
Understanding and Altering the Longitudinal Course of Marriage

Weak and counterintuitive findings linking couples' interactional processes to marital outcomes have prompted new lines of research on how marriages change. Recent findings reviewed here highlight the value of (a) expanding conceptions of marital interaction by considering how social support and positive affect moderate the effects of problem-solving skills on changes in marital quality; (b) examining partners' individual strengths and vulnerabilities as antecedents of marital aggression and hostile interaction; and (c) recognizing the central role of chronic and acute circumstances in governing fluctuations in spouses' judgments of marital quality. We outline implications of these findings for ongoing efforts to prevent adverse marital outcomes, and for recent federal initiatives to strengthen healthy marriages among people with low incomes.

Consider the data shown in Figure 1, which come from a married couple participating in a longitudinal study of marriage. The vertical axis represents self-reported marital satisfaction scores as assessed with the Quality Marriage

Index (Norton, 1983), and the horizontal axis represents the number of days that have elapsed since the couple's wedding. These spouses, who were recruited from public marriage license records, provided eight independent reports of their relationship satisfaction at approximately 6-month intervals, beginning within 6 months of their marriage. Additional reports of satisfaction were collected in the last trimester of the first pregnancy and shortly after the arrival of the first child, an event that is indicated in the figure by a thick vertical line. Figure 1 therefore shows how the husband's and wife's 10 reports of satisfaction change over a period of about 1,500 days, or approximately 4 years. More specifically, we can see that the marital satisfaction scores for this couple (a) are above the scale midpoint at the first assessment but well below the maximum possible score of 45; (b) generally trend downward, particularly for the wife, who achieves the lowest possible score of 6 after approximately 4 years of marriage; and (c) demonstrate upward and downward fluctuations. The focus on the first 4 years of marriage is not arbitrary, but was chosen for analysis because marital dissolution is most likely to occur during this period (see Bradbury, 1998), and because it is a time in which many couples are raising one or more young children.

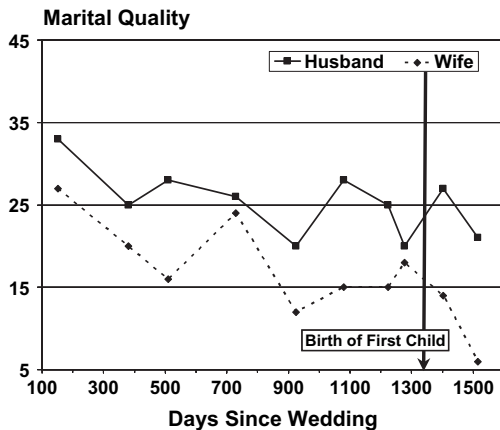
Imagine that you encountered this couple when they were newlyweds back in 1993, when they provided the first data points in this figure. If you are a researcher, this might be one of the couples visiting your laboratory or responding

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FIGURE 1. TEN ASSESSMENTS OF SELF-REPORTED MARITAL QUALITY FOR A HUSBAND AND WIFE, BEGINNING SHORTLY AFTER MARRIAGE AND CONTINUING FOR APPROXIMATELY 4 YEARS



Note: Data were collected using the Quality Marriage Index (Norton, 1983), which yields scores that can range from 6 to 45. Higher scores reflect higher levels of marital quality. The thick vertical line marks the arrival of the couple's first child.

to a survey you are conducting. If you are a practitioner, this couple might be participating in a workshop that you are offering to enhance marital communication. If you are a state policymaker, this may be one of the tens of thousands of couples marrying in your region in this particular year. Although Figure 1 shows how relationship satisfaction ebbs and flows over a significant period of time in a developing marriage, we never have access to this information when we first make contact with a recently married couple. But by seeing the way in which future reports of satisfaction will evolve over time for this couple, researchers, practitioners, and policymakers alike are prompted to ask: What concepts would prove most valuable for understanding this marriage? What variables might we want to track from the very start of marriage, or perhaps even earlier, to anticipate and explain how it evolves? What would we want to know to explain the degree of satisfaction that the spouses experienced when their marriage began, and to explain how their satisfaction changed over time? And how can we achieve an understanding of change in marital satisfaction that might be applicable to all kinds of married couples? We would want to know

the answer to these questions in part because they capture a fascinating scientific puzzle. But we would also strive to answer these questions because doing so allows us to address with greater sophistication yet another question: What strategies can we develop, and what specific steps can we take to increase the chances that this couple and all couples will have stronger relationships?

These questions are by no means new, and in fact for decades have served as a kind of a touchstone for gauging progress in the field, serving both to clarify the extent to which basic empirical findings inform intervention, and to determine the extent to which available interventions are rooted in the empirical literature. Revisiting these questions now takes on special significance for several reasons. First, although the divorce rate has changed little for over two decades, it has stabilized at a high level; 43% of all first marriages end within 15 years (Bramlett & Mosher, 2002). Second, the vast majority of interventions offered to couples in developing relationships—including many interventions offered nationally to large numbers of couples—have not been rigorously tested with well-controlled experiments, long follow-up intervals, at-risk populations, and independent replication of effects. Some interventions designed to teach couples skills in communication and problem solving show promise (e.g., Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998). Recent evidence, however, that couples at relatively low risk for adverse outcomes are better off in a minimally directed group discussion of a book on relationships than in a structured five-session skill-based program (Halford, Sanders, & Behrens, 2001) suggests that more complex models of intervention may be necessary. Third, at the same time, research on marriage has evolved beyond cross-sectional comparisons of maritally distressed and satisfied couples to address with longitudinal designs possible processes by which marriages develop and change from their earliest point forward. Finally, the Healthy Marriage Initiative, advanced by the Administration for Children and Families within the U.S. Department of Health and Human Services, promises to create new opportunities and challenges for scholars of marriage, highlighting the need to take stock of basic and applied progress in the marital domain.

The purpose of this article is to offer a focused analysis of recent longitudinal research on

marriage, with the aim of drawing out the implications of this work for devising strategies to alter the longitudinal course of marriage. We emphasize the implications of this research specifically for preventive and educational interventions, on the grounds that basic research has far greater relevance to these interventions than it does to tertiary interventions. This is because interventions undertaken after the onset of marital distress must contend not only with the factors that led to the distress but also with the individual and interpersonal consequences that result from the distress (see Bradbury, Johnson, Lawrence, & Rogge, 1998). As is customary for invited papers, this analysis focuses heavily on our own studies, though in doing so, we link our work to related findings in the literature. More inclusive summaries of research on marriage can be found in reviews by Bradbury, Fincham, and Beach (2000); Christensen and Heavey (1999); Fincham and Beach (1999); and Halford, Markman, Kline, and Stanley (2003).

So where do we focus first in our quest to understand and help the couple in Figure 1, around the time their marriage begins? We will begin where Harold Raush and colleagues began in their classic work on *Communication, conflict, and marriage* (1974), when they asserted that "Studying what people say about themselves is no substitute for studying how they behave. . . . Questionnaires and scales of marital satisfaction and dissatisfaction have yielded very little. We need to look at what people do with one another" (p. 5). The ensuing emphasis on observational analysis of marital communication, particularly communication over conflicts and differences of opinion, would soon come to dominate the psychological study of marriage. Researchers working from the perspective of social learning theory embraced this method and organized their studies around the premise that

Distress, in this model, is assumed to be a function of couples' interaction patterns. Inevitably, couples have wants and needs that conflict. Distress results from couples' aversive and ineffectual responses to conflict. When conflicts arise, one or both partners may respond aversively by nagging, complaining, distancing, or becoming violent until the other gives in, creating a coercive cycle that each partner contributes to and maintains. (Koerner & Jacobson, 1994, p. 207)

Modification of these interactional patterns was undertaken, in turn, as a means of treating

(Jacobson & Margolin, 1979) and preventing (Markman & Floyd, 1980) relationship dysfunction. In the first section below, we evaluate the social learning perspective as a foundation for preventive interventions, followed by sections in which we consider two additional factors—the individual strengths and vulnerabilities that spouses bring to their marriage, and the stressful events and circumstances that spouses and couples encounter once married—that are likely to affect interpersonal repertoires in marriage and the trajectory of marital satisfaction.

INTERACTIONAL PROCESSES AND CHANGE IN MARITAL QUALITY

Background

Few hypotheses are as intrinsically appealing as the notion that marital outcomes are governed by how spouses talk and respond to one another generally, and by how they exchange particular positive and negative behaviors during problem solving more specifically. Despite its appeal, this hypothesis has proved to be remarkably difficult to support or refute with any kind of consistency across studies. Consider a few selected findings from the following longitudinal studies, all of which employ observational methods for studying marital interaction: Filsinger and Thoma (1988) found that reciprocation of positive behaviors is detrimental to relationships. Gottman and Krokoff (1989) found that higher levels of positive verbal codes are detrimental to relationships, whereas a greater degree of conflict engagement is beneficial for relationships. Karney and Bradbury (1997) reported that higher rates of negative behaviors slow the rate at which marriages deteriorate. Kiecolt-Glaser and colleagues (2003) found little evidence that observed interaction behaviors predict marital outcomes, demonstrating instead that stress hormones collected before, during, and after problem-solving discussions foreshadow couples' drops in relationship satisfaction. It is tempting to discount these studies and focus solely on the "signal" in other studies that provide clearer support for the basic hypothesis (e.g., see Bradbury & Karney, 1993), and to base our interventions upon them. It is difficult, however, to overlook the "noise" that arises from the studies enumerated here and from the

literature more broadly. On the basis of these inconsistent findings, are we prepared to abandon the view that distress results from couples' ineffectual responses to conflict? Probably not; thus, the uncertain status of interpersonal processes as a key precursor to marital deterioration deserves a closer look.

Perhaps it should come as no surprise that this most central ingredient of human intimacy is so difficult to capture well, yet we can still ask why the association between observed interaction behaviors and change in marital satisfaction is not more consistent. One possible answer is that many studies rely on samples that are relatively small and underpowered. As is typical in the field of observational research, all of the studies mentioned above involve fewer than 100 couples, and most involve fewer than 60 couples. A second concern is that some studies rely on samples that include couples from different stages in their marital careers. Efforts to identify behavioral mechanisms underlying marital dysfunction are likely to be thwarted when newlyweds are combined with couples who have been married for decades, or when first-time newlyweds are combined with remarried newlyweds. Third, the labor-intensive nature of observational studies has led investigators to invest more heavily in independent variables than in dependent variables. Two-wave longitudinal designs are common, yet Figure 1 suggests that any two data points would be inadequate for representing the changes in satisfaction that these spouses report.

A fourth explanation for the inconsistent behavioral findings stems from the possibility that the approach that has worked well for characterizing the problem-solving skills of satisfied and distressed couples proves less effective for identifying the communication deficits that may lead a newlywed couple from a relatively high level of relationship satisfaction to a lower level of satisfaction later on. Expressions of positive affect, for example, rarely aid in discriminating satisfied from distressed couples in problem solving (Gottman 1979; Margolin & Wampold, 1981), yet may be more salient in the problem-solving interactions of newlywed couples and more diagnostic of their future. Positive affect might exert a main effect on marital satisfaction, or it might moderate the effects of other behaviors on change in satisfaction, as others have shown (e.g., see Huston & Chorost, 1994; Smith, Vivian, &

O'Leary, 1990). Similarly, interpersonal domains that do not involve the management of marital disagreements—most notably the provision of emotional or instrumental support—may be at least as important for marital outcomes (Cutrona, 1996). Couples marry not because they manage problems well, but because they find comfort and solace in one another's presence. The ability to enact this support and to sustain a nurturing environment may stave off declines in marital satisfaction, perhaps because conflicts are less consequential when they do occur. Below, we summarize two studies that address one or more of these four possible reasons why interpersonal processes in marriage evince an ambiguous relationship with changes in marital functioning.

Empirical Illustrations

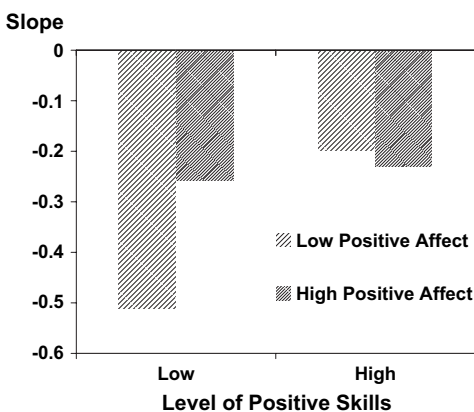
Moderating effects of positive affect. In a recent study by Johnson et al. (in press), the behaviors displayed by husbands and wives in two 10-minute videotaped problem-solving interactions of 172 first-time newlywed couples were coded separately for: (a) specific communication skills that were positive (disclosure, positive solution, accepting the other, agreement) and negative (criticism, negative solutions, justification, disagreement) in nature, using Hahlweg et al.'s (1984) *Kategoriensystem für Partnerschaftliche Interaktion* [Coding System for Couple Interaction] (KPI); and for (b) specific emotions that were positive (humor, affection, interest/curiosity) and negative (anger, contempt) in valence, using Gottman's (1994) Specific Affect Coding System. Composites of these four separate groups of codes were created separately for husbands and wives. These composites, individually and in statistical interactions (e.g., positive affect interacting with negative skills) were then examined in relation to 4-year linear changes in self-reported marital satisfaction, using growth curve modeling. Thus, for the spouses in Figure 1, straight lines would be fitted to their data points, and the rates of change in these lines, quantified as points per month, would serve as dependent variables. Spouses' ratings of the severity of the problems that they discussed were controlled in these analyses. The rationale for examining statistical interactions between codes derives from Baron and Kenny's (1986) observation that unexpectedly weak effects

often arise because a key moderating variable has not been identified. We predicted that the effects of skill codes would vary as a function of the relative presence or absence of affect codes, and for reasons noted above, we expected expressions of positive affect to be particularly influential in this regard.

What did we learn? Using a large sample of couples (relatively homogeneous with regard to marital duration) followed over 4 years to yield a dependent variable that reflects long-term change in satisfaction seems to boost the empirical signal in behavioral data. More specifically, main effects are consistent in showing that faster declines in husbands' and wives' satisfaction are predicted by higher levels of negative affect and negative skills, and by lower levels of positive affect and positive skills. These effects are qualified, however, by several significant interactions between affect and skill codes, the majority of which involve positive affect moderating the effects of positive or negative skills.

Figure 2 shows one such interaction between the positive affect and positive skills displayed

FIGURE 2. 48-MONTH CHANGE IN WIVES' MARITAL QUALITY (QUANTIFIED AS POINTS PER MONTH DECLINED ON THE LOCKE-WALLACE MARITAL ADJUSTMENT TEST) AS A FUNCTION OF HUSBANDS' LOW VERSUS HIGH POSITIVE AFFECT, AND LOW VERSUS HIGH POSITIVE SKILLS



Note: This figure shows that husbands' low levels of positive skills predict declines in wives' satisfaction only when husbands are below average in their displays of positive affect. Dichotomized variables are shown only for illustrative purposes; original analyses used continuous variables. $N = 172$ couples (Johnson et al., in press).

by husbands and changes in wives' satisfaction. When husbands display relatively high levels of such positive skills as disclosing feelings, offering positive solutions, accepting the partner's suggestions, and agreeing with the partner, their wives decline in satisfaction by about .2 points per month, regardless of whether the husbands show a lot or a little positive affect. In marriages in which husbands are relatively low in their display of these positive skills, however, a different pattern emerges. If the husbands are high in positive affect, their wives decline to about the same degree as the wives of high-positive skill husbands. But if the husbands are low in positive affect, wives' rates of decline in satisfaction more than double on average, to .56 points per month. Several interactions obtained between positive affect and *negative* skills tell a very similar story: Low levels of negative skills are not detrimental to marriage regardless of whether positive affect is high or low, and high levels of negative skills are detrimental to marriage only when levels of positive affect are low. Stated otherwise, this means that couples with relatively poor problem-solving skills will achieve marital outcomes that are no different from couples with relatively good problem-solving skills, provided that they display relatively high levels of affection, humor, and interest/curiosity. It is only when spouses display relatively low levels of these positive emotions that poor skills appear to be detrimental.

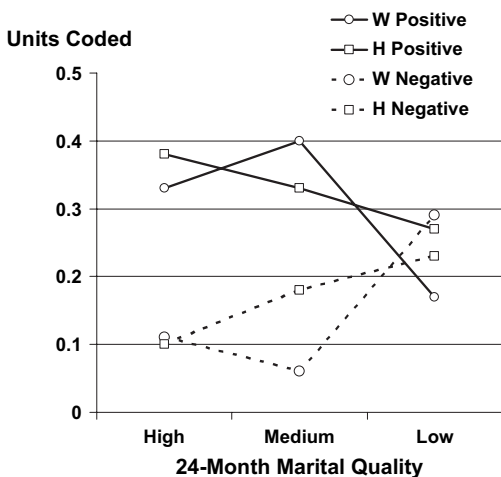
Social support. Are the communication skills that foreshadow declines in marital satisfaction limited to the context of marital problem solving, or do they extend to other important domains of marital interaction? To examine this question, Pasch and Bradbury (1998), following work by Cutrona (1996), devised an interactional task in which one spouse (e.g., the wife) identified something she wanted to change about herself, something that was not a source of marital tension, while the husband was instructed to respond in whatever way he might ordinarily respond if this topic came up in day-to-day conversation. A second interaction took place in which spouses reversed these two roles. Spouses talked about a wide range of issues, including wanting to exercise more, read more, spend more (or less) time with friends or relatives, be more organized at work, and so on. In both interactions, specific positive and negative behaviors displayed by both partners were

coded using a system devised for this purpose (see Pasch, Harris, Sullivan, & Bradbury, 2004); here we focus on the aggregated positive and negative behaviors displayed by the spouse who is responding to the partner identifying a topic for change. The 60 newlywed couples participating in this study also engaged in 15-minute problem-solving discussions, which were coded for specific emotions using Gottman's (1994) Specific Affect Coding System.

Casual observation of these interactions revealed great variety in how newlywed spouses responded to their partner, with some spouses displaying exquisite sensitivity in understanding and motivating their partner to take effective steps toward change, whereas other spouses were awkward, selfish, discouraging, critical, and dismissive. Subsequent analysis of the coded behaviors showed that couples going on to experience different marital outcomes 2 years later—designated as *very satisfied*, *satisfied*, and *distressed or dissolved*—tended to display, as newlyweds, different levels of positive and negative supportive behaviors. As shown in Figure 3, couples who went on to be either satisfied or very satisfied did not differ much, but

both of these groups of couples tended to be more positive and less negative than those couples going on to be distressed or to dissolve their marriages. Remarkably, couples who go on to be maritally distressed or divorced after 2 years show about the same number of negative behaviors as positive behaviors when provided with the opportunity to help their partner with some relatively mundane personal conversation. Negative affect coded in the problem-solving discussions performed as one might expect, with higher levels in the distressed or dissolved group than in the two satisfied groups (see Pasch & Bradbury, 1998). Even after controlling for negative affect in the problem-solving discussions, however, the findings shown in Figure 3 did not change; independent of negative affect in problem solving, behaviors coded in the support conversations discriminated between couples going on to have satisfying versus dissatisfying relationships. Finally, high levels of wives' negative affect in problem-solving interactions combined with high levels of wives' negative support to produce high levels of marital distress, suggesting that deficits in one domain can potentiate the effects of deficits in the other domain. We can conclude that the communicative behaviors that put newlywed couples at risk for marital difficulties are not limited to problem-solving interactions, but instead extend to other important tasks in marriage.

FIGURE 3. ASSOCIATION BETWEEN (A) NEWLYWED HUSBANDS' AND WIVES' POSITIVE AND NEGATIVE SOCIAL SUPPORT BEHAVIORS, AND (B) 24-MONTH MARITAL OUTCOMES



Note: These effects remain after controlling for initial marital satisfaction and negative affect in a problem-solving discussion. *N* = 57 couples (Pasch & Bradbury, 1998).

Implications for Intervention

The two studies summarized here run counter to Koerner and Jacobson's (1994) assertion, derived from social learning theory—that "Distress results from couples' aversive and ineffectual responses to conflict" (p. 207)—in two ways. First, poor marital problem skills (i.e., either the relative absence of positive skills or the relative presence of negative skills) do not necessarily foreshadow poor marital outcomes. In fact, if spouses are able to infuse their problem-solving discussions with humor, show genuine enthusiasm for what the partner is saying, and express feelings of warmth and affection, low-skill couples decline in marital satisfaction at the same rate as high-skill couples. Without these brief but potent expressions of positive affect, newlywed couples with relatively low levels of communication skills are likely to

experience their conversations as unpleasant, harsh, and frustrating. Thus, where social learning theory tends to maintain a sharp distinction between rewarding and aversive behavioral exchanges, these findings suggest instead that the presence of positive affect may neutralize aversive, unskilled behaviors to the point where they have little bearing on declines in marital quality. The absence of positive affect, in contrast, appears to heighten and enhance the effect of relatively unskilled communication. This is consistent with the notion that resolution of marital problems is less important than how spouses define and understand the context in which their differences of opinion are discussed (Wile, 1981).

Second, findings from the observational study of social support indicate that problem-solving conversations may have no unique predictive relationship with marital outcomes. When we look at interactions that involve discussion of personal rather than marital sources of tension, here too we find evidence that the quality of couples' behavior exchanges has consequences for the well-being of the marriage. This evidence indicates that a more basic communication deficit—perhaps a difficulty in setting aside one's own interests and concerns in order to attend to those of the partner and the marriage—operates to place couples at risk for marital dysfunction and will emerge in any significant sampling of marital communication. Moreover, the negative affect that couples display during problem solving appears to be more costly to the marriage when social support skills are weak versus strong. As in the Johnson et al. (in press) study, positive engagement seems to envelop the couple like Teflon, so unskilled behavior and negative emotions do not stick to the couple as they negotiate different tasks and situations.

How does any of this help the couple shown in Figure 1? First, it bears noting that this couple conforms surprisingly well to the findings of the two studies presented here. The husband in particular displays very few positive problem-solving skills and virtually no positive affect. He does not display many negative behaviors or emotions either, and in fact, he is quiet and unresponsive throughout their conversations. When the wife discusses her desire to do more volunteer work in a local homeless shelter, for example, the husband does ask what he can do to help, but he does not offer much in the way

of specific suggestions or encouragement. The simplest suggestion we might imagine—"How about if we do it together?"—is made by neither the husband nor the wife. The wife does much of the work in keeping the conversations moving, and is rather upbeat and engaged as she does so. Her comments on how expressive he was toward her during their courtship, and how expressive he seems to be with his friends during their once-weekly bike-riding session, are poignant, however, and it is not hard to speculate about why her initial satisfaction is relatively low and then declines for the next two assessments.

This couple might well be helped by an intervention emphasizing, for example, the value of expressing positive emotions during problem solving, the importance of constructive engagement in the marriage, and the need for empathic listening and responding. Much has been written about the importance of these factors for a developing marriage (e.g., Guerney, 1977), and an experimental test of their effects on 3-year marital outcomes is now under way (Rogge, Cobb, Johnson, Lawrence, & Bradbury, 2003). But is this enough? Will this approach or any comparably structured intervention be sufficient for stabilizing or, ideally, improving a marriage such as the one depicted in Figure 1? Perhaps, but seeing the precipitous drop in satisfaction experienced by this couple might prompt practitioners and policymakers to ask two additional questions: Are there characteristics of this couple that might help us to understand what has led their interactions to be unrewarding—for example, characteristics that might in turn help us to know whether they require a particularly intensive intervention to help them learn the necessary skills? And second, what factors might interfere with, constrain, or challenge these spouses' abilities to enact behaviors likely to promote the well-being of their relationship? Adopting the perspective that marital outcomes are governed not only by (a) the transactions that occur between spouses but also by (b) partners' individual strengths and vulnerabilities and (c) the ecological niches that couples inhabit (see Karney & Bradbury, 1995) leads us to the position that intervention effects will be maximized when the risks associated with all three domains are recognized. The ramifications of individual characteristics for marital development are considered next.

INDIVIDUAL STRENGTHS AND
VULNERABILITIES*Background*

Individuals vary tremendously along such dimensions as personality, ethnicity and culture, personal history and early experiences, habits and preferences, attitudes and values, and educational achievements. Personal characteristics such as these are likely to be relatively stable, and it is plausible to assume that individuals bring these characteristics into any marriage that they may form. Is variance along these dimensions important for understanding and changing the course of a marriage? If so, how?

Surprisingly, research on marriage conducted within the social learning tradition has rarely expanded to incorporate dimensions such as these. In dozens of studies conducted on interactional processes, investigators have invested considerable time and resources into collecting and coding behavioral samples, yet rarely have they examined the resulting data in relation to individual difference variables, variables that would be far easier to collect. This reveals a general and unfortunate reluctance to test alternative models in the marital field, along with a strong and unwavering view that interactional processes, to a greater degree than stable intrapersonal phenomena, hold the key for understanding how marriages deteriorate and where interventions should be aimed to keep marriages strong.

Three lines of research suggest that it is now timely to embed behavioral processes between spouses in more complex nomological networks that include spouses' individual characteristics. In the first line of research, independent studies by Karney and Bradbury (1997) and Belsky and Hsieh (1998) demonstrate that personality variables (e.g., negative affectivity, agreeableness) have been shown to predict levels of relationship functioning (but not change in those levels), whereas observed behavioral variables have been shown to predict the degree to which relationship functioning deteriorates (but not the level of relationship functioning). These findings lend support to the view that interactional processes are consequential for change in marriage, yet they also highlight how individual difference variables might set the point from which change occurs. Thus, individual difference variables may contribute to marital satisfaction by raising or lowering the overall level

of satisfaction that a given spouse reports, whereas behaviors exchanged between partners may contribute to the degree to which satisfaction changes around that level. High levels of negative affectivity, for example, covary with lower levels of marital satisfaction around the time of marriage, and problem-solving behaviors displayed at that time predict the rates at which marital satisfaction drops (Karney & Bradbury, 1997). Negative affectivity and behavioral variables are not correlated, however, nor do they appear to interact to hasten the rate of relationship deterioration.

A second, well-established line of research shows that variation in marital outcomes can be linked reliably to the marital functioning of the spouses' parents. Parental divorce increases the likelihood that their offspring will divorce (e.g., Amato, 1996; Feng, Giarusso, Bengston, & Frye, 1999), for example, and parents' reports of marital quality covary with their offspring's marital quality assessed more than a decade later (e.g., Amato & Booth, 1997). Again, this suggests the value of looking beyond interactional processes to understand why marriages unfold in a particular way and achieve various outcomes. Here it bears noting that, for the couple shown in Figure 1, both sets of parents had divorced.

Recognition of these intergenerational associations leads naturally to questions about the proximate effects of the early family environment, and particularly about those effects that are likely to mediate associations between experiences in the family of origin and later marital outcomes. In this regard, a third line of research is now emerging that lends support to the widely held view that the family of origin is a primary setting in which children and adolescents learn maladaptive interpersonal repertoires. According to this view, observing interactions between family members, or interacting directly with family members, leads the developing individual to acquire emotional and behavioral propensities that will generalize to nonfamily relationships (e.g., O'Leary, 1988; also see Amato & Booth, 2001). Prime candidates in this set of variables are physical aggression, which demonstrates small to medium effect sizes across generations (Stith et al., 2000), and patterns of interaction marked by negative affect and ineffective problem solving. For example, Sanders, Halford, and Behrens (1999) and Levy, Wamboldt, and Fiese (1997)

observed higher rates of conflict, invalidation, withdrawal, and negative nonverbal behaviors in those couples in which the woman's parents had divorced, relative to those couples in which the woman's parents had not divorced. Similarly, Andrews, Foster, Capaldi, and Hops (2000; also see Swinford, DeMaris, Cernkovich, & Giordano, 2000) used a prospective design and observational data to demonstrate that aversive family communication assessed when the child was 16 years old predicted, over a 6-year period, reports of physical aggression and displays of aversive communication with a spouse or dating partner. Given that interpersonal processes displayed in adult relationships can be traced back to the family of origin, is it the case that these interpersonal processes serve to mediate the cross-generation linkage in marital outcomes? We next summarize a recent study that addresses this question.

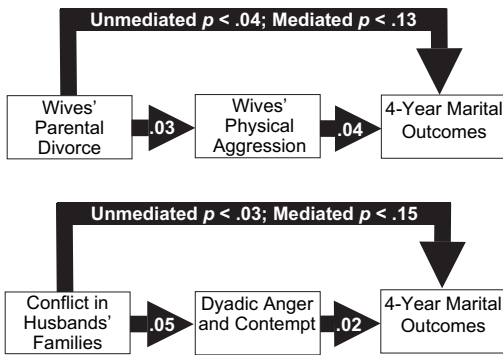
Empirical Illustration

Is interpersonal behavior the route by which experiences in the family of origin come to be associated with the outcomes of offspring marriages? A few studies hint at this possibility, while also examining whether an alternative path of influence—heightened sociodemographic risk resulting from divorce or conflict in the family of origin—might be contributing to adverse marital outcomes. Amato and DeBoer (2001) demonstrated that self-reported marital behavior mediated the association between parental marital discord (but not parental divorce) and thoughts of divorce by the offspring: Spouses coming from families marked by more dissatisfaction between their parents were more likely to report engaging in disruptive behaviors in their own marriages, and to express more doubts about the future of their marriages. Sociodemographic factors (parental education, offspring age, ethnicity) did not mediate the effects of parental discord or divorce on offspring thoughts of divorce. In a study of sociodemographic factors, Feng et al. (1999) found evidence for a pattern in which wives' history of parental divorce predicted lower age at marriage, which in turn predicted subsequent offspring divorce. Other life course variables, such as wife employment and income, did not mediate this association. Finally, Conger, Cui, Bryant, and Elder (2000) studied links between family interaction when children

were in the seventh grade and their romantic relationships eight years later. The quality of offspring relationships was higher to the extent that the parents had been observed to be nurturing, involved, and supportive during the family interactions. The quality of the offspring's affective behaviors toward their partners mediated this association.

In an attempt to extend this growing line of work, Story, Karney, Lawrence, and Bradbury (in press) collected newlywed spouses' retrospective reports on parental divorce and conflict in the family of origin, and data on their prospective marital outcomes 4 years later. (In a separate study, newlywed spouses and their siblings independently reported on their recollections of conflict and negativity in the family of origin; reliable correlations—.57 between husbands and their siblings, .66 between wives and their siblings—lend support to the validity of these retrospective reports.) Potential interactional mediators of these associations included specific expressions of anger and contempt as coded from the newlyweds' problem-solving interactions and, in view of its high prevalence rates (e.g., O'Leary et al., 1989) and apparent consequences for divorce and marital dissatisfaction (Lawrence & Bradbury, 2001; Rogge & Bradbury, 1999), spouses' self-reports of aggression in the relationship over the preceding year. Potential sociodemographic mediators included age at marriage, education, income, and cohabitation with the partner prior to marriage. As Figure 4 shows, the results were quite clear. For wives, divorce in their families of origin predicted higher levels of aggression in their newlywed marriages, which in turn increased the likelihood of adverse outcomes in their own marriages. For husbands, retrospectively predicted conflict in the family of origin predicted higher levels of anger and contempt displayed in problem-solving interactions shortly after marriage, which in turn increased the likelihood of adverse marital outcomes. (Retrospected conflict in wives' families of origin did not predict their own marital outcomes, and divorce between husbands' parents did not predict their own marital outcomes.) In contrast, neither of the intergenerational transmission effects were mediated by sociodemographic risk variables. Experiences in a family while growing up appear to shape the interpersonal repertoires that newlyweds display, which in turn aid in the prediction of their marital outcomes several years later.

FIGURE 4. INTERPERSONAL PROCESSES MEDIATE THE ASSOCIATION BETWEEN NEWLYWED SPOUSES' EXPERIENCES IN THE FAMILY OF ORIGIN AND THEIR 4-YEAR MARITAL OUTCOMES



Note: N = 57 couples (Story et al., in press).

Implications for Intervention

At the outset of this section, we raised the question of whether efforts to understand and change the course of marriage would benefit from knowing about the degree to which individual spouses possess certain traits and attitudes, have had particular kinds of experiences, identify with particular ethnic and cultural groups, and so forth. We did not address this question in any broad sense here, yet we did answer this question in the affirmative by focusing specifically on family conflict and parental divorce as experiences in the family of origin likely to leave spouses at a disadvantage as they enter marriage, a disadvantage that appears to increase their chances of marital distress and dissolution years later. We believe that individual strengths, vulnerabilities, and propensities are indeed potent influences on the developmental course of marriage, and that the important questions now pertain to how—and not whether—they should be incorporated into intervention programs.

In what ways might this perspective help the spouses shown in Figure 1, both of whom came from families in which the parents divorced? First, we know from their questionnaire responses that this couple, like many couples, did not participate in any form of premarital counseling. Although there does not appear to be any reliable association between history of parental divorce and participation in premarital counseling (Sullivan & Bradbury, 1997), the case can

be made for developing specialized recruitment strategies that will bring couples at risk for adverse outcomes into contact with appropriate interventions. Experiences in the family of origin, including divorce, do carry information about subsequent marital risk, are readily assessed, and no longer appear to have any great stigma associated with them, and thus might be prime candidates in this kind of recruitment model.

Second, in view of evidence that divorce and conflict in the family of origin are associated with interactional processes that appear to contribute to the development of adverse marital outcomes, there is reason to believe that interventions focused only on interactional processes, without consideration for the source of these processes, might be overlooking an important aspect of how these relationships will unfold. Thus, had the couple in Figure 1 been induced to participate in premarital counseling, they might have explored whether they see conflictual situations as an opportunity to get closer or as a threat to their well-being, how they typically respond to frustrating interpersonal situations, reasons that it is difficult for them to reach out and support one another, and so forth. Simply enacting the behaviors that reflect effective communication may yield some benefits for this couple, yet controlled studies with distressed couples demonstrate that achieving some degree of insight into relationship patterns produces better results than skill-based communication interventions (Snyder, Wills, & Grady-Fletcher, 1991). Although many interventions do attend to the family backgrounds of spouses, the effects of these interventions and the incremental effects of tailoring interventions to spouses' histories await further study.

Third, recognition that parental conflict and divorce are powerful formative experiences implies that (a) differences between individuals from divorced and intact family backgrounds in the domain of intimate relationships are likely to be evident well before marriage, and (b) interventions delivered early to children and adolescents from risky family backgrounds hold great potential for reducing later relationship difficulties. On the former point, Jacquet and Surra (2001) have shown that, in a sample of 232 couples in which neither partner had ever been married, women from divorced families reported more ambivalence and conflict in their current relationships, as well as less trust and

satisfaction, compared with women from intact families. These effects indicate that the strong forms of negative interpersonal behavior studied as mediators by Story et al. (in press) may themselves be a manifestation of the distrust, ambivalence, and uncertainty about relationships that individuals from divorced families are especially prone to experience. With regard to intervention, randomized controlled studies show that interventions delivered to children of divorce and their parents in the years following separation and divorce produce measurable benefits in mental health, reduced alcohol and drug use, and fewer sexual partners (Wolchik et al., 2002).

Finally, the point that individual differences generally, and experiences in the family of origin specifically, have important implications for marriage can be made from a different angle. Consider the girl whose birth is represented on the right side of Figure 1, at a time when her parents' marriage is struggling. Although we know little about what happened to this family between 1998 and 2002, we do know that their marriage is intact and that the spouses' reports of marital quality are only slightly above the last recorded points in Figure 1. Assuming, for the sake of argument, that this young girl's parents have been in an unfulfilling, tense, or disengaged relationship for a significant portion of her life, we can see that interventions delivered in young adulthood to help foster intimacy and effective relationship functioning have a tall order to fill: The 20 years of chronic marital discord to which she has been exposed present a formidable adversary for the 20 or 30 hours of intervention that might be offered to this young adult as she enters a committed lifelong relationship. Intervening early and intensively with this child's parents would seem to be essential, as would looking for the effects of these interventions in the marriage, in the coparenting relationship, in parent-child relationships, and in the well-being of the developing child.

STRESS AND CONTEXT

Background

Although the marital quality data shown in Figure 1 can be viewed as depicting a couple with relatively low scores early in marriage that trend downward over the subsequent 4 years, this

characterization overlooks the numerous fluctuations, both upward and downward, that are evident at several points along these trajectories. These fluctuations are likely to be important for capturing whether couples experience their relationship as improving or deteriorating at a given point, and they may prove informative for devising interventions that help to dampen or circumvent rapid deterioration in relationship functioning. How can we understand these fluctuations? A simple behavioral model would lead to the prediction that drops in marital quality result from "couples' aversive and ineffectual responses to conflict" (Koerner & Jacobson, 1994, p. 207), and that improvements in marital quality result from enhanced management of relationship difficulties. This account seems to be at best incomplete, and at worst implausible, in part because marital interaction behavior appears to be relatively stable over time (e.g., Gottman & Levenson, 1999), and in part because the presumed behavior changes for a given couple would then have to go in both directions, improving at some times and deteriorating at others. If interpersonal processes in marriage are indeed changing in significant ways across time for a given couple, the next logical question would address the conditions that bring about these changes and, in turn, fluctuations in marital quality. If interpersonal processes in marriage are not changing to any significant degree, it becomes important to know what other variables are changing around the same time and whether these variables are contributing to the observed fluctuations in satisfaction—on their own or through the moderating effects of marital processes.

Both scenarios draw attention to the contexts and ecological niches that marriages inhabit, a concept that includes the developmental transitions, situations, incidents, and chronic and acute circumstances that spouses and couples encounter (for a review, see Story & Bradbury, 2004). Thus, for a given couple, the hypothesis might be made that fluctuations in marital quality result in part from adjustments and adaptations that spouses and couples are making to circumstances that arise in their lives. Theoretically identical marriages are unlikely to achieve identical outcomes if they are forced to contend with rather different contexts, and by the same token, two rather different marriages may evolve to similar outcomes if, for example, the contexts in which they both operate are especially

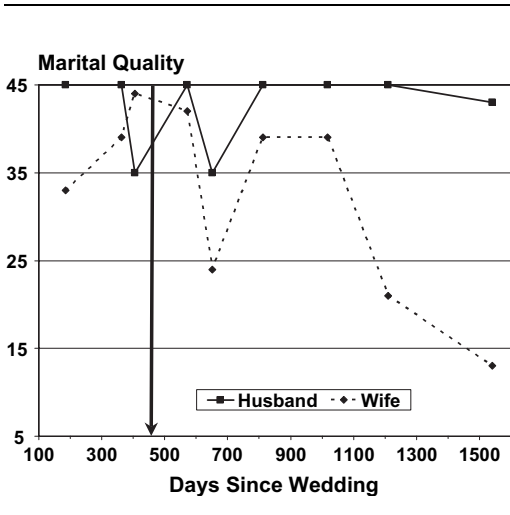
salubrious or especially toxic. Although most observational research on change in marital quality has sought to sample couples' adaptive capacities (e.g., how spouses interpret negative partner behaviors, resolve differences of opinion, and support one another), far less of this work focuses on the circumstances that might instigate or necessitate adaptation. The interior of marriages has been reasonably well explored, but relatively little is known about marriages in context and the interplay between the two (see Berscheid, 1999).

To illustrate this point, consider the couple shown in Figure 5. The husband in this couple reports a consistently high degree of marital quality, with the exception of 10-point drops in the last trimester of his wife's pregnancy, and again several months after the child is born. For the following four assessments, his scores are very close to the maximum value on the scale, which is 45. The wife's picture is fairly similar at first, with a more exaggerated drop and recovery after the child is born, but after her seventh assessment, her reported marital quality drops rapidly. Questionnaire data collected from

this couple at the time of the seventh assessment reveal several important events. The wife resumed work as an administrative assistant at a high school, her workload there increased unexpectedly when budget cutbacks forced her to take on the responsibilities of a colleague who was laid off, a close relative died unexpectedly, and the couple reported encountering financial difficulties. Whereas a simple behavioral perspective does not provide a very satisfying account of this marked change in the wife's marital quality, it is likely that the drop can be explained by the massive stress that she was experiencing at this time, stress that probably compromised the ability of this dyad to maintain itself. Models developed to understand this balance between the resources available to couples (including their interpersonal resources) and the challenges they confront are likely to be more informative than models that focus solely on interactional processes or contextual influences. The transition to parenthood has been studied extensively, of course, resulting in important insights into how couples negotiate this important period of time (e.g., Cowan & Cowan, 2000). The data presented in Figure 5 suggest that analysis of a more encompassing range of events and circumstances in couples' lives is now warranted.

A potentially strong counterargument to the position outlined here comes from marital interaction studies reporting high to very high levels of accuracy in predicting marital outcomes—for example, 94% (Buehlman, Gottman, & Katz, 1992) and 84% (Gottman, 1994). Is all of the information needed to predict marital outcomes with near-perfect accuracy to be found in couples' interactional processes, as assessed in a 10- or 15-minute laboratory task? We believe that this is unlikely on theoretical grounds, and the strength of this counterargument is lessened further by shortcomings in the predictive studies themselves. For example, several factors are likely to increase unduly the magnitude of predictive effects in some of these studies (e.g., inclusion of couples who are already maritally distressed, a high ratio of variables to spouses, and use of extreme groups of couples; see Rogge & Bradbury, 1999). The predictive algorithms derived in these studies vary from sample to sample, true prospective prediction studies have not yet been undertaken, and recent analyses document the high degree of shrinkage in prediction that results in cross-validation

FIGURE 5. NINE ASSESSMENTS OF SELF-REPORTED MARITAL QUALITY FOR A HUSBAND AND A WIFE, BEGINNING SHORTLY AFTER MARRIAGE AND CONTINUING FOR APPROXIMATELY 4 YEARS



Note: Data were collected using the Quality Marriage Index (Norton, 1983), which yields scores that can range from 6 to 45. Higher scores reflect higher levels of marital quality. The thick vertical line marks the arrival of the couple's first child. See text for discussion of this wife's decline in marital quality.

efforts (Heyman & Slep, 2001). Though these studies are exceedingly important for specifying processes that might figure into robust prediction models in the future, they leave unanswered questions about why marital satisfaction can increase and decrease in relatively short spans of time. Contextual variables, alone and in interaction with behavioral processes between partners, provide a good (albeit tentative) answer to these questions. We turn next to consider two recent studies that help detail how contextual variables might influence the developmental course of marriage.

Empirical Illustrations

Chronic stress, acute stress, and change in marital quality. In an effort to understand the role of stress in the course of developing marriages, Karney, Story, and Bradbury (in press) assessed 4-year marital quality trajectories for 172 newlywed couples by gathering eight waves of self-report data for all spouses. Reasoning that different kinds of stress would have different kinds of effects on marital quality trajectories, Karney et al. assessed (a) spouses' experiences of *chronic stress* in the preceding 6 months at each of the eight waves by asking about the degree to which eight nonmarital domains of life (e.g., relationships with in-laws, relationships with friends, experiences at work, finances, own health, and spouse's health) were experienced as exceptionally positive versus exceptionally stressful (following procedures developed by Hammen et al., 1987), and (b) spouses' experiences of *acute stress* at each of the eight waves by asking them to complete a checklist by indicating which specific life events had occurred to them in the preceding 6 months, and if an event had occurred, the positive versus negative impact it had on them. At each wave, acute stress was defined as the number of negative life events outside the context of marriage that the spouse had reported (see Cohan & Bradbury, 1997). As expected, spouses' reports of chronic stress were indeed relatively stable over time, and thus they were summed to form a single index for each spouse.

What did we learn when we examined these two indices of stress in relation to changes in marital quality? Consistent with expectations, marital quality was lower among couples experiencing higher average levels of chronic stress, and independent of this effect, marital quality

declined more rapidly over time to the extent that couples reported higher levels of chronic stress. A different pattern arose with the acute stress data. Here, marital quality deviated downward from a given spouse's own linear trajectory from one assessment to the next, to the extent that that spouse reported more negative life events in the preceding 6 months. We were most interested to learn that the strength of the association between acute stress and marital quality depended on the stable level of chronic stress to which the marriage was exposed, particularly for wives. Acute stress and marital satisfaction were linked most strongly among those couples for whom levels of chronic stress were relatively high, a finding that supports the view that negative life events are particularly detrimental when the external context places a constant drain on a couple's coping resources. Examples that illustrate this idea readily come to mind. The 2003 transit strike in Los Angeles, which shut down bus service for several months across the county, no doubt extracted a far greater toll on those bus riders who had no alternatives to get to work and school, who lived far from their places of work, who were paid by the hour and could not afford to miss work, and who had jobs that did not permit much flexibility in scheduling. Thus, a single event can be rather costly for a couple living in circumstances that make them vulnerable. One spouse might have to get up earlier to arrive at work on time, the other spouse might have to work extra hours to make up for the partner's lost wages, new expenses might be incurred for additional child care, and the exhaustion that ensues may leave tempers short and intimacy difficult to maintain.

Acute stress, maladaptive attributions, and marital difficulties. Using a rather similar eight-wave design and a separate sample of 82 newlywed couples, Neff and Karney (2004) sought to examine possible means by which increases in acute stress might bring about within-person declines in marital quality, independent of that person's linear change in marital quality. At each of the eight data collection points, they assessed (a) acute nonmarital life events (using a standard checklist of events) occurring in the couple in the previous 6 months and experienced by the spouses as negative; (b) the extent to which spouses made maladaptive attributions for four specific negative partner behaviors

(e.g., “Your partner does not pay attention to what you are saying”), using the Relationship Attribution Measure (Fincham & Bradbury, 1992); (c) the extent to which 12 potential marital problems (e.g., trust, making decisions, showing affection) were perceived as being present in the relationship, using the Marital Problems Inventory (Geiss & O’Leary, 1981); and (d) marital quality.

In addition to showing that increases in negative stressors corresponded with lower levels of marital quality, analyses revealed two independent paths by which this association might come about. First, in periods of elevated stress, more problems were perceived in the relationship, and marital quality deflected downward. Second, again in periods of elevated stress, the partner’s negative partner behaviors were more likely to be viewed as intentional, selfishly motivated, and worthy of blame, and again marital quality deflected downward. Both of these mediating effects were obtained primarily for wives, perhaps because wives encounter higher levels of chronic demands associated with tasks at work and at home. In short, Neff and Karney (in press) present evidence that acute stress hastens the rate at which marital quality declines, because higher levels of acute stress appear to result both in spouses perceiving more areas of disagreement in the relationship, and in their offering interpretations for negative partner behaviors that cast the partner in a negative light.

Linking contextual variables with interactional processes. The two foregoing studies are limited because they capture only a small part of the rich context in which marriages exist, they rely on spouses to provide reports of the contextual influences, and they fail to provide direct analysis of interactional processes. Other studies help to fill these gaps. For example, in an observational study, husbands working in blue-collar jobs were more likely to reciprocate negative affect during problem-solving discussions compared with husbands working in white-collar jobs, apparently because of their greater job distress (Krokoff, Gottman, & Roy, 1988). In a diary study of air traffic controllers’ daily work stress, air traffic volume and workday stress were associated with aspects of marital interactions each evening (Repetti, 1989). On high-stress days, husbands who received more support from their wives reported less anger and more emotional withdrawal at the end of

the workday, perhaps illustrating the benefits of wives’ support on high-stress evenings for husbands’ emotional recuperation (also see Roberts & Levenson, 2001). In a study of 202 African American couples, Cutrona et al. (2003) demonstrated that variation in neighborhood distress—as reflected in a composite index derived from census data and comprising per-capita income, percent of households headed by women, proportion of neighborhood residents on public assistance, proportion of households below the poverty level, and proportion of unemployed men—covaried reliably with lower levels of observed warmth in marital interaction and higher levels of observed hostility. Remarkably, these correlations were consistently stronger than those obtained between self-reported marital quality and observed behavior. (Connecting these findings back to the results from Johnson et al., in press, suggests that contextual variables operate to extract positive affect from couples’ problem-solving interactions, which leaves them vulnerable to the effects of poor communication skills.) Taken together, these findings strengthen the assertion that stress and context are integral to understanding how the quality of marriage changes, and they set the stage for future studies in which multiple waves of interactional data are tracked in relation to the stable and changing aspects of the ecological niches in which couples function.

Implications for Intervention

“It does not do to leave a live dragon out of your calculations, if you live near him” (J. R. R. Tolkien, *The Hobbit*, 1937, p. 195)—and so it is with stress and relationships. This view has at least four implications for designing interventions intended to strengthen developing marriages. First, couples who live in more challenging environments, however defined, are likely to have fewer opportunities to participate in effective intervention programs. Second, for couples who do participate in intervention programs, the environments in which they reside may hinder uptake of the intervention itself. For example, unusual work schedules, long hours of work at physically demanding jobs, shared or stressful living arrangements, and a host of other factors might interfere with couples’ abilities to learn and practice intervention exercises. Third, after completion of an intervention program, we can anticipate that stressful events and

circumstances will conspire against any benefits that were gained. Beneficial effects of marital therapy (Jacobson Schmaling, & Holtzworth-Munroe, 1987), group-level interventions for couples undergoing the transition to parenthood (Cowan & Cowan, 2000), and structured preventive interventions for engaged and newlywed couples (Story & Bradbury, 2004) all appear to erode as a result of stressful events encountered following treatment. To counter this robust effect, it may prove valuable to deliver intervention content to couples at regular intervals over a significant span of time, rather than in the intensive shorter bursts that are now commonplace. Fourth, contextual variables themselves could become a target in interventions. This might be achieved by helping couples understand and counteract the effects of stress on their relationship (see Bodenmann, Charvoz, Cina, & Widmer, 2001), either generally or in anticipation of a particular stressor (e.g., the transition to parenthood, job loss, relocation). As the data from the couple in Figure 5 remind us, this is no small task. Those times when relationship-maintaining skills are needed most are likely to overlap significantly with those times when they are most difficult to mobilize. Finally, and most ambitiously, we should not overlook the value of bypassing couples and lobbying for change in environments and conditions that impinge on marriages and families. Although it may be difficult to discern their effects in experimental designs, we can expect that the availability of reliable child care, safer neighborhoods, affordable housing, higher wages, and improved access to high-quality medical care would have far-reaching consequences for enhancing couple and family well-being.

CONCLUDING COMMENTS

With the federal Healthy Marriage Initiative gaining momentum, our field is poised for rapid growth in discovering how best to strengthen American marriages and families, especially those struggling with poverty and diminished resources. Scholars have been careful to acknowledge that many specific findings about marriage, achieved as they are with White middle-class samples, may not generalize well to people with low incomes, ethnic minority backgrounds, and different cultural values. Yet it is equally important to raise the broader con-

cern that the dominant paradigm itself—that is, that interactional processes capture the lion's share of variance in determining marital outcomes, and that modification of interactional processes provides the surest route to stronger marriages—may prove incomplete for understanding couples with precarious socioeconomic standing. By presenting trajectory data on individual couples and by presenting recent findings on how marital outcomes appear to be governed by interactional processes, individual strengths and vulnerabilities, and stressful events and contexts, we aimed to demonstrate that consideration of all three classes of phenomena is likely to prove necessary in developing effective intervention strategies. Indeed, collecting data to investigate this claim may reveal that the dominant paradigm does not apply particularly well even to the middle-class White couples on which it was developed.

NOTE

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Additional information about the research presented here can be found at <http://www.uclamarriagelab.com> and <http://www.relationshipscience.net>.

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