps types of disorders that occur in marriages and families (e.g., Brewin, MacCarthy, Duda, & Vaughn, 1991; Jacob & Leonard, 1992).

Second, significant associations between attributions and behavior emerged only for wives in this study, and direct comparisons showed that these associations were stronger among wives than husbands. This finding provides clear support for our second hypothesis, but the possibility must be acknowledged that this pattern of results arose because the three groups of wives differed in marital satisfaction and depressive symptoms; this was not the case for husbands (see Table 1). Although the importance of this rival interpretation cannot be overlooked, it remains noteworthy that the gender differences obtained here are consistent with three prior studies that used different samples and methods (Studies 1 and 2 in Bradbury & Fincham, 1992; Miller & Bradbury, 1995). These studies provide a useful context for clarifying the interpretation of some of the present results. For example, in the same manner that attributions and behavior were related more strongly for wives than for husbands, behavior and satisfaction were related more strongly for wives than for husbands in the present sample. This finding could imply that the more consistent attribution-behavior link for wives is in some way tied to the strong behavior-satisfaction association (e.g., wives' behavior is generally easier to predict than husbands' behavior, across a variety of predictors). However, the fact that Bradbury and Fincham (1992, Study 2) also found a stronger association between attributions and behavior among wives, with the *opposite* pattern of results for behavior and satisfaction (i.e., they covaried among husbands but not wives), renders this possibility unlikely. Similarly, although it could be argued that the association between attributions and behavior is stronger among wives because they tend to make attributions that are more maladaptive than those of husbands (see Table 1), this argument is less plausible because Miller and Bradbury (1995) also obtained stronger attribution-behavior results for wives yet found no differences between husbands and wives in mean level of attributions.

By lending support to a gender difference in the association between attributions and behavior, the present data highlight the need to shift attention away from further demonstrations of how attributions might account for important marital variables and toward a focus on understanding how attributions are shaped in interpersonal transactions. On one hand, the consistent finding that the association between attributions and marital satisfaction does not vary by gender (see Bradbury & Fincham, 1990) indicates that husbands' and wives' attributions are ostensibly similar. On the other hand, a stronger association

between attributions and behavior among wives than husbands might suggest a gender difference in the nature of the information that contributes to the formation and maintenance of attributions. Such a difference is consistent with the position that wives are more sensitive than husbands to their relationships (see Worell, 1988), which may in turn engender a higher level of attributional activity (see Holtzworth-Munroe & Jacobson, 1985). Although plausible, these ideas need to be developed and tested if researchers are to understand what makes wives' attributions different and why they are linked more closely to their behavior in marriage.

One explanation for this apparent gender difference is that, compared to husbands' attributions, wives' attributions are rooted more firmly in the events and circumstances of the marriage. If wives' attributions are indeed more accurate or well-developed representations of partner behaviors, then their attributions will be linked more closely to the behaviors they display in interaction when discussing some of those partner behaviors. Prediction of behavior should be enhanced to the extent that the information it is based on is more accurate. Little is known about the antecedents of attributions in marriage, but indirect support for the hypothesis that wives' attributions are more accurate comes from prior research showing that attributions made by wives, but not those made by husbands, covary reliably with negative personality traits reported by the partner (Karney, Bradbury, Fincham, & Sullivan, 1994) and with personality ratings of the partner made by independent judges (Bradbury & Miller, 1994). Additional data are now needed to specify which features of partner behavior correspond with attributions made by the partner and to examine the extent to which husbands' and wives' attributions for partner behavior change as a function of changing circumstances within the marriage. Alternative explanations for this gender difference, for example, that the male gender role limits husbands' behavioral repertoires, which in turn constrains the attributions wives make for their behavior, may be equally viable and also warrant consideration.

Although cognitive interventions for marital distress have produced increases in satisfaction without consistent improvements in marital behavior (e.g., Baucom et al., 1990), our results run counter to the possibility that attributions and behavior are unrelated. Instead, they suggest that behavioral effects have not emerged with interventions designed to teach spouses how to make more benign attributions because changes in attributions have not been produced or, at least for some spouses, because the attributions they were making originally may have been accurate depictions of the partner's behavior. As Jacobson and Margolin noted, "the tendency to attribute behavior either to underlying personality traits or malevolent intentions . . . is certainly not always a misattribution" (1979, p. 144). Thus, as an alternative to trying to change a spouse's attributions directly, behavioral change in the partner may prove to be a key first step in changing the spouse's attributions and, in turn, that spouse's behavior. In considering this recommendation, it is important to recognize that marital attributions tend to be stable over time (e.g., Fincham & Bradbury, 1987), which suggests that maladaptive attributions, once formed, may prove difficult to modify even through behavioral change in the partner. A further implication of this view is that the efficacy of traditional

forms of behavioral marital therapy may be mediated in part by the attributions a spouse makes for improvements in partner behavior.

Interpretation of the present findings must be qualified by several factors. First, although there is experimental evidence linking attributions to behavior in marriage (Fincham & Bradbury, 1988), the design used here does not permit statements about the direction of causation. Second, we have no evidence that our results will generalize to distressed marriages in which the husband is depressed or to happy marriages in which either partner is depressed. Third, our analysis is limited to responsibility attributions and may not extend to other attributions. Finally, it is possible that some important nonsignificant findings (e.g., the interaction terms in Table 2) might become significant with a larger sample.

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