

- Walster, E. H., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn & Bacon.
- Williams, G. C. (1966). Natural selection, the costs of reproduction, and a refinement of Lack's principle. *American Naturalist*, 100, 687-690.
- Williams, J. E., & Best, D. L. (1982). *Measuring sex stereotypes*. Beverly Hills, CA: Sage.
- Wilson, E. O. (1975). *Sociobiology: The new synthesis*. Cambridge, MA: Harvard University Press.

## Behavior and Satisfaction in Marriage

### PROSPECTIVE MEDIATING PROCESSES

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Although considerable progress has been made in the study of close relationships, few models integrate existing research and point to new areas of inquiry. Moreover, the models that are available pertain either to discrete segments of interaction, and hence neglect many important phenomena, or they pertain to close relationships more generally, and hence lack sufficient detail at the level of interaction (Newcomb & Bentler, 1981). One purpose of this article is to offer a framework for the study of marriage that incorporates both levels of analysis. Following discussion of the historical context that has given rise to this framework, we attempt to show how such a framework can both organize existing research and identify additional topics for investigation. The chapter concludes with a summary of major themes and a discussion of the limitations of our analysis.

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## HISTORICAL CONTEXT

Historically, researchers have devoted most of their attention in the study of marriage to understanding marital satisfaction, and two distinct research traditions have emerged.<sup>1</sup> The *sociological tradition* is characterized by large-scale surveys conducted to determine the associations between demographic, personality, and familial variables and marital satisfaction. This tradition generated a large body of findings (see Burgess, Locke, & Thomes, 1971; Tharp, 1963), yet also led to the observation that "knowing the correlates of marital success actually presents the theoretical problem of explaining why these correlations exist" (Barry, 1970, p. 44).

Responding to the atheoretical nature of these data and to limitations of the self-report methods used to obtain them, Raush, Barry, Hertel, and Swain (1974) sought to explain the sociological findings by examining the overt behaviors of couples as they engaged in marital conflict in a laboratory setting. Their work, together with Stuart's (1969) extension of social learning principles to the treatment of distressed couples, was instrumental in introducing the *behavioral tradition* to the study of marital satisfaction. A spate of studies relating coded behavior in interaction to satisfaction followed (e.g., Birchler, Weiss, & Vincent, 1975; Gottman, 1979; Gottman, Markman, & Notarius, 1977; Vincent, Weiss, & Birchler, 1975), and recent reviews of this research indicate that the interactions of distressed couples, compared to those of nondistressed couples, are characterized by a higher rate of negative behaviors, more reciprocity of negative behaviors, and a greater degree of stereotypy or predictability (see Schaap, 1984).

A second research strategy in the behavioral tradition, initiated by Wills, Weiss, and Patterson (1974), examined spouses' daily ratings of satisfaction in relation to the pleasing and displeasing behaviors exhibited by their partners. It was determined that spouses' reports of partner behavior, and in particular displeasing partner behavior, accounted for a significant proportion of variance in their daily satisfaction. This finding has been replicated in subsequent studies (e.g., Barnett & Nietzel, 1979; Jacobson, Waldron, & Moore, 1980). Thus, in the behavioral tradition the two dominant paradigms have produced evidence to document an association between behavior and satisfaction in marriage.

Although research in the behavioral tradition provides important information about marriage, the need to explain established findings is once again evident. Attention is turning from strictly behavioral accounts of marriage to the study of factors that may intervene between

behavior and satisfaction. In particular, the realization from laboratory studies that nonverbal behavior (e.g., facial movement, voice tone, gestures) is more powerful than verbal behavior in discriminating distressed and nondistressed couples (e.g., Gottman, 1979) has led to the view that affect may play a central role in marital interaction (e.g., Gottman & Levenson, 1984; for review see Bradbury & Fincham, 1987a). Similarly, the finding that spouses disagree over the occurrence of daily behaviors in their relationship (e.g., Jacobson & Moore, 1981) has led to consideration of the role of cognition in marriage (e.g., Berley & Jacobson, 1984; for review see Arias & Beach, 1987).

Based on these and related developments, we believe that a third tradition in the study of marital satisfaction is presently underway. In this *mediational tradition*, emphasis is upon factors that may clarify the association between behavior and satisfaction rather than upon the association itself. Indeed, few studies have appeared in recent years that focus solely upon the relation between behavior and satisfaction and, instead, attention within the behavior tradition has shifted to refining existing measures of behavior (e.g., Jacob & Krahn, 1987) and satisfaction (e.g., Huston, McHale, & Crouter, 1986) so that their association might be more clearly understood.

It is useful to contrast the evolution of the behavioral tradition with that of the mediational tradition, as doing so reveals two important differences. First, the initial decision to study behavior reflected a rejection of sociological methods (e.g., see Raush et al., 1974, p. 5). The mediational tradition, in comparison, appears to be an acceptance and expansion of the behavioral and sociological approaches, and may be appropriately referred to as an *integrative* movement. Second, with few exceptions (e.g., Krokoff, Gottman, & Roy, 1988), there has been little recognition of the possibility that sociological variables influence marital interaction. A corresponding disregard of the interplay between behavior and mediating variables is difficult to sustain, however, insofar as a couple's overt behaviors are likely to be intricately related to affective and cognitive processes.

Although the study of potential mediating variables is gaining momentum, the need to broaden the behavioral model of marriage has long been recognized (e.g., Glick & Gross, 1975; Gurman & Knudson, 1978; Hinde, 1979). Indeed, the study by Raush et al. (1974), widely cited as seminal in the behavioral tradition, was conceptualized in terms of the psychoanalytic notion of object relations schemata. Raush et al. (1974) made little effort to assess these "organized structures of images of the self and others" (p. 43), yet a variety of interesting results have since emerged from the study of factors believed to be relevant to the

association between behavior and marital satisfaction. These factors include physiological arousal (e.g., Levenson & Gottman, 1983), accuracy of communication (e.g., Noller, 1980), attributions for marital problems (e.g., Fincham & Bradbury, 1988), commitment and exchange orientations (Broderick & O'Leary, 1986), and spouses' perceptions of marital communications (e.g., Gottman et al., 1976).

While encouraging, the very diversity of these studies makes salient the fact that a comprehensive understanding of the association between behavior and satisfaction has yet to be established. In the next section we offer an organizational framework, which we refer to as the contextual model, that might serve as a first approximation to a comprehensive account of the relations among behavior, satisfaction, and mediating processes in marriage.

#### A CONTEXTUAL MODEL OF BEHAVIOR, SATISFACTION, AND PROSPECTIVE MEDIATING PROCESSES

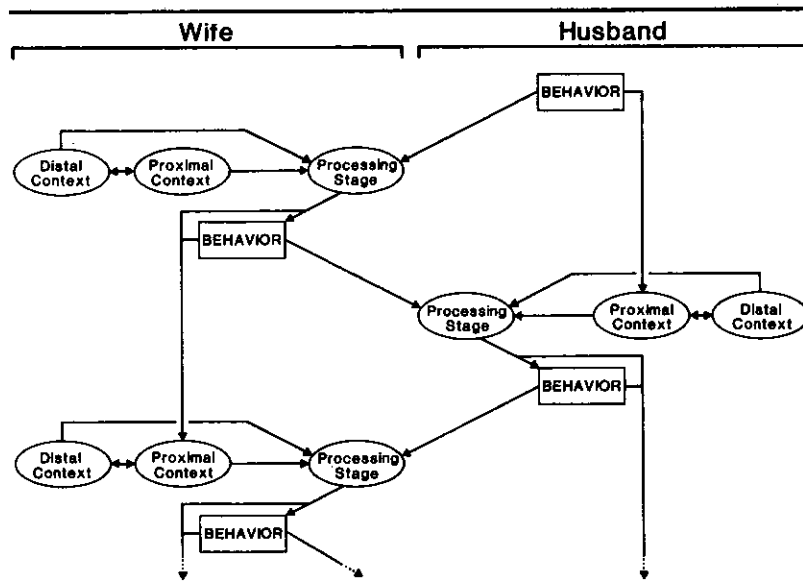
A primary consideration in developing a model for organizing and advancing research on marriage is the breadth of focus taken in selecting mediating processes. In discussing this issue, Hinde (1979, p. 22) noted that "If we are to come to terms with the affective/cognitive aspects of interpersonal relationships . . . we shall need additional concepts. Yet if we are too generous in introducing them we shall find ourselves swimming in a mush with nothing firm to stand on. But if we are too niggardly, we run the risk of missing important phenomena." Although we are mindful of this delicate balance, it is possible that we shall err in the overinclusive direction, with the realization that parsimony will dictate the form that our framework ultimately takes.<sup>2</sup>

The first component to be included in the framework is *behavior* itself. For the purpose of discussion we will assume that behaviors are exhibited alternately by a husband and wife as they interact with one another. Given that the husband has behaved at one point in time and that the wife behaves shortly thereafter, it is reasonable to inquire about the psychological processes that have intervened, or about the factors that may have given rise to the wife's action. We can infer that the wife *attends to and perceives* the behavior in some rudimentary fashion, following which may occur an *interpretation* of the husband's behavior. Evidence has accumulated to indicate that such events can have affective consequences (e.g., Weiner, 1986), suggesting that it is necessary to include *affect* in a comprehensive model of marriage. We will refer to these three processes collectively as the *processing stage*.

The foregoing sequence of events suggests that the wife's behavior will be a function of how she perceives, interprets, and responds affectively to the husband's behavior. It is important to emphasize, however, that the relations among these processes are likely to be probabilistic rather than deterministic in form. That is, for example, variance in perceptual processes will not account entirely for variance in interpretations, and the processing stage will not determine entirely the nature of the subsequent behavior. Realization of these probabilistic relations raises the question of what other factors may contribute to the wife's behavior. An answer may be found in the observation that as yet she is depicted as operating independently of prior events in the interaction and of any continuing psychological characteristics.

Accordingly, it seems appropriate to propose first that the wife's thoughts and feelings elicited by prior events influence her responses to later events. We will refer to such momentary thoughts and feelings as the *proximal context*, as they are assumed to provide an immediate environment that qualifies the processing of events. The proximal context includes thoughts and feelings prompted by events outside the relationship (e.g., weather, work) as well as those specific to the marriage. Second, an understanding of the events that intervene between the husband's behavior and the wife's subsequent behavior is aided by knowledge of the wife's stable and continuing psychological characteristics. Elements in this *distal context* include individual difference variables (e.g., personality traits, goals, or chronic mood states), preexisting relationship-relevant variables (e.g., general relationship expectations), and variables that emerge over the course of a relationship (e.g., learning histories). These variables are themselves interrelated and are likely to influence each other.

The importance of the elements in the distal context lies in their potential to influence (a) variables in the proximal context and (b) the processing stage.<sup>3</sup> For example, the wife's proximal context at the outset of an interaction is likely to be a function not only of her thoughts and feelings about existing circumstances, but also of more stable factors such as her chronic mood state. Similarly, an interpretation of the husband's behavior will be related to memories of his prior behaviors, her learning history in the relationship, her expectations about what sorts of behaviors are appropriate in marriage, and so on. Moreover, elements in the distal context may be modified gradually as a function of the thoughts and feelings that comprise the proximal context. For example, a husband may become more trusting of his wife on the basis of the thoughts and feelings prompted by the things she says or does in their relationship.



**Figure 5.1** The contextual model of marital interaction. According to the contextual model, partner behavior is processed by the spouse, that processing is influenced by the spouse's proximal context and distal context, and spouse behavior then occurs. The spouse's proximal context is updated frequently on the basis of his or her processing stage and behavior. For clarity, depiction of the model has been simplified in several ways: The processing stage includes attention and perception, interpretation, and affective responding; events between interactions (i.e., appraisals) are not included; and marital satisfaction, an important element in the distal context, is not shown. See text for further details.

A diagram showing the relations among behavior, the processing stage, proximal context, and distal context is shown in Figure 5.1 for three interpersonal transactions. Here it can be seen that the wife's proximal context is updated frequently in an interaction. That is, the wife's processing of the husband's behavior (which is modified by the distal and proximal contexts), together with her own behavior, influence her proximal context.

In sum, according to the framework we have proposed, behaviors are enacted by a spouse, and the partner then perceives, interprets, and responds affectively to them. These processes, together with (a) residual thoughts and feelings from prior events in the interaction (i.e., proximal context) and (b) a variety of continuing psychological characteristics of the partner (i.e., distal context) guide the partner's behavioral response. The proximal context is updated as a result of each such sequence of

events, and the nature of elements in the distal context may also change over time.

The above analysis provides relatively thorough coverage of the classes of variables that are likely to be involved in the exchange of behaviors in marriage. Conspicuously absent, however, is consideration of the role of marital satisfaction. To the degree that it is typically conceptualized as a relatively stable variable, it would appear most appropriate to assign satisfaction to the distal context. It follows that a spouse's marital satisfaction can be expected to influence directly the perceptual, interpretive, and affective responses to partner behavior, and to influence indirectly the spouse's behavior that follows from these three processes. A spouse's marital satisfaction may in turn be altered by both self and partner behaviors that alter the thoughts and feelings (i.e., proximal context) that arise in interaction (see a later section, *Appraisals between interactions*, for a second way in which satisfaction may be altered). In addition to suggesting a reciprocal association between behavior and satisfaction, it can be seen that these constructs are indirectly related. Indeed, it is difficult to construe the relation between behavior and satisfaction solely in direct terms, an observation that corroborates the need to extend the behavioral tradition by examining potential mediating processes.<sup>4</sup>

### Comparison of the Contextual Model with Other Models

One useful way of evaluating the contextual model is to compare it with other models of close relationships. Doing so reveals that most existing models tend to focus either on proximal factors (e.g., Berscheid, 1983; Gottman, 1979; Gottman & Levenson, 1986; Kelley, 1985) or on distal factors (e.g., Chelune, Robison, & Kommor, 1984; Rempel, Holmes, & Zanna, 1985; Sternberg, 1986). The lack of attention given to the interplay among proximal and distal factors is consistent with the observation that existing theories in the marital domain "either effectively explain a small segment of the marital interaction, but lack the scope and range of the many factors involved, or else have the range and broad perspective, but lack detail and intricacy at the practical, dyad level of analysis" (Newcomb & Bentler, 1981, p. 92).

In contrast, the contextual model, like the model presented by Kelley et al. (1983, Chapter 2), is one of few that seeks to combine a detailed analysis of dyadic interaction in close relationships with consideration of the relatively stable factors that influence, and are influenced by, the interaction (see Levinger & Rands, 1985; Schindler & Vollmer, 1984). Although the two approaches share some common features (e.g., a focus on interaction), they differ fundamentally in the close relationships they

seek to represent. Specifically, the focus of the contextual model is on marriage, whereas the Kelley et al. model concerns close dyadic relationships of all forms (e.g., between friends, spouses, co-workers, parents and children). This difference can be viewed as a trade-off between a desire to understand the marital relationship with depth and accuracy on one hand, and a desire to achieve a broadly generalizable understanding of close relationships on the other.

A related difference is that development of the contextual model was prompted in part by the well-established empirical association between behavior and satisfaction in marriage; our framework reflects an attempt to explain and expand upon this association in terms of research and theory on marriage. Thus, the contextual model is not only specific to one particular form of close relationship, but it is also derived in part from a set of studies that document a specific relation between marital phenomena. The Kelley et al. model, in contrast, apparently was not guided by existing data and is instead an effort to provide a descriptive, nontheoretical conception of "the essential phenomena of close interaction" (1983, p. xiii).

An important implication of the relative breadth of the Kelley et al. model is that it touches upon, in varying degrees of detail, all the phenomena that can be addressed in models of close relationships. This is evident in the assertion by Kelley et al. (1983, p. 64) that "all investigators, all hypotheses, and all theories relating to dyadic interaction refer in one way or another to this broad framework or to its components." Although generalizability across relationships is an asset of the Kelley et al. model, this gain appears to come at the expense of detailed specification of important processes that occur in close relationships. The contextual model, in comparison, allows a greater degree of specificity and therefore differs in relative emphasis; it also permits identification and specification of issues relevant to the study of interaction that are not addressed explicitly by the Kelley et al. approach. Four such issues are described here.

First, the emphasis in the contextual model is primarily upon psychological factors in marriage. The Kelley et al. model includes psychological processes, yet also assigns a unique role to the environment in which a relationship occurs (e.g., weather conditions, lighting, furniture). Although we acknowledge that the physical and social environments are relevant to the study of close relationships (e.g., interaction in the laboratory may differ from interaction in the home), we maintain that consideration of the *psychological consequences* of environmental factors, as reflected in the proximal and distal contexts, is sufficient for understanding their role in relationships. Thus, unlike

Kelley et al. (1983, p. 53), we do not reject a "wholly 'psychological'" level of analysis.

Second, attention to and perception of partner behavior is an essential element of marital interaction in the contextual model and is therefore analyzed in some detail (see later section *Attention and perception*). To our knowledge, however, the Kelley et al. model does not provide a detailed description of attentional and perceptual processes.

Third, we view as important the events that occur *between* dyadic interactions, in part because they may influence spouses' evaluations of their marriage and the proximal context present at the start of subsequent interactions (see later section *Appraisals between interactions*). As in other models of marital interaction (e.g., Gottman, 1979; Gottman & Levenson, 1986), little mention is made in the Kelley et al. model of the events that occur between interactions, and no mechanism is specified by which changes in relatively stable variables can occur.

Fourth, although the distal context for the wife may be similar to that of the husband in the contextual model, it is generally held that the contexts differ for the two spouses. The analogous concept in the Kelley et al. model, that is, the causal conditions, includes variables that exist solely at the dyadic level (e.g., attitude similarity). The focus on variables that operate at the level of the interaction in the Kelley et al. model is accompanied by a relative lack of attention to individual differences. In contrast, the distal context in the contextual model operates solely at the level of the individual, indicating that individual differences are essential to this model.

The different levels of specificity in the contextual model and the Kelley et al. model appear to have implications not only for the processes they identify but also for whether the models themselves are subjected to empirical analysis. In its initial form, the contextual model included a series of testable research propositions (Bradbury & Fincham, 1987b), and research guided by the framework has recently appeared (Bradbury & Fincham, 1988; Sillars, Wilmot, & Hocker, in press). To our knowledge, little research has been guided explicitly by the Kelley et al. model since its publication, a factor that may be due to the level of specificity at which it was proposed.

To conclude, although the two approaches bear certain similarities, there are fundamental differences between the contextual model and the Kelley et al. model in the degree to which various issues are emphasized. The purposes for which these approaches were formulated are different and the level at which various processes are specified differ in the two models. As a consequence, we believe that important phenomena will be

overlooked to the extent that the two approaches are assumed to be equivalent.

#### APPLICATION OF THE CONTEXTUAL MODEL

The framework we have offered serves to illustrate the incomplete nature of research conducted in the sociological and behavioral traditions. Data from the sociological tradition derive predominantly from attempts to relate variables in the distal context to marital satisfaction, another variable in the distal context. The attempt to explain why particular variables were associated with marital satisfaction led investigators in the behavioral tradition to examine an additional component of the framework, namely, the overt behaviors exhibited by spouses in interaction. As noted, research on marital behavior and satisfaction suggested the need to consider factors that might mediate their association; this step in the progression toward understanding marital satisfaction is reflected in the processing stage that occurs following partner behavior, and in the proximal and distal contexts that modify it. In the remainder of the chapter we use the framework as a vantage point from which to evaluate research in the mediational tradition and to suggest potentially fruitful avenues of future inquiry.

#### Relevance to Existing Mediational Research

Several research strategies have emerged for examining prospective mediating processes in the association between behavior and marital satisfaction. Three of these strategies are used here to illustrate the utility of the proposed framework for evaluating existing research. They involve the "talk table" paradigm, comparison of inside and outside perspectives on interaction, and physiological indices of affect. We anticipate that other marital research could be analyzed in a similar manner.

*Talk table studies.* The talk table procedure was devised to define operationally the rewards and costs posited by social exchange theory and to "provide a first approximation to the schema that Raush et al. proposed" (Gottman, 1979, p. 218). With this procedure, spouses are asked to sit at either side of a table and to speak one at a time, usually while discussing a marital difficulty. After speaking, a spouse rates the intended impact or *intent* of the sent message, following which the partner rates the perceived *impact* of the message. The partner then speaks and rates the intent of the message, the spouse rates the perceived

impact, and the couple alternates in this way through their discussion. Intent and impact ratings are made privately on a 5-point scale ranging from "super positive" to "super negative." Discrepancies between the intent of the messages sent by one spouse and their impact as rated by the other spouse are then examined in satisfied and dissatisfied couples. Results from talk table studies typically show that both groups send messages with positive intent, but that the messages of distressed spouses have a negative impact. A discrepancy between intent and impact thus distinguishes the interactions of distressed couples (see Gottman et al., 1976; Markman, 1981; Schachter & O'Leary, 1985).

In terms of the contextual model, the talk table requires spouses to report on one aspect of the processing stage (i.e., the impact of the partner's message), to speak, and then to report on one aspect of their proximal context (i.e., the intent of their own message). Two issues become apparent when the talk table paradigm is viewed from this perspective. First, because spouses rate the impact that partner messages have on them and the intent behind their own messages, the talk table places greater emphasis on self-perception than on partner-perception. The contextual model suggests, in contrast, that the inferences made about *partner* behavior are at least as important as self-perceptions. To examine the inferences made in response to partner behavior, the talk table strategy requires modifications such that a spouse judges the intent of a partner behavior ("He said that to hurt me"), rather than its impact ("What he just said makes me feel bad"). The spouse could then send a message and rate its intended impact (i.e., actual intent) as in the original talk table, and discrepancies between a spouse's actual intent and the partner's perception of the spouse's intent could be explored. We do not mean to imply that the existing impact rating is unimportant, but perceptions of partner intent may be equally important in understanding marital interaction.

Second, analysis of ratings from the talk table involves the discrepancy between the intent of one spouse in sending a message and the impact of that message as rated by the partner. This approach therefore emphasizes important and often neglected phenomena that occur *between* spouses. However, a different analytic strategy could shed light on the intraindividual processes that are highlighted by the framework we have outlined. In particular, one could examine the association between the spouse's first response to a given partner behavior (e.g., perceived impact, as in the original talk table) and that same spouse's subsequent (a) behavior or (b) rating of intent in sending a message. Applied across distressed and nondistressed couples, this approach could provide information about how the processing stage influences

later events within an individual, at different levels of marital satisfaction. To our knowledge, intraindividual events in marital interaction have yet to be investigated in this manner.

Impetus for pursuing an intraindividual level of analysis comes from the need to understand the cycles of negative reciprocity that are known to occur in the interactions of distressed couples. To date, attempts to understand intraindividual factors relevant to negative affect reciprocity have been indirect. For instance, the process of *cognitive editing*, whereby a spouse's negative thoughts and feelings shown while listening to the partner *do not* lead to a negative behavioral response, has been inferred on the basis of coded behavior (Gottman, 1979). An intraindividual analysis of talk table data would permit a more direct examination of this mediational process. In addition, it might be hypothesized that distressed spouses are more likely to interpret partner behavior as being motivated by negative intent and, as a consequence, feel justified to respond behaviorally in kind. Interpretations, as well as other pertinent processes identified in the framework, could be assessed readily with an appropriately modified talk table procedure.

*Inside versus outside perspectives.* As noted in the introduction, an emphasis on cognitive processes in marriage was spurred by data that questioned the assumption that spouses generally agree on the behaviors that occur in their relationship. As Jacobson and Moore (1981, p. 276) stated, "The fact that two spouses living in the same environment perceive such different worlds suggests that in functional terms, spouses are operating in vastly different environments. . . . How spouses in a marital relationship perceive and process information relevant to the relationship . . . and the factors that influence these cognitive events potentiate the development of . . . a richer understanding of the characteristics of marital distress." Thus, refutation of the assumption that spouses were accurate observers aided in opening up a new domain of research in marriage.

With this as their starting point, Floyd and Markman (1983) sought to compare spouse's perceptions of their partner's interaction behaviors with undergraduate coders' perceptions of the same behaviors. They argued that spouses would provide an inside perspective on their interaction, whereas trained coders would provide an outside criterion against which spouse's perceptions could be meaningfully compared (see Christensen & Nies, 1980; Margolin, Hattem, John, & Yost, 1985). Both sets of observers rated behaviors from conflict discussions on a five-point scale ranging from very negative to very positive. It was found that nondistressed spouses, as well as distressed husbands, rated partner behavior as more positive than it was rated by outside coders; distressed

wives displayed the opposite tendency as they rated partner behavior as less positive than did outside coders.

In discussing their results, Floyd and Markman (1983) underscored the importance of cognition in marriage by noting that "the pattern of insider/outsider differences suggests that cognitive/perceptual factors for the spouses were determining the differences rather than systematic objective observer bias. The results suggest that *cognitive* factors may have systematic influences on spouse's evaluations of their interactions" (p. 456). The potential significance of such factors is best illustrated by considering the sources of influence that most likely affected the ratings from the inside and outside perspectives. From the inside perspective, it seems likely that spouse's ratings of partner behavior emerged from the sequence depicted in Figure 5.1. That is, thoughts and feelings from previous events in the interaction serve as the proximal context for a partner behavior and, as a function of elements in the proximal and distal contexts (e.g., history of the relationship, feelings of satisfaction with the marriage), the behavior elicits perceptual, interpretive, and affective responses. From the outside perspective, the rating of partner behavior probably draws upon coders' stereotypes of how men and women behave in close relationships and lay conceptions of what constitutes a positive or negative behavior in a close relationship, both of which are elements in the distal context.

This comparison reveals that the two perspectives differ dramatically, and it becomes understandable how they might lead to different impressions of the interaction. The inside perspective involves, for example, perceptual and interpretive processes that are not available to the outside coders, thus supporting Floyd and Markman's (1983) suggestion that cognitive factors underlie the observed differences. Although this is a useful suggestion, it is probably incomplete. In particular, the two perspectives are likely to diverge in many other ways, raising the possibility that differences arise because of other factors, including affective processes. For instance, spouse's judgments of partner behavior may be influenced by affect via (a) the proximal context, which reflects transient thoughts and feelings about the interaction; (b) the distal context, which comprises such factors as marital satisfaction and stable affective response tendencies; and (c) the affective response to the partner behavior itself, which is proposed to follow the initial perception. Thus, in our opinion, discrepancies between inside and outside perspectives are not surprising, and explanation of the discrepancies cannot be limited to cognitive factors.

In sum, application of the contextual model indicates that the perceptual and cognitive features that are prominent in studies of inside

and outside perspectives are likely to be accompanied by affective responses. The framework therefore may afford a more comprehensive approach to marriage whereby affective and cognitive processes are viewed as interrelated in a reciprocal association with one another and with ongoing behavior.

*Affect and physiology in marital interaction.* Among the most important findings to result from behavioral research on marital interaction is that distressed and nondistressed couples are more powerfully discriminated on the basis of their nonverbal behaviors than on the content of their speech. For example, Gottman (1979) discovered that these groups did not differ in the overall extent of verbal disagreement, yet distressed couples were ten times more likely than nondistressed couples to express disagreement with nonverbal behavior. These and related data led Levenson and Gottman (1983, p. 588) to surmise that "patterns of observable affect and affect exchange that typify dissatisfied marriages would be accompanied by parallel patterns of physiological response."

To examine in greater detail the role of physiological indices of affect in marriage, Levenson and Gottman (1983) assessed the physiology (e.g., heart rate, sweating) of spouses as they discussed a marital difficulty. They found that 60% of the variance in couples' satisfaction was accounted for by physiological *linkage*, defined as the physiological interrelatedness of a husband and wife over the course of their interaction. Specifically, lower marital satisfaction was related to higher physiological linkage.

Having demonstrated a concurrent relation between physiological indices of affect and marital satisfaction, Levenson and Gottman (1985) then sought to determine whether changes in satisfaction could be predicted from the same set of physiological measures. Three years after their laboratory interaction, 19 of the original 30 spouses provided self-reports of their marital satisfaction. In addition to a series of interesting gender effects, greater declines in satisfaction were predictable from higher levels of physiological arousal (e.g., faster heart rate, more sweating) at the time of the interaction. Particularly surprising was the finding that decreases in satisfaction were a function of levels of arousal measured in the five-minute baseline period *before the interaction began*, as the spouses sat silently facing one another in anticipation of their conflict.

From the perspective of the contextual model, this study can be construed as an attempt to relate marital satisfaction to physiological changes that accompany the processing stage, the subsequent updating of the proximal context, and the influence of the proximal context on

the processing stage. In discussing their findings, Levenson and Gottman (1985) maintained that the predictive power of the pre-interaction levels of physiology resulted from the fact that spouses knew that they would soon be interacting with one another and were thinking about past events in their relationship. They reasoned that "over time, a couple develops a set of expectations about the prospect of interacting that is grounded in their past interactive experience. . . . We believe it is these pleasurable or displeasurable expectations that account for the arousal differences we have observed during baseline periods" (p. 92). Thus, as might have been predicted from our framework, an explanation of the longitudinal findings was best achieved by invoking elements of the distal context (i.e., expectations and learning histories) and by hypothesizing that they exerted an impact on the proximal context, the interaction, and associated physiology.

In the same way that reconsideration of Floyd and Markman's (1983) study made salient the role of affective processes in the examination of ostensibly cognitive variables, so too does reexamination of Levenson and Gottman's (1985) investigation highlight the importance of (a) cognitive variables in understanding affective responses and of (b) distal variables in the study of proximal variables and the processing stage. Again, insofar as it is designed to provide a comprehensive account of important overt and covert events in marriage, the framework we have outlined may prove heuristic in identifying mediating processes that may not have been otherwise considered in the conceptualization and study of marital phenomena.

*Summary.* The foregoing discussion illustrates some of the progress already made in the mediational tradition. By analyzing three research strategies we have tried to show that seemingly disparate findings can be understood and organized in terms of a common framework, and that application of the framework can extend what is now known. Thus, our analysis points to the relevance of factors that were not considered in the original discussion of these findings and makes apparent the need to incorporate measures of mediating variables in such research. Although the extension of existing work is worthwhile, a more exacting test of our conceptual scheme lies in its ability to identify avenues not yet pursued systematically within the mediational tradition, and it is to this issue that we now turn.

#### Directions for Future Research

The model outlined earlier points to several directions for research, thus raising the problem of which issues to address and which to exclude. The issues discussed here represent a compromise between



those that appear most promising on one hand, and those that can be described adequately in the remaining pages.

*Appraisals between interactions.* The framework we have outlined is an attempt to describe the events that occur as a husband and wife talk with one another. However, spouses do not spend all their time interacting, and while apart it is likely that they experience a variety of feelings and think about past discussions, the quality and future of their marriage, and about issues in the relationship that concern them. It is necessary therefore to accommodate phenomena that occur between interactions in conceptual accounts of marriage. We will refer to these phenomena as *appraisals* and, because the partner is not necessarily present when these thoughts and feelings occur, it is posited that they pertain primarily to elements in the distal context.

Central to the study of marriage are those factors that lead to changes in one element of the distal context, marital satisfaction. In Figure 5.1, the line drawn from the proximal context to the distal context implies that, within an interaction, particular thoughts and feelings may lead to changes in satisfaction. For example, a husband's revealing that he has had an extramarital affair may cause a wife to believe that she is no longer happy in her marriage. However, it seems more likely that variation in satisfaction comes about gradually as a function of appraisals between interactions. For example, while alone a husband may think to himself, "She really isn't paying much attention to me anymore," a realization that he finds inconsistent with his conception of a satisfying marriage. A belief of this sort may enter into subsequent interactions, either implicitly (e.g., it may lead the husband to attend selectively to those statements by his wife that confirm the belief) or explicitly (e.g., he may tell his wife that he is feeling this way so that they might come to a mutual understanding of the issue), and over time satisfaction may change accordingly.<sup>5</sup>

This proposal has at least three implications for future research. First, the relation between events that occur within an interaction and those that occur following an interaction could be examined. A few studies have begun to look at the role of distal variables (e.g., marital satisfaction, expectations) and processing-stage variables (e.g., impact ratings of spouse behavior) in predicting the immediate outcome of interaction (e.g., Koren, Carlton, & Shaw, 1980; Weiss, 1984). A valuable extension of these studies would entail assessment (a) of a broader array of distal variables, (b) in an unstructured format (e.g., with a "think-aloud" task), (c) at intervals hours or days after the initial interaction. Second, the appraisal process could be explored by measuring spouses' thoughts and feelings as they occur in natural

settings. Procedures for *in vivo* assessment are now available for this purpose (e.g., Hormuth, 1986) and could be used to discern patterns in couple's day-to-day fluctuations in satisfaction and the interactions and appraisals that accompany them. Third, the relation between the appraisal process and the nature of subsequent interactions could be investigated. Over long periods of time such an interplay is likely to be involved in establishing the learning history of a couple. However, because it may be difficult to detect gradual changes of this sort, the thoughts and feelings that occur immediately preceding an interaction may be a more viable starting point. The data by Levenson and Gottman (1985) suggest the need to examine such phenomena and, in terms of the contextual model, they may be critical determinants of the initial proximal context within which an interaction occurs.

*Attention and perception.* A common strategy in marital therapy is to teach spouses to attend more to the positive behaviors and less to the negative behaviors emitted by their partner (e.g., Stuart, 1980). As suggested earlier, the significance of attentional and perceptual processes is likely to stem from their hypothesized role in interpretations of partner behavior, which in turn are expected to influence affective and behavioral responding. Surprisingly little research has been conducted on the attentional and perceptual characteristics of spouses in interaction, yet this line of inquiry holds considerable potential for understanding the dysfunctional patterns of behavior observed in distressed couples. For example, it is of clinical as well as theoretical relevance to ascertain whether the tendency to reciprocate negative behaviors is a function of perceptual or interpretive processes. In the former case interventions might be designed to modify how spouses extract information from the stream of partner behavior, whereas in the latter case spouses might be taught to interpret in a more benign manner the information that is extracted. In all probability, of course, these operations are likely to be highly complex, and as a first step toward their understanding we speculate below on how attention and perception may be related to partner behavior and may be qualified by elements of the distal and proximal contexts.

First, variation in perception is likely to be related to properties of the behaviors available to be perceived. Extrapolating from research in social psychology, it might be inferred that those behaviors which are particularly intense and negative will draw spouses' attention (e.g., Fiske, 1980; see Bradbury & Fincham, 1987b). This may account for the fact that reciprocation of negative behaviors is more likely than reciprocation of positive behaviors in marital interaction (Schaap, 1984). Further, an explanation for why negative reciprocity is more

common in distressed than nondistressed couples might be derived from testing the hypothesis that, all else being equal, a distressed spouse is more likely to attend to the negative rather than to the positive component of the partner's behavior. This hypothesis might be tested by providing spouses with ambivalent partner statements ("I really appreciate your helping out with the kids, yet I wish you could try to be a little more consistent when you discipline them") and assessing their responses to them and their recall of them.

A second factor that is likely to determine the perceptions of spouses is their expectations regarding partner behavior. Expectations are posited as an element in the distal context, and it is well documented that distressed couples hold general expectations about marriage that are more unrealistic than those held by nondistressed couples (e.g., Eidelson & Epstein, 1982). It would not be surprising, therefore, if distressed spouses also developed specific negative expectations about their partners' behavior, a process that emphasizes the dynamic relation among elements in the distal context. Again drawing upon social psychological research, there is evidence to suggest that people's perceptions and impressions of behavior in interaction are guided by the behaviors that they are led to expect, and that expectations are related to knowledge of a person's past behavior (see Higgins & Bargh, 1987; McArthur, 1981). Although caution must be exercised when extending this work to the marital realm, it follows that if a wife has learned to expect her husband to be aggressive and uncompromising in interaction, she may attend selectively to those aspects of his behavior that support her expectations. Because spouses may behave in accordance with the events they anticipate, rather than in response to unanticipated aspects of partner behavior, there may be a disproportionate tendency to attend to and reciprocate those partner behaviors that are expected. In this way, the distal context may exert an impact on attentional and perceptual processes that promotes reciprocity of negative behaviors in distressed couples.

The proximal context is a third factor that may impinge upon attentional and perceptual processes in marital interaction. One component of the proximal context is the level of physiological arousal of spouses as they discuss their marital difficulties. In a study mentioned earlier, Levenson and Gottman (1983) found that the interactions of distressed couples are characterized by a greater degree of physiological arousal than are those of nondistressed couples. This finding, coupled with the proposition that higher levels of arousal can lead to a restriction in the range of stimuli to which an individual is able to attend (Easterbrook, 1959), suggests that distressed spouses are operating on

the basis of less information than are nondistressed spouses. This may mean in turn that they are responding to only the most salient aspects of their partner's behavior (e.g., negative and intense statements) and, as a consequence, are quite likely to exhibit and reciprocate negative behavior. Thus, by circumscribing the range of incoming stimuli, the physiological component of the proximal context may be detrimental to effective problem-solving.

*Interpretations.* Unlike the study of attention and perception, several investigations have been conducted on the interpretations, and particularly the causal attributions, that spouses make for events in their marriage. A concurrent association between attributions and marital satisfaction has been documented (for reviews see Bradbury & Fincham, in press-a; Fincham & Bradbury, in press-a), and longitudinal evidence indicates that, at least for wives, attributions are predictive of changes in satisfaction over a 12-month period (Fincham & Bradbury, 1987a).

The general pattern of results to emerge from this literature is that the attributions of distressed spouses, compared to those of nondistressed spouses, are more likely to minimize the impact of positive behaviors (e.g., "He bought me flowers because he wanted to look good in front of his co-workers") and accentuate the impact of negative behaviors (e.g., "He criticized me because he doesn't care about how I feel"). Such attributions are likely to maintain marital distress. In addition to this basic effect, attributions have been related to such distal variables as unrealistic expectations and perceived efficacy in solving relationship problems (Fincham & Bradbury, 1987a, 1987b).

Despite these advances, the possibility that attributions may serve to mediate the association between behavior and satisfaction in marriage has not been widely acknowledged. Little attention has been devoted to the processes that give rise to attributions in interaction (see Holtzworth-Munroe & Jacobson, in press) or to the consequences that attributions for partner behavior have for a spouse's behavioral responding (see Fincham & Bradbury, in press-b). As a result, the present understanding of marital attributions is limited largely to mindful attributions that are reported publicly, whereas the contextual model suggests that implicit, mindless attributions and attributions that remain private also may be important in interaction (see Bradbury & Fincham, in press-b for a discussion of these types of attribution).

At least two directions for research become apparent when attributions are viewed as potential mediators of the association between behavior and marital satisfaction. Most obviously, there is a need to examine the implications of attributions for behavior. A first step toward doing so might involve correlating couples' explanations for

their primary marital difficulty with the behaviors they exhibit in discussing this problem, with the hypothesis that distress-maintaining attributions will relate to higher rates of negative behavior and greater propensities to reciprocate negative behavior (see Fincham & Bradbury, in press-a). Support for this hypothesis would then justify closer inspection of the attribution-behavior relationship at a finer level. One possible means of doing so, noted earlier, would involve altering the talk table paradigm so that attribution judgments are requested after partner behaviors; the attributions could then be examined in regard to the spouse's subsequent behavior.

Second, it is not presently known whether the types of attributions that have been studied are more appropriately designated as elements in the distal context or as interpretive events. Thus, it would be valuable to know the degree to which variance in marital attributions is a function of either discrete stimuli (e.g., partner behavior), trait-like tendencies to make certain attributions rather than others, or a combination of these factors. An adaptation of the talk table procedure could be informative once again, as attributions that occur as the interaction proceeds (i.e., interpretations) could be compared with those that are stable across time and marital situations (i.e., distal elements). To the extent that attributions were found to be relatively trait-like, the question would then arise as to what occurs in the interpretive stage in marital interaction, and what sorts of information in the distal context are drawn upon when they are made.

*Summary.* To complement our earlier analysis of research on possible mediating processes, several topics were identified and discussed that have yet to be examined within the mediational tradition. The argument was made that, because important events occur outside marital interaction, the model we have proposed should be expanded to accommodate the appraisals that spouses make before and after their discussions. We then considered the importance of attentional and perceptual factors that occur within an interaction and went on to examine the contribution of research on attributions to an understanding of the interpretations that spouses make for partner behavior. Questions remain about the specific role of attributions in the contextual model, yet the demonstrated impact of attributions on marital satisfaction would appear to justify their inclusion in theoretical accounts of marriage.

#### CONCLUSION

The central purpose of this chapter is to recognize formally the emergence of a *mediational tradition* in the study of marital satisfaction.

This movement, which evolved from earlier eras where sociological and behavioral variables were the primary focus, is characterized by research designed to clarify processes that may mediate the association between satisfaction and behavior in marriage. In an effort to give coherence and direction to this developing area, we described a contextual model that serves as a framework for organizing and conceptualizing mediating processes in marital interaction. After elaborating upon the components of this model, we applied it to existing research within the mediational tradition, with the intent of demonstrating how a comprehensive scheme of this sort can (a) make apparent the common elements of a seemingly diverse group of studies and (b) indicate how present research can be extended to address additional mediating factors. Having done so, we then identified three promising domains for future investigation by drawing upon the contextual model itself, research in social psychology, and marital studies not yet fully recognized as relevant to the association between behavior and satisfaction.

Limitations of our analysis derive from the untested validity of the contextual model and from the necessarily restricted range of topics that we have selected for its illustration. Continued advances in the mediational tradition may reveal that the distinctions we have drawn do not represent adequately the processes we have sought to illuminate, and the topics we have chosen to focus upon may prove to be less important than those we have excluded. Nevertheless, we offer this formulation as a means to organize within a common framework seemingly disparate lines of marital research, mindful of the fact that "it is necessary to formulate each piece of knowledge in a manner that enables it to be incorporated alongside others" (Hinde, 1979, p. 6).

#### NOTES

1. The history of research on marital satisfaction is much more complicated than we have portrayed it here. To our knowledge, a definitive treatment of this literature has not been written, and interested readers are encouraged to examine original sources for further information (see also Fincham & Bradbury, in press-a).

2. Owing to space limitations, it is not possible to present the model in its complete form. For related discussions, see Bradbury and Fincham, 1987b, Bradbury and Fincham, 1988, and Fincham & Bradbury, in press-a.

3. The possibility must be maintained that the distinction between proximal and distal factors may be more appropriately viewed as a continuum rather than as a dichotomy, an issue that warrants further empirical and theoretical development.

4. This conception of marital satisfaction does not preclude the possibility that satisfaction can be viewed as a state-like appraisal of the quality of marriage, thus suggesting that satisfaction also may be an element in the proximal context.

5. We emphasize here how marital satisfaction, as an element in the distal context, might change over time as a function of the appraisals that occur between interactions. A similar perspective might be taken on other variables in the distal context. For example, personality characteristics are known to have a profound effect on the quality of marriage (e.g., Kelly & Conley, 1987) and it seems likely that over time close relationships exert some influence on the personalities of their participants (Hinde & Stephenson-Hinde, 1986). The appraisal process represents a mechanism by which such changes may occur.

## REFERENCES

- Arias, I., & Beach, S.R.H. (1987). The assessment of social cognition in the context of marriage. In K. D. O'Leary (Ed.), *Assessment of marital discord* (pp. 109-137). Hillsdale, NJ: Lawrence Erlbaum.
- Barnett, L. R., & Nietzel, M. T. (1979). Relationship of instrumental and affectional behaviors and self-esteem to marital satisfaction in distressed and nondistressed couples. *Journal of Consulting and Clinical Psychology, 47*, 946-957.
- Barry, W. A. (1970). Marriage research and conflict: An integrative review. *Psychological Bulletin, 73*, 41-54.
- Berley, R. A., & Jacobson, N. S. (1984). Causal attributions in intimate relationships: Toward a model of cognitive-behavioral marital therapy. In P. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (Vol. 3, pp. 1-60). New York: Academic Press.
- Berscheid, E. (1983). Emotion. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson, *Close relationships* (pp. 110-168). New York: Freeman.
- Birchler, G. R., Weiss, R. L., & Vincent, J. P. (1975). Multimethod analysis of social reinforcement exchange between maritally distressed and nondistressed spouse and stranger dyads. *Journal of Personality and Social Psychology, 31*, 349-360.
- Bradbury, T. N., & Fincham, F. D. (1987a). Assessment of affect in marriage. In K. D. O'Leary (Ed.), *Assessment of marital discord* (pp. 59-108). Hillsdale, NJ: Lawrence Erlbaum.
- Bradbury, T. N., & Fincham, F. D. (1987b). Affect and cognition in close relationships: Towards an integrative model. *Cognition and Emotion, 1*, 59-87.
- Bradbury, T. N., & Fincham, F. D. (1988). Individual difference variables in close relationships: A contextual model of marriage as an integrative framework. *Journal of Personality and Social Psychology, 54*, 713-721.
- Bradbury, T. N., & Fincham, F. D. (in press-a). *Attributions in marriage: Review and critique*. *Psychological Bulletin*.
- Bradbury, T. N., & Fincham, F. D. (in press-b). Assessing spontaneous attributions in marital interaction: Methodological and conceptual considerations. *Journal of Social and Clinical Psychology*.
- Broderick, J. E., & O'Leary, K. D. (1986). Contributions of affect, attitudes, and behavior to marital satisfaction. *Journal of Consulting and Clinical Psychology, 54*, 514-517.
- Burgess, E. W., Locke, H. J., & Thomes, M. M. (1971). *The family*. New York: Van Nostrand Reinhold.
- Chelune, G. J., Robison, J. T., Kommor, M. J. (1984). A cognitive interactional model of intimate relationships. In V. J. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 11-40). New York: Academic Press.
- Christensen, A., & Nies, D. C. (1980). The spouse observation checklist: Empirical analysis and critique. *The American Journal of Family Therapy, 8*, 69-79.
- Easterbrook, J. A. (1959). The effect of emotion on cue utilization and the organization of behavior. *Psychological Review, 66*, 183-201.
- Eidelson, R. J., & Epstein, N. (1982). Cognition and relationship maladjustment: Development of a measure of dysfunctional relationship beliefs. *Journal of Consulting and Clinical Psychology, 50*, 715-720.
- Fincham, F. D., & Bradbury, T. N. (1987a). The impact of attributions in marriage: A longitudinal analysis. *Journal of Personality and Social Psychology, 53*, 510-517.
- Fincham, F. D., & Bradbury, T. N. (1987b). Cognitive processes and conflict in close relationships: An attribution-efficacy model. *Journal of Personality and Social Psychology, 53*, 1106-1118.
- Fincham, F. D., & Bradbury, T. N. (1988). The impact of attributions in marriage: Empirical and conceptual foundations. *British Journal of Clinical Psychology, 27*, 77-90.
- Fincham, F. D., & Bradbury, T. N. (in press-a). Cognition in marriage: A program of research on attributions. In D. Perlman & W. Jones (Eds.), *Advances in personal relationships* (Volume 2). Greenwich, CT: JAI.
- Fincham, F. D., & Bradbury, T. N. (in press-b). The impact of attributions in marriage: An experimental analysis. *Journal of Social and Clinical Psychology*.
- Fiske, S. T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology, 38*, 889-908.
- Floyd, F. J., & Markman, H. J. (1983). Observational biases in spouse observation: Toward a cognitive/behavioral model of marriage. *Journal of Consulting and Clinical Psychology, 51*, 450-457.
- Glick, B. R., & Gross, S. J. (1975). Marital interaction and marital conflict: A critical evaluation of current research strategies. *Journal of Marriage and the Family, 37*, 505-512.
- Gottman, J. M. (1979). *Marital interaction: Experimental investigations*. New York: Academic Press.
- Gottman, J. M., & Levenson, R. W. (1984). Why marriages fail: Affective and physiological patterns in marital interaction. In J. C. Masters & K. Yarkin-Levin (Eds.), *Boundary areas in social and developmental psychology* (pp. 67-106). New York: Academic Press.
- Gottman, J. M., & Levenson, R. W. (1986). Assessing the role of emotion in marriage. *Behavioral Assessment, 8*, 31-48.
- Gottman, J. M., Markman, H., & Notarius, C. (1977). The topography of marital conflict: A sequential analysis of verbal and nonverbal behavior. *Journal of Marriage and the Family, 39*, 461-477.
- Gottman, J. M., Notarius, C., Markman, H., Banks, S., Yoppi, B., & Rubin, M. E. (1976). Behavior exchange theory and marital decision making. *Journal of Personality and Social Psychology, 34*, 14-23.
- Gurman, A. S., & Knudson, R. M. (1978). Behavioral marriage therapy: I. A psychodynamic-systems analysis and critique. *Family Process, 17*, 121-138.
- Higgins, E. T., & Bargh, J. A. (1987). Social cognition and social perception. *Annual Review of Psychology, 38*, 366-425.
- Hinde, R. A. (1979). *Toward understanding relationships*. London: Academic Press.
- Hinde, R. A., & Stevenson-Hinde, J. (1986). Relationships, personality, and the social situation. In R. Gilmour & S. Duck (Eds.), *The emerging field of personal relationships* (pp. 63-76). Hillsdale, NJ: Lawrence Erlbaum.

- Holtzworth-Munroe, A., & Jacobson, N. S. (in press). Toward a methodology for coding spontaneous causal attributions: Preliminary results with married couples. *Journal of Social and Clinical Psychology*.
- Hormuth, S. E. (1986). The sampling of experiences *in situ*. *Journal of Personality*, 54, 262-293.
- Huston, T. L., McHale, S. M., & Crouter, A. C. (1986). When the honeymoon's over: Changes in the marriage relationship over the first year. In R. Gilmour & S. Duck (Eds.), *The emerging field of personal relationships* (pp. 109-132). Hillsdale, NJ: Lawrence Erlbaum.
- Jacob, T., & Krahn, G. (1987). The classification of behavioral observation codes in studies of family interaction. *Journal of Marriage and the Family*, 49, 677-687.
- Jacobson, N. S., & Moore, D. (1981). Spouses as observers of the events in their relationship. *Journal of Consulting and Clinical Psychology*, 49, 269-277.
- Jacobson, N. S., Waldron, H., & Moore, D. (1980). Toward a behavioral profile of marital distress. *Journal of Consulting and Clinical Psychology*, 48, 696-703.
- Kelley, H. H. (1985). Affect in interpersonal relations. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 89-115). Beverly Hills, CA: Sage.
- Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston T. L., Levinger, G., McClintock, E., Peplau, L. A., & Peterson, D. (1983). *Close relationships*. New York: Freeman.
- Kelly, E. L., & Conley, J. J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology*, 52, 27-40.
- Koren, P., Carlton, K., & Shaw, D. (1980). Marital conflict: Relations among behaviors, outcomes, and distress. *Journal of Consulting and Clinical Psychology*, 48, 460-468.
- Krokoff, L. J., Gottman, J. M., & Roy, A. K. (1988). The blue-collar couple: A re-evaluation. *Journal of Social and Personal Relationships*, 5, 201-221.
- Levenson, R. W., & Gottman, J. M. (1983). Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology*, 45, 587-597.
- Levenson, R. W., & Gottman, J. M. (1985). Physiological and affective predictors of change in relationship satisfaction. *Journal of Personality and Social Psychology*, 49, 85-94.
- Levinger, G., & Rands, M. (1985). Compatibility in marriage and other close relationships. In W. Ickes (Ed.), *Compatible and incompatible relationships* (pp. 309-331). New York: Springer-Verlag.
- Margolin, G., Hattem, D., John, R. S., & Yost, K. (1985). Perceptual agreement between spouses and outside observers when coding themselves and a stranger dyad. *Behavioral Assessment*, 7, 235-247.
- Markman, H. (1981). Prediction of marital distress. A 5-year follow-up. *Journal of Consulting and Clinical Psychology*, 49, 760-762.
- McArthur, L. Z. (1981). What grabs you? The role of attention in impression formation and causal attribution. In E. T. Higgins, C. P. Herman, & M. P. Zanna (Eds.), *Social cognition: The Ontario Symposium* (pp. 201-246). Hillsdale, NJ: Lawrence Erlbaum.
- Newcomb, M. D., & Bentler, P. M. (1981). Marital breakdown. In S. Duck & R. Gilmour (Eds.), *Personal relationships: 3. Personal relationships in disorder* (pp. 57-94). New York: Academic Press.
- Noller, P. (1980). Misunderstandings in marital communication: A study of couples' nonverbal communication. *Journal of Personality and Social Psychology*, 39, 1135-1148.

- Raush, H. L., Barry, W. A., Hertel, R. K., & Swain, M. A. (1974). *Communication, conflict, and marriage*. San Francisco: Jossey-Bass.
- Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, 49, 95-112.
- Schaap, C. (1984). A comparison of the interaction of distressed and nondistressed married couples in a laboratory situation: Literature survey, methodological issues, and an empirical investigation. In K. Hahlweg & N. S. Jacobson (Eds.), *Marital interaction: Analysis and modification* (pp. 133-158). New York: Guilford.
- Schachter, J., & O'Leary, K. D. (1985). Affective intent and impact in marital communication. *American Journal of Family Therapy*, 13, 17-23.
- Schindler, L., & Vollmer, M. (1984). Cognitive perspectives in behavioral marital therapy: Some proposals for bridging theory, research, and practice. In K. Hahlweg & N. S. Jacobson (Eds.), *Marital interaction: Analysis and modification* (pp. 309-324). New York: Guilford.
- Sillars, A. L., Wilmot, W. W., & Hocker, J. C. (in press). Communication strategies in conflict and mediation. In J. Wiemann & J. Daly (Eds.), *Communicating strategically: Strategies in interpersonal communication*. Hillsdale, NJ: Lawrence Erlbaum.
- Sternberg, R. J. (1986). A triangular theory of love. *Psychological Review*, 93, 119-135.
- Stuart, R. B. (1969). Operant interpersonal treatment for marital discord. *Journal of Consulting and Clinical Psychology*, 33, 675-682.
- Stuart, R. B. (1980). *Helping couples change*. New York: Guilford.
- Tharp, R. G. (1963). Psychological patterning in marriage. *Psychological Bulletin*, 60, 97-117.
- Vincent, J. P., Weiss, R. L., & Birchler, G. R. (1975). A behavioral analysis of problem-solving in distressed and nondistressed married and stranger dyads. *Behavior Therapy*, 6, 475-487.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
- Weiss, R. L. (1984). Cognitive and behavioral measures of marital interaction. In K. Hahlweg & N. S. Jacobson (Eds.), *Marital interaction: Analysis and modification* (pp. 232-252). New York: Guilford.
- Wills, T. A., Weiss, R. L., & Patterson, G. R. (1974). A behavioral analysis of the determinants of marital satisfaction. *Journal of Consulting and Clinical Psychology*, 42, 802-811.