Shelter from the storm? Flawed reactions to stress in precarious couples

William B. Swann, JR, Katie Larsen McClarty and Peter J. Rentfrow

Journal of Social and Personal Relationships 2007; 24; 793
DOI: 10.1177/0265407507081473

JSPR

Shelter from the storm? Flawed reactions to stress in precarious couples

William B. Swann, Jr.

University of Texas at Austin

Katie Larsen McClarty

Pearson Educational Measurement

Peter J. Rentfrow

Cambridge University

ABSTRACT

Past research suggests that relationship quality is low in "precarious couples," those in which the woman is both critical and more verbally disinhibited than her male partner. Such diminished relationship quality may compromise the capacity of precarious couples to cope with stressors. To test this hypothesis, we exposed 67 married women to an experimentally induced stressor, reunited them with their husbands, and examined the subsequent physiological reactions of both partners. Interacting with one's spouse after the stress-induction procedure resulted in relatively low heart rates among most people, but men in precarious couples displayed elevated levels of arousal. Apparently, for men in precarious couples, interacting with a recently stressed partner is itself stressful, which could ultimately compromise physical health.

KEY WORDS: blirtatiousness • health • heart rate • personality • precarious couple • relationships

This research was supported by a grant from the National Institutes of Mental Health MH57455 to William B. Swann, Jr. All correspondence concerning this article should be addressed to William Swann, Department of Psychology, University of Texas, 1 University Place, A8000, 108 E. Dean Keeton, Austin, TX 78712–0187, USA [e-mail: swann@mail.utexas.edu].

Journal of Social and Personal Relationships Copyright © 2007 SAGE Publications (www.sagepublications.com), Vol. 24(5): 793–808. DOI: 10.1177/0265407507081473

Bob Dylan's (1975) song *Shelter from the Storm* portrays close relationships as warm, nurturant sanctuaries against the cold, harsh realities of everyday life. The research literature suggests that the benefits of relationships may extend beyond providing mere psychological solace. Witness, for example, that people in marital relationships enjoy superior physical health (Juster & Suzman, 1995; Prior & Hayes, 2003), mental health (Marks & Lambert, 1998; Simon, 2002), emotional health (Coombs, 1991; Horwitz, White, & Howell-White, 1996), and even longevity (Goldman, Koreman, & Weinstein, 1995; Ross, Mirowski, & Goldsteen, 1990). The salubrity of relationships may reside, at least partially, in their capacity to reduce stress. Exposure to friends while under stress, for example, reduces cardiac reactivity (e.g., Snydersmith & Cacioppo, 1992; for a review, see Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Nevertheless, relationships differ in the extent to which they reduce stress (Allen, Blascovich, & Tomarka, 1991) and some relationships may actually exacerbate stress (e.g., Holmes & Rahe, 1967). In this report, we test one scheme for identifying couples who vary in the extent to which they reduce stress.

Our research builds upon recent evidence that specific personality characteristics of men and women may combine to influence the quality of the relationship in general and communication in particular. We propose here that such diminutions in relationship quality and communication will compromise the capacity of members of such couples to reduce stress. Specifically, we propose that the verbal inhibition levels of participants will sometimes combine to degrade relationship quality and such degradations in relationship quality, in turn, lower the ability of the couple to deal effectively with a mild stressor encountered by the woman. This argument can be broken down into two key propositions. First, relationship quality varies as a function of the configuration of verbal inhibition of partners within relationships. Second, when relationship quality and communication suffers, so too will the capacity of the couple to deal effectively with a stressor. We consider each proposition in turn.

Configuration of verbal inhibition influences relationship quality

There is sound evidence that communication patterns in relationships are associated with relationship quality, with some patterns predicting disharmony and divorce (Christensen & Heavey, 1990; Gottman, 1998). Yet relatively little is known about the antecedents of such communication patterns. A recent series of studies has begun to explore this issue. In particular, researchers have tested the hypothesis that individual differences in verbal inhibition might influence communication patterns and, in turn, relationship quality (Swann & Rentfrow, 2001).

Verbally disinhibited persons ("disinhibitors") translate their every thought and feeling into words quickly and without hesitation. In contrast, verbally inhibited persons ("inhibitors") are relatively slow in responding to others.

Swann and Rentfrow (2001) developed, and provided evidence for the construct validity for a scale to measure these individual differences in verbal inhibition (see also Swann, Rentfrow, & Gosling, 2003). For example, disinhibitors talked more rapidly and effusively than inhibitors and are easier to "read" than inhibitors. Such differences emerged whether the interaction was affectively neutral (e.g., a getting-acquainted conversation) or contentious (e.g., a confrontation with a confederate who disrupted the experiment by talking on her cell phone). Furthermore, when antagonized, inhibitors "clammed up" while their physiological arousal (i.e., elevated blood pressure) spiked sharply. In short, disinhibitors, as compared with inhibitors, verbalize what they are thinking and feeling to their interaction partners quickly and effusively and this tendency has a variety of personal and social consequences.

Individual differences in verbal inhibition or blirtatiousness have important implications for the quality of close relationships. If both partners are verbally disinhibited, both will respond rapidly and effusively, fostering feelings of connection to one another. Similarly, if partners are both verbally inhibited, both will feel gratified that their partners offer them "space" to respond thoughtfully. In contrast, when partners differ in level of verbal inhibition, conflict and misunderstanding may sometimes result. Just as the verbally disinhibited person may think that the relative silence of the verbally inhibited person reflects lack of interest in the relationship, the verbally inhibited person may be overwhelmed by a verbally disinhibited partner.

Yet if asymmetries in partners' verbal inhibition may disrupt communication in relationships, some asymmetrical configurations may be more disruptive than others. Sex roles may be critical here. Carli and her associates (Carli, 1990; Carli, LaFleur, & Loeber, 1995), for example, reported that men derogate women who speak rapidly and with few hesitations, that is, verbally disinhibited women. We suspect that verbally inhibited men would be especially inclined to dislike verbally disinhibited women because such men may be overwhelmed or threatened by the verbal dominance of these women (Glick & Fiske, 1999; Rudman & Glick, 2001; Sattel, 1976). Disinhibited women who are also critical may be particularly aggravating to inhibited men. That is, criticalness can be aggravating even when muted but will be especially so among disinhibited persons as disinhibition tends to *amplify* such behavioral propensities (Swann & Rentfrow, 2001).

In four studies, Swann et al. (2003) identifed a "man-more-inhibited" effect. These couples – in which the man was more verbally inhibited than the woman – were less satisfied than other couples. One study also produced a "precarious couple" effect wherein relationship quality was lowest when men were paired with relatively disinhibited, and critical, women. Furthermore, a follow-up study indicated that women's criticalness served as a cause, rather than effect, of relationship disharmony. That is, even among unacquainted pairs, interaction satisfaction dipped when men interacted with women who were both relatively disinhibited and dispositionally critical (Swann, Sellers, & McClarty, 2006, Study 3).

Finally, one study highlighted the behavioral mechanisms that may undermine relationship quality in precarious couples. Specifically, objective judges noted that precarious couples engaged in a wife-demand, husband-withdraw pattern of interaction to a greater extent than nonprecarious couples (Swann & Angulo, 2006). It appears that women make demands because they lack power in their relationships, and disinhibited men (particularly males with traditional sex role stereotypes) withdraw because they feel that they have nothing to gain from confrontations (Heavey, Christensen, & Malamuth, 1995). This communication pattern produces hostility and anger, which erodes both partners' relationship quality.

Relationship quality, communication, and coping with stressors

One symptom of the relationship difficulties experienced by members of man-more-inhibited and precarious couples may be difficulty dealing with stressors. For example, unacquainted precarious couples reported interaction dissatisfaction only when they discussed stressful topics (Swann et al., 2006, Study 3). Discomfort in dealing with stressors may sour partners' relationship feelings and also have important physiological ramifications. For example, Robles and Kiecolt-Glaser (2003) concluded that hostile and negative interactions (compared to neutral and supportive ones) are consistently associated with increases in heart rate and blood pressure. Thus, for example, couples that expressed negative affect and hostility during a stressful task displayed higher heart rates and blood pressure than did supportive couples. From this vantage point, the diminutions in relationship quality suffered by precarious couples may undermine their ability to deal with stressors which may, in turn, result in increased physiological arousal. The primary goal of this investigation, then, is to investigate the cardiovascular activity (i.e., heart rates) of members of man-more-inhibited and precarious couples after the wife has encountered a stressor.

Rival predictors of couple's ability to cope with the woman's stressor

This study's secondary goal is to provide further evidence for the discriminant validity of the predicted links among verbal inhibition configuration, relationship quality, and coping. Swann et al. (2003) found that verbal inhibition is correlated with personality charaterstics of extraversion (e.g., sociable, energetic, and cheerful) and neuroticism (e.g., anxious, self-conscious, impulsive). It is conceivable that extraversion or neuroticism configurations might contribute to the precarious couple effect (although Swann et al., 2003, encountered no such evidence). Similarly, although attachment style (i.e., how secure people feel in the attachment of their close relationship partners) is only modestly related to verbal inhibition,

(*r*s = –.14, –.13, ambivalent attachment and avoidant attachment, respectively), attachment orientation has been shown to predict support seeking and giving in the wake of stressful events (Simpson, Rholes, & Nelligan, 1992). We accordingly had our participants complete measures of each of these variables with the intent of controlling for them in the analyses.

The current research

In summary, the configuration of individual differences in verbal inhibition in couples can influence relationship quality in general and responses to stressors in particular. In addition, couples' quality of interactions has been linked to physiological reactions to stressors. The present study combined these independent themes by testing the hypothesis that the verbal inhibition configuration of hetereosexual married couples will be associated with their ability to cope with a stressor encountered by the woman. Specifically, we expected that when women were exposed to a stressor and then allowed to interact with their husband, the capacity of members of precarious couples to minimize one another's physiological arousal would be low relative to other couples. As a result, we anticipated that the physiological arousal of members of precarious couples would be high relative to the arousal of members of other couples.

To test our hypotheses, we adapted a procedure developed by Simpson et al. (1992) to measure couples' reactions to a stressful event. Specifically, we brought married couples into the laboratory, assessed their heart rates, and determined their verbal inhibition and criticalness scores. We then separated husbands and wives and had wives undergo a stressful experience (Simpson, Rholes, & Orina, 2002, indicated no sex differences in reactions to such stress inductions). We then reunited the couples, allowed them to talk for several minutes, and reassessed their heart rates. Our primary question was whether the configurations of verbal inhibition of couple members would influence how effectively they coped with the stressful experience, as indexed by their physiological arousal at the end of the study. A secondary question was whether the predicted effects of verbal inhibition might be due to rival personality characteristics such as extraversion, neuroticism, and attachment style.

Method

Participants

One-hundred and thirty-four participants (67 couples) who had been married for an average of 7.8 years responded to newspaper advertisements that offered $25 for participation. The average age of participants was 35 years (Males M = 35.8, SD = 8.6; Female M = 33.3, SD = 8.4).

Procedure

Upon arrival, couples were greeted by a male experimenter who escorted them to a comfortable waiting room and explained that they would be participating in two studies: A questionnaire study of the relation between personality and close relationships and an unrelated investigation (by design, for wives only) of the "psychophysiological correlates of intimacy." After offering this introduction, the experimenter recorded the "baseline" heart rates of both partners using a HEM-712C Automatic Inflation Blood Pressure Monitor. Heart rate was averaged over a 45-second interval. This assessment not only offered separate indices of the woman and man's heart rate, it also provided a basis for the average couple heart rate (which reflected the average physiological arousal of the couple, analogous to average couple satisfaction).

The "questionnaire study." Participants were escorted to separate rooms in which both participants completed several questionnaires, including some background information, and Swann and Rentfrow's (2001) measure of verbal inhibition (BLIRT; Brief Loquaciousness and Interpersonal Responsiveness Test). The BLIRT is an 8-item scale that exhibited internal consistency and temporal stability, and is independent of intelligence, social desirability, and gender of the participant. Also, as summarized earlier, scores on the scale predict a wide range of social behaviors (Swann & Rentfrow, 2001; Swann et al., 2003).

Participants also completed measures of Extraversion (enduring tendency to be gregarious, assertive, and generally seek out excitement) and Neuroticism (enduring tendency to experience negative emotional states such as anxiety, anger, guilt, and depression) (BFI; John & Srivastava, 1999) and the Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Phillips, 1996). The AAQ consists of 17 items that measure whether they avoid or withdraw from intimate relationships (avoidant attachment) and whether they ruminate over issues of abandonment and their partner's level of commitment (anxious-ambivalent attachment).

Participants then completed Swann et al.'s (2003) measure of criticalness. The measure of criticalness consisted of nine items taken from Murray, Holmes, and Griffin's (1996) Interpersonal Qualities Scale (e.g., "critical and judgmental," "complaining," "kind and affectionate," [reverse coded]). The scale was dubbed Criticalness because the "critical and judgmental" item had the highest factor loading in principal-components analysis. The scale was internally consistent ($\alpha = .70$) and has been shown to have predictive validity (Swann et al., 2003, 2006).

Finally, participants completed Swann, De La Ronde, and Hixon's (1994) measure of intimacy. The intimacy measure consisted of five items on 9-point scales that focused on both affective (i.e., relationship satisfaction) and behavioral (e.g., exclusive sharing of personal matters) components. The scale was internally consistent ($\alpha = .88$) and has been shown to be a satisfactory measure of relationship quality (De La Ronde & Swann, 1998; Swann et al., 2003). Upon completing the questionnaires, husbands returned to the waiting room and wives moved to "the second experiment."

The "psychophysiological experiment." Women entered a tiny, dimly lit, windowless room that was dominated by a very large device with an intimidating display of dials, buttons, and lights. The experimenter asked the participant to wait in the room while "the psycho-physiologist" finished preparing the experiment. The experimenter then left the room and shut the door.

Approximately two minutes later, a female experimenter wearing a white lab coat entered. She greeted the participant in an austere manner, asked her to sit upright, and placed a blood pressure cuff on her arm and electrodes on each index finger. After appearing to measure the participant's blood pressure, the experimenter asked several health-related questions, such as how often the participant exercised, if there was a history of heart disease in her family, whether she had been admitted to the hospital within the past 12 months, and whether she had a PET scan or MRI within the past 12 months.

The experimenter then announced that she would turn on the rest of the physiological equipment. After feigning an attempt to turn on the machine, the experimenter explained that "sometimes the screws loosen." She then inserted a screwdriver into the back of the machine and appeared to be tightening a screw. After several seconds, she surreptitiously pushed a button which created a bright flash of light. Visibly alarmed, she jumped away from the equipment and, with a somewhat dazed and confused expression, asked if the participant had also felt the shock. When the participant indicated that she felt nothing, the experimenter stated that the equipment required repair before the study could proceed.

Note that although this procedure was modeled after the one used by Simpson and colleagues, we attempted to increase participants' experienced stress by having them actually sit in the room with the equipment and witness the experimenter ostensibly shock herself. To avoid arousing suspicion, we included no manipulation check. Nevertheless, pilot testing and participants' reports during the study offered converging evidence that participants found the procedure to be both engaging and somewhat stressful. For example, one participant insisted that she herself was "shocked" and it took several minutes of debriefing to convince her otherwise. Similarly, another participant was sufficiently preoccupied following the machine "malfunction" that she asked if she could go outside for some fresh air.

After the "equipment malfunction," the female experimenter escorted the participant to the waiting room where the husband was sitting. Couples waited alone for five minutes, at which point the female experimenter returned and announced that the equipment was inoperable and this component of the study was thus cancelled. Couples then waited alone for five additional minutes until the male experimenter returned and recorded both participants' "final" heart rates. Participants were then carefully and fully debriefed.

Results

Our analyses addressed three related but distinct issues. First, did the predicted man-more-inhibited and precarious couple effects emerge? Second, did the predicted man-more-inhibited and precarious couple effects compromise couples' capacity to reduce one another's physiological arousal created by a stressor? Third, were the predicted physiological effects truly relational phenomena or were they limited to our female participants (who were the directly exposed to the stressor)? To correct for possible within-couples response interdependence, all data were analyzed using hierarchical linear modeling (HLM 5.04) with individuals as Level 1 units and couples as Level 2 units.

Relationship quality

We first ran an unconditional multilevel model to assess the amount of interdependence associated with couple intimacy. Based on the interclass correlation, 46% of the variance in intimacy was shared between couples. In an effort to account for this variance, we tested for the man-more-inhibited effect by entering verbal-inhibition difference scores (male–female) into the model as a Level 2 predictor of intimacy. A man-more-inhibited effect emerged ($B = .43$, $se = .13$, $t_{65} = 3.31$, $p < .002$), such that participants in couples in which the man was more inhibited than the woman ($n = 40$) reported less intimacy than those in which the woman was more inhibited than the man ($n = 34$).

We followed up the intimacy analyses, and all subsequent analyses reported below involving either a man-more-inhibited or precarious couple effect, by controlling for attachment style, Extraversion, and Neuroticism. Specifically, we entered individual levels of avoidant attachment, anxious-ambivalent attachment, Extraversion, and Neuroticism as Level 1 predictors of intimacy, while verbal inhibition difference score was a Level 2 predictor of intimacy, according to the following equations

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{Avoidant} + \beta_{2j}X_{Anxious} + \beta_{3j}X_{Extraversion} + \beta_{4j}X_{Neuroticism} + r_{ij} \quad (1)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{VerbalInhibition} + u_{0j} \quad (2)$$

$$\beta_{1j} = \gamma_{10} \quad (3)$$

$$\beta_{2j} = \gamma_{20} \quad (4)$$

$$\beta_{3j} = \gamma_{30} \quad (5)$$

$$\beta_{4j} = \gamma_{40} \quad (6)$$

where Y is each individual's level of intimacy, the Level 1 intercept was a random effect, and the Level 1 coefficients were treated as fixed effects. We ran a random intercept model because, within HLM, there were insufficient

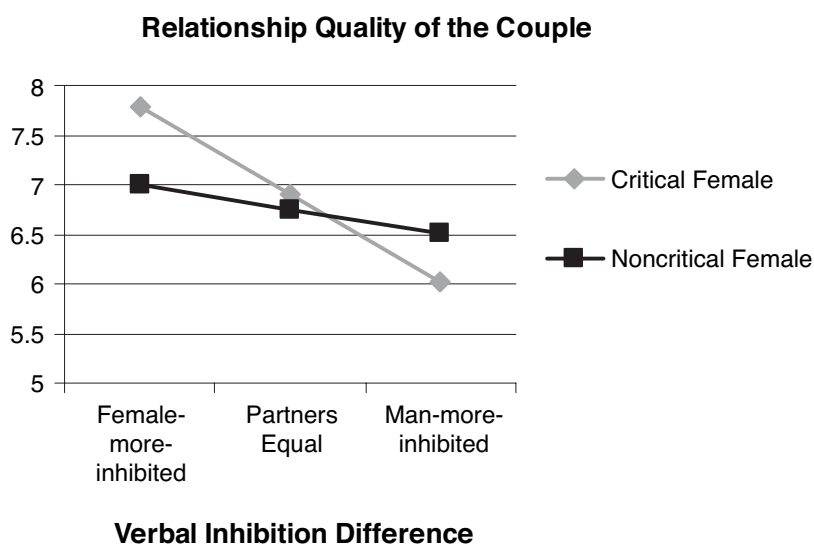
degrees of freedom to allow the slopes to vary. Results showed that the man-more-inhibited effect remained significant ($B = .44$, $se = .13$, $t_{65} = 3.38$, $p < .002$) even when controlling for other predictors of intimacy. In no instance was individual level of attachment, Extraversion, or Neuroticism a significant covariate. The man-more-inhibited effect accounted for an additional 30% of the between-couple variance in intimacy.

A precarious couple effect also emerged. That is, when we entered verbal inhibition difference scores, female criticalness, and their interaction into the multilevel model as Level 2 predictors (in Equation 2), the interaction was significant ($B = .31$, $se = .14$, $t_{63} = 2.17$, $p < .03$). To illustrate this interaction, we identified critical and noncritical women as those whose scores on the criticalness scale were one standard deviation above and below the mean, respectively. As shown in Figure 1, when the woman was critical, participants displayed less intimacy insofar as the man was more inhibited than the woman. The precarious couple effect accounted for an additional 7% of the variance in intimacy scores between couples above and beyond the man-more-inhibited effect. Moreover, the precarious couple effect was specific to highly critical women as compared to men; within man-more-inhibited couples, intimacy was the same whether men were critical or noncritical.

Physiological arousal

Evidence of man-more-inhibited and precarious couple effects set the stage for testing our central hypothesis: That couples would differ in the extent to which they recovered after a stressor. First we ran an unconditional

FIGURE 1
Relationship quality.



model to assess the amount of interdependence in couple heart rates. The interclass correlation showed that 21% of the variance in heart rate was between couples. Second, we investigated if there were differences between man-more-inhibited and other pairings at baseline. As expected, man-more-inhibited pairings had similar baseline heart rates when compared with all other couples ($B = –.34$, $se = 1.11$, $t_{50} = –.31$, $p < .76$). Because there was a nonlinear pattern in the relationship between verbal inhibition difference scores and final heart rate (controlling for baseline), we used verbal-inhibition difference scores to trichotomize participants into man-more-inhibited (MMI; $n = 40$), partners-equal (Equal; $n = 30$), and woman-more-inhibited (WMI; $n = 34$) couples. These categories were dummy coded and entered as Level 2 predictors in which the dependent variable was final heart rate and the Level 1 predictor was baseline heart rate according to the following set of equations

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{HR-Baseline} + \beta_{2j}X_{Avoidant} + \beta_{3j}X_{Anxious} + \beta_{4j}X_{Extraversion} + \beta_{5j}X_{Neuroticism} + r_{ij} \quad (7)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{MMIvs.Equal} + \gamma_{02}W_{MMIvs.WMI} + u_{0j} \quad (8)$$

$$\beta_{1j} = \gamma_{10} \quad (9)$$

$$\beta_{2j} = \gamma_{20} \quad (10)$$

$$\beta_{3j} = \gamma_{30} \quad (11)$$

$$\beta_{4j} = \gamma_{40} \quad (12)$$

$$\beta_{5j} = \gamma_{50} \quad (13)$$

where Y is each individual's final heart rate, the Level 1 intercept was a random effect, and the Level 1 coefficients were treated as fixed effects.

As can be seen in Figure 2, a man-more-inhibited effect emerged, wherein individuals in man-more-inhibited pairs had significantly higher final heart rates (after controlling for baseline heart rate, attachment, Extraversion, and Neuroticism) than individuals in partners equal ($B = –7.68$, $se = 3.33$, $t_{46} = –2.30$, $p < .03$) and woman-more-inhibited pairs ($B = –6.20$, $se = 3.26$, $t_{97} = –1.90$, $p < .06$). Adding these personality combinations to the model accounted for 48% of the remaining variance in final heart rate after accounting for baseline heart rate.

There was also evidence of a precarious couple effect. We ran another model to test the specific hypothesis that the man-more-inhibited couples in which the female was high in criticalness would have higher final heart rates than the other five groups in the design. To test this hypothesis, Equation 8 above was changed to:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{Precariousvs.Other} + u_{0j} \quad (14)$$

FIGURE 2
Heart rate as a function of verbal inhibition difference.

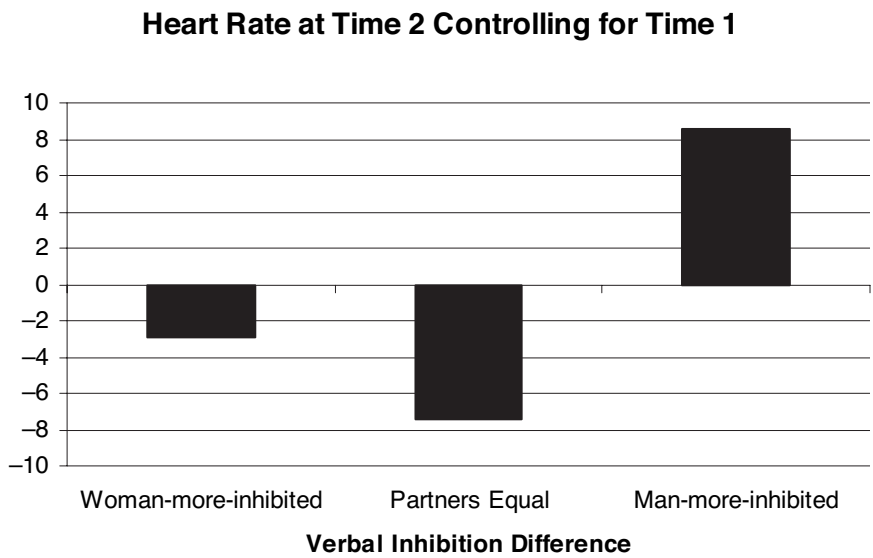
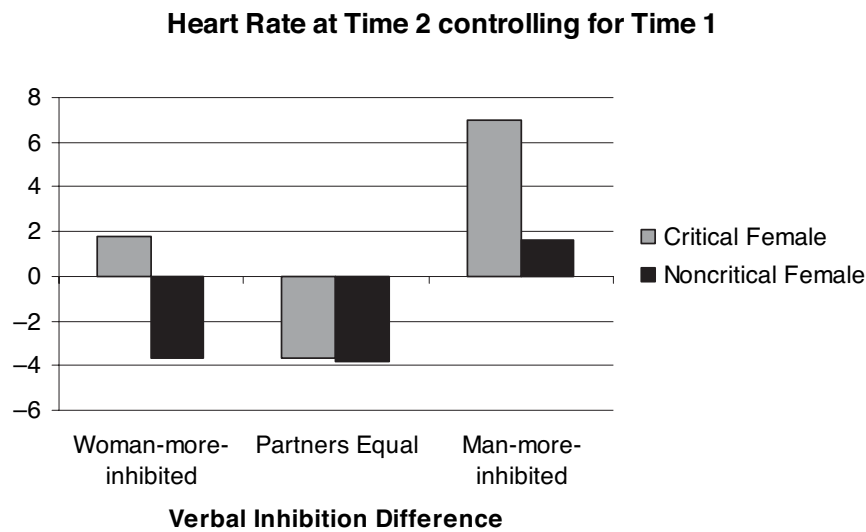


Figure 3 indicates that man-more-inhibited couples in which the female was high in criticalness ($n = 20$) had a higher final heart rate than the other five groups ($n = 84$; $B = 6.44, se = 3.03, t_{50} = 2.13, p < .038$). Conversely, man-more-inhibited couples in which the male was high in criticalness ($n = 20$)

FIGURE 3
Heart rate as a function of verbal inhibition difference and criticalness.



did not differ from any of the other five groups (B = –1.83, se = 3.81, t_{50} = –.50, p < .63). In addition, although the personality combination of the couple predicted intimacy level, intimacy did not mediate the effects of personality on change in heart rate. That is, when intimacy was added to the model at Level 1 (in Equation 7), it did not predict change in heart rate for the man-more-inhibited pairs (B = –.65, se = .99, t_{92} = –.65, p < .51) or precarious couples (B = –.67, se = .99, t_{93} = –.68, p < .49).

Were physiological reactions a relational phenomenon?

It is possible that physiological reactions were due to the responses of women only, as they were the ones who were directly exposed to the stressor. To determine if the man-more-inhibited and precarious couple effects were limited to women only, we repeated our analyses of physiological reactions, once with both men and then with women only.

There was some evidence of a man-more-inhibited effect among men. Men in man-more-inhibited pairs had higher final heart rates than those in partners equal (B = –14.91, se = 5.96, t_{42} = –2.50, p < –.017) and woman-more-inhibited pairs (B = –10.42, se = 5.78, t_{42} = 1.80, p < .08), although the latter effect merely approached significance. In contrast, women in man-more-inhibited pairs had similar final heart rates (controlling for baseline) as partners in equal (B = –.78, se = 2.92, t_{43} = –.27, p < .79) and woman-more-inhibited pairs (B = –2.33, se = 3.20, t_{43} = –.73, p < .47). Results also showed that the precarious couple effect was present for men but not for women. That is, men in precarious couples had significantly higher final heart rates than the other five groups (B = 12.33, se = 5.51, t_{43} = 2.24, p < .031) but women in precarious couples had similar final heart rates (controlling for baseline) to the other five groups in the design (B = –1.34, se = 2.70, t_{44} = –.50, p < .62). Curiously, it appears that women in precarious couples created stress in their husbands but the stressor had little lasting effect on the women themselves.

These results suggest that the physiological changes seen in the couple level analysis were not just a result of the female's stress experience. Since men were not directly exposed to the stressor, disinhibited females must have communicated their distress to their interaction partners, as previous research has shown they are particularly prone to do (Swann & Rentfrow, 2001). Relatively inhibited men appear to have been made quite uncomfortable with such communications, especially if their relatively disinhibited spouse was dispositionally critical. Men in such precarious couples became aroused after speaking with their partners, perhaps by the negative spin women put on their mild distress, perhaps by the fact such men were uncomfortable with the relationship to begin with, or by both.

Clearly, something about the dynamics in precarious couples caused men in such relationships to experience more distress than men in nonprecarious relationships. In addition to demonstrating that our effects were relational (as compared to intrapsychic) in nature, these data also provide evidence that our "stress-induction" procedure was indeed stressful. That is, whereas there were no between-condition differences in heart rates at the outset of

the study, such differences were present when heart rates were measured after the stress-induction procedure.

In short, our findings support the notion that husbands in nonprecarious couples were less stressed after their wife was exposed to a stressor than husbands in precarious couples. These differences could have been due to either simply being in the presence of a particular partner or listening to what the partner had to say. Although we have no record of what was said during the interactions, our measure of relationship quality did not significantly predict heart rate, nor did entering it into our model eliminate our effects. By default, this suggests that the distinctive ways that precarious vs. nonprecarious couples reacted to the stressors (rather than simply being in a dissatisfying relationship) determined their physiological responses.

Discussion

Considerable evidence indicates that people involved in close relationships enjoy superior health. Nevertheless, the causal mechanisms underlying this phenomenon, as well as its boundary conditions, have not yet been established. In the tradition of past studies of friendships (Uchino et al., 1996), we proposed that one way that close relationships may improve health is by helping partners cope with the stressors they encounter in life. We also suggested, however, that this mechanism is compromised within some couples. In particular, based on evidence that couples suffer dissatisfaction when critical women pair with men who are relatively high in verbal inhibition (Swann et al., 2003, 2006), we hypothesized that members of such "precarious couples" would be relatively unsuccessful in managing stress. Just such a pattern of data emerged. That is, when spouses were exposed to a stressor and then provided with an opportunity to interact with one another, men in precarious couples displayed higher heart rates than men in nonprecarious couples. Moreover, this effect emerged even after controlling for related variables, such as attachment style, Extraversion, and Neuroticism. In short, our research suggests that relationships might sometimes foster physical health by facilitating people's efforts to cope with stressors.

By illustrating the critical role that communication styles play in determining people's reactions to stressors, our findings also relate to more general issues such as the conditions under which personality is most apt to shape the outcome of social interactions. Specifically, as Willerman, Turner, and Peterson (1976) argued, personality (in this instance, individual differences in verbal inhibition) may be most evident when people are in situations that are personally challenging. From this vantage point, individual differences in communication styles may matter most when couples are under duress, which is precisely why such individual differences are so profoundly important.

To be sure, one must be cautious in generalizing from the results of such laboratory research. For example, it is unclear how well findings from a study of reactions to a laboratory induced stressor observed in a single slice

of time generalize to reactions to naturally-occurring stressors. Moreover, we focused on heart rate only and our results may not generalize to other indices of physiological arousal. Nevertheless, when considered together with evidence of links between cardiac functioning and life expectancy (e.g., Krantz & Falconer, 1997), our findings are consistent with the idea that some pairings of relationship partners are more apt to ameliorate one another's physical health and increase longevity than are others.

Summary and conclusion

Some of the most compelling accounts of the roots of relationship disharmony focus on communication patterns within the couple. Christensen and Heavey (1990), for example, have identified a "demand–withdrawal" pattern in which one partner pressures the other through demands, criticism, and complaints, and the other partner responds by withdrawing. Similarly, in his analysis of "stonewalling" in marital couples, Gottman and colleagues (e.g., Carrére & Gottman, 1999; Gottman & Krokoff, 1989) argue that the tendency for husbands to withdraw emotionally from conflict situations is a key predictor of divorce.

The research reported here builds upon this work in several ways. Perhaps most important, we provide further evidence that individual differences in verbal inhibition and criticalness offer a means of identifying, in advance, couples who will be susceptible to communication difficulties. In addition, our data bolster Swann et al.'s (2003, 2006) evidence that the personalities of people in relationships do not combine in a simple, additive fashion, as suggested by the personality-similarity hypothesis (Berscheid & Reis, 1998; Klohnen & Mendelsohn, 1998). Rather, people's personalities combine synergistically, such that the qualities of one partner (e.g., criticalness of women or verbal inhibition of men) are problematic only in combination with specific qualities of the other partner (e.g. Robins, Caspi, & Moffitt, 2002). From this vantage point, it is not that some relationship partners are deficient in some way; it is just that some personality characteristics lead to discord in the presence of specific other characteristics. Furthermore, when discord does emerge, it is consequential in that it may impair ability to cope with stressors which could, in turn, threaten physical health.

REFERENCES

Allen, K. M., Blascovich, J., & Tomaka, R. M. (1991). Presence of human friends and pet dogs as moderators of autonomic responses to stress in women. *Journal of Personality and Social Psychology*, *61*, 582–589.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 193–281). New York: McGraw-Hill.

Carli, L. L. (1990). Gender, language, and influence. *Journal of Personality and Social Psychology*, *59*, 941–951.

Carli, L. L., LaFleur, S. J., & Loeber, C. C. (1995). Nonverbal behavior, gender, and influence. *Journal of Personality and Social Psychology*, *68*, 1030–1041.

Carrére, S., & Gottman, J. M. (1999). Predicting divorce among newlyweds from the first three minutes of a marital conflict discussion. *Family Processes*, *38*, 293–301.

Christensen, A., & Heavey, C. L. (1990). Gender and social structure in the demand/withdraw pattern of marital conflict. *Journal of Personality and Social Psychology*, *59*, 73–81.

Coombs, R. H. (1991). Marital status and personal well-being: A literature review. *Family Relations: Interdisciplinary Journal of Applied Family Studies*, *40*, 97–102.

De La Ronde, C., & Swann, W. B. Jr. (1998). Partner verification: Restoring shattered images of our intimates. *Journal of Personality and Social Psychology*, *75*, 374–382.

Glick, P., & Fiske, S. T. (1999). Sexism and other "isms": Interdependence, status, and the ambivalent content of stereotypes. In W. B. Swann, J. H. Langlois, & L. A. Gilbert (Eds.), *Sexism and stereotypes in modern society: The gender science of Janet Taylor Spence* (pp. 193–221). Washington, DC: American Psychological Association.

Goldman, N., Koreman, S., & Weinstein, R. (1995). Marital status and health among the elderly. *Social Science and Medicine*, *40*(12), 1717–1730.

Gottman, J. M. (1998). Psychology and the study of marital processes. *Annual Review of Psychology*, *49*, 169–197.

Gottman, J. M. & Krokoff, L. J. (1989). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology*, *57*, 47–52.

Heavey, C. L., Christensen, A., & Malamuth, N. M. (1995). The longitudinal impact of demand and withdrawal during marital conflict. *Journal of Consulting and Clinical Psychology*, *63*, 797–801.

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, *11*, 213–218.

Horwitz, A. V., White, H. R., & Howell-White, S. (1996). Becoming married and mental health: A longitudinal study of a cohort of young adults. *Journal of Marriage and the Family*, *58*, 895–907.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality theory and research* (pp. 102–138). New York: Guilford Press.

Juster, F. T., & Suzman, R. (1995). An overview of the health and retirement study. *Journal of Human Resources*, *30*, S7–S56.

Kiecolt-Glaser, J. K., & Newton T. (2001). Marriage and health: His and hers. *Psychological Bulletin*, *127*, 472–503.

Klohnen, E. C., & Mendelsohn, G. (1998). Partner selection for personality characteristics: A couple-centered approach. *Personality and Social Psychology Bulletin*, *24*, 268–278.

Krantz, D. S., & Falconer, J. J. (1997). Measurement of cardiovascular response. In S. Cohen, R. C. Kessler, & L. U. Gordon (Eds.), *Measuring stress: A guide for health and social scientists* (pp. 193–212). New York: Oxford University Press.

Marks, N. F., & Lambert, J. D. (1998). Marital status continuity and change among young and midlife adults: Longitudinal effects on psychological well-being. *Journal of Family Issues*, *19*, 652–686.

Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology*, *70*, 79–98.

Prior, P. M., & Hayes, B. C. (2003). The relationship between marital status and health: An empirical investigation of differences in bed occupancy within health and social care facilities in Britain, 1921–1991. *Journal of Family Issues*, *24*(1), 124–148.

Robins, R. W., Caspi, A., & Moffitt, T. (2002). It's not just who you're with, it's who you are: Personality and relationship experiences across multiple relationships. *Journal of Personality*, *70*, 925–964.

Robles, T. F., & Kiecolt-Glaser, J. K. (2003). The physiology of marriage: Pathways to health. *Physiology and Behavior*, *79*, 409–416.

Ross, C. E., Mirowsky, J., & Goldsteen, K. (1990). The impact of the family on health: The decade in review. *Journal of Marriage and the Family*, *52*, 1059–1078.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, *57*, 743–762.

Sattel, J. W. (1976). The inexpressive male: Tragedy or sexual politics? *Social Problems*, *23*, 469–477.

Simon, R. W. (2002). Revisiting the relationships among gender, marital status, and mental health. *American Journal of Sociology*, *107*(4), 1065–1096.

Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.

Simpson, J. A., Rholes, W. S., & Orina, M. M. (2002). Working models of attachment, support giving, and support seeking in a stressful situation. *Personality and Social Psychology Bulletin*, *28*, 598–608.

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, *71*, 899–914.

Snydersmith, M. A., & Cacioppo, J. T. (1992). Parsing complex social factors to determine component effects: I. Autonomic activity and reactivity as a function of human association. *Journal of Social and Clinical Psychology*, *11*, 263–278.

Swann, W. B., Jr., & Angulo, S. (2006). *Female-demand, male-withdraw in precarious couples*. Manuscript in preparation, University of Texas at Austin.

Swann W. B. Jr., De La Ronde, C., & Hixon, J. G. (1994). Authenticity and positivity strivings in marriage and courtship. *Journal of Personality and Social Psychology*, *66*, 857–869.

Swann, W. B., Jr., & Rentfrow, P. J. (2001). Blirtatiousness: Cognitive, behavioral and physiological consequences of rapid responding. *Journal of Personality and Social Psychology*, *81*, 1160–1175.

Swann, W. B., Jr., Rentfrow, P. J., & Gosling, S. G. (2003). The precarious couple effect: Verbally inhibited men + critical, disinhibited women = bad chemistry. *Journal of Personality and Social Psychology*, *86*, 1095–1106.

Swann, W. B., Jr., Sellers, J. G., & McClarty, K. L. (2006). Tempting today, troubling tomorrow: The roots of the precarious couple effect? *Personality and Social Psychology Bulletin*, *32*, 93–103.

Uchino, B. N., Cacioppo, J. T., & Kiecolt-Glaser, J. K. (1996). The relationship between social support and physiological processes: A review with emphasis on underlying mechanisms and implications for health. *Psychological Bulletin*, *19*, 488–531.

Willerman, L., Turner, R. G., & Peterson, M. (1976). A comparison of the predictive validity of typical and maximal personality measures. *Journal of Research in Personality*, *10*, 482–492.