INVESTIGATING HOW EXTERNAL STRESS DOES (AND DOES NOT) IMPACT MARITAL FUNCTIONING AND OUTCOMES: MECHANISMS OF INFLUENCE AND PROTECTIVE COUPLE PROCESSES

by

ALLEN WEAS BARTON

ABSTRACT

Research on marriage possesses a lengthy history aimed at understanding the dynamics contributing to the resiliency or deterioration of these unions. Such efforts have largely entailed two distinct routes, one focused on interpersonal behaviors and cognitions and the other on broader contextual factors. The current collection of studies contributes to the growing scholarship integrating these two routes, thereby providing a more comprehensive understanding of marriage in context. At present, three studies investigated how external stressors impact marital functioning and outcomes as well as couple processes that condition how and when this effect appears. Study 1 explored how levels of financial strain and neighborhood disorder influence trajectories of marital warmth and hostility among a sample of 280 African American newlyweds. Results of latent growth curve and other structural equation models found greater external stress to be associated with lower initial levels of perceived partner warmth and higher perceived partner hostility. Additionally, external stress was marginally associated with steeper declines in perceptions of partner warmth over time. Study 2 tested mediating and moderating roles of demand/withdraw communication and perceived partner gratitude, respectively, in the association between financial distress and marital outcomes. Across a sample of 468 married

individuals, multiple mediation models found demand/withdraw to consistently link financial distress to multiple dimensions of marital quality. Moderated mediation models revealed main effects for perceived partner gratitude on nearly all marital outcomes as well as moderation effects that reduced the impact of negative communication on certain aspects of marital quality. Study 3 explored couple social integration, its determinants, and its direct and protective effects on marital satisfaction among 492 married individuals. Results from latent interaction structural equation modeling indicated couple social integration to predict greater marital satisfaction and offset declines in marital satisfaction associated with certain contextual stressors. Collectively, findings offer novel insight into how the surrounding context impacts a marital union as well as less-identified couple processes that can protect couples from the deleterious effect of external stressors. Results aide in better understanding marital dynamics and also contribute germane information for efforts to assist the maintenance and stability of marriages across different social contexts.

INDEX WORDS: Marriage, Protective processes, Gratitude, Couple social integration, Stress Spillover, Demand/withdraw, Marital trajectories, Marital quality

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DEDICATION

To Iulia,

my wife, my helpmeet, my best friend,

with whom I grow in understanding how

we love because He first loved us

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This dissertation, while bearing my name alone, more accurately reflects the cumulative effort of many individuals that have been influential in my ability to write this piece.

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To my wife, Iulia. This piece is dedicated to you, given your covenantal dedication and love to me. I love being married to you. Being your husband is the best title I will ever have.

To my son, Julian. Thank you for crawling to me and pulling up on my leg whenever I tried to work on this at home with you awake. Sunt tatăl tău şi te iubesc.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Introduction

Why do some marriages flourish, some flounder, and others fail? This question has centrally informed decades of marital research, yet despite such time and primacy, proven exceedingly difficult to unravel. Understanding and explaining the variability observed in marital quality and stability remains a complex puzzle researchers are, in essence, still trying to piece together. The present research aims to contribute to this effort by investigating how contextual stressors shape marital functioning as well as how interpersonal processes protectively buffer the associations between external stress and negative marital outcomes.

Historically, research efforts devoted to the study of marriage have largely entailed two separate routes (see Neff, 2012). One route, often reflected in psychological traditions (e.g., Gottman, 1994b), has involved a micro-level, or intra-dyadic, focus. Here, efforts devote attention to particular individual cognitions, behaviors, and dyadic interactions and their subsequent associations with marital outcomes. Topics of research interest in this area have included attributions (Bradbury & Fincham, 1990), commitment (Stanley, Rhoades, & Whitton, 2010), and couple communication patterns (Caughlin & Huston, 2002). A second route, often reflected in sociological traditions (e.g., Heaton, 2002), concerns a macro-level, or inter-dyadic, focus. At this level, efforts focus on broad personal, demographic, and situational factors – such as socioeconomic status (Conger, Conger, & Martin, 2010), race (Bryant et al., 2010), and family

of origin experiences like parental divorce (Amato & Booth, 2001) – and their ability to account for variance in marital outcomes.

Integrating these two routes offers a promising, yet underdeveloped, domain in marital scholarship (Bradbury & Karney, 2004). Persistent inattention to understanding how context (i.e., macro-level) shapes internal relationship processes (i.e., micro-level) and subsequent marital outcomes produces an incomplete depiction of marriage (Story & Bradbury, 2004). Accordingly, understanding relationship outcomes requires the need to "move beyond focusing exclusively on couple behavioral processes to identifying the multiple settings and systems through which risk factors can arise" (Rauer, Karney, Garvan, & Hou, 2008, p. 1123). Building on this, the current work aims to advance the field of marital scholarship through three distinct studies that address the interplay between contextual risk factors, marital adaptive processes, and relationship outcomes. Specific attention is given to elucidating two specific facets: first, how external contextual factors impact marital adaptive processes and outcomes, and second, whether particular, less-researched adaptive processes can reduce the negative marital impacts had by contextual risk factors. In the remainder of the introduction, the theoretical framework guiding and connecting these studies is presented, followed by sections addressing the contributions of the current effort along with descriptions and objectives of each study. Remarks on the broader societal importance of this current research conclude the chapter.

Theoretical Framework

The Vulnerability-Stress-Adaptation (VSA) model of relationship development (Karney & Bradbury, 1995) provides the theoretical underpinning for this collection of studies. Developed following a review of 115 longitudinal studies on marriage, the VSA model offers a concise framework of the multiple domains influencing marital outcomes. As suggested by its

name, the VSA model emphasizes three general categories – enduring vulnerabilities, stressful events, and adaptive processes – that collectively inform marital outcomes (see Figure 1.1). In the model, enduring vulnerabilities refer to stable individual traits, demographic factors, and previous experiences, including (among others) educational attainment, substance abuse, depression, and parental divorce (see Bradbury, Fincham, & Beach, 2000; Rauer et al., 2008). Stressful events encompass taxing, resource-depleting circumstances of both acute and chronic duration as well as minor (e.g., daily hassles at work) to major (e.g., severe illness) intensity (see Randall & Bodenmann, 2009). Adaptive processes reflect cognitive and behavioral aspects of couple interaction, such as communication patterns and spousal support (see Bradbury et al., 2000; Lawrence et al., 2008).

[INSERT FIGURE 1.1 HERE]

In addition to highlighting central categories shaping marital quality, the model also depicts the pathways by which these three factors operate. As shown in Figure 1.1, both enduring vulnerabilities and stressful events act through adaptive processes to impact marital quality. Phrased differently, marital outcomes are primarily governed by adaptive processes, but such processes are themselves reciprocally influenced by enduring vulnerabilities and stressful life events. Thus, understanding (and potentially altering) the associations between stressful events and marital outcomes must take into account how these stressful events shape or change the adaptive processes occurring within the dyad. Further, if the adaptive processes that have weakened as a result of stressful contexts can be strengthened, the negative association between stressful contexts and marital quality could itself be reduced.

Since its conceptualization, a variety of studies have supported the tenets of this model (e.g., Karney, Story, & Bradbury, 2005; Neff & Karney, 2009). In one of the most

comprehensive assessments of this model, Lavner and Bradbury (2010) compared five classes of marital satisfaction trajectories on various dimensions of the VSA model. A consistent between-group pattern appeared on mean levels of these variables, with those class trajectories characterized by lower initial levels and steeper declines possessing less favorable scores on all dimensions. Specifically, this included reporting more problematic personality traits of neuroticism, anger proneness, and low self-esteem; higher chronic stress, aggression, and negative affect; and lower positive affect. Findings similar in nature have appeared elsewhere, with marital satisfaction trajectories reliably differing based on husbands' and wives' starting levels of relationship problems, verbal aggression, negative relationship attributions, acute stress, and self-esteem (Lavner, Bradbury, & Karney, 2012).

Since its conceptualization, other models that describe marital phenomena in a fashion strongly similar to the VSA have been articulated and empirically supported. The Family Stress Model (Conger, Rueter, & Elder, 1999), as one example, depicts the impact of economic hardship on marital outcomes, emphasizing how objective and subjective matters of financial hardship influence marital outcomes through individual (e.g., elevated emotional distress) and interpersonal (e.g., increased marital conflict) factors. Additionally, the Stress-Divorce model (Bodenmann, 2000; Randall & Bodenmann, 2009) depicts a pathway to divorce that involves chronic stress, its subsequent detrimental impact on individual and couple functioning, and concludes with a cascading process of negative marital outcomes. Overall, robust support appears for the VSA model with respect to both the constructs described in the model and their nature of association.

Contribution to the Literature

> As a research area develops and matures, focus eventually shifts away from demonstrating the existence of an effect toward understanding the mechanism(s) by which an effect operates and establishing its boundary conditions or contingencies. Answering such questions of "how" and "when" result in a deeper understanding of the phenomenon or process under investigation, and gives insights into how that understanding can be applied. (Hayes, 2012, p. 1)

Applying this quote to the present study, a well-identified link exists between higher levels of external stress and lower marital outcomes (i.e., "the existence of an effect"). However, mechanisms and contingencies (i.e., "how" and "when") with this association continue to warrant attention. As Bodenmann and colleagues (2010) noted, "important questions remain regarding the conditions under which it [the link between stress and negative marital interactions] is most likely to arise" (p. 410). The present effort directly addresses such issues of 'how' and 'when', thereby offering a better understanding of how external stress does (and does not) influence marital well-being, expanding the literature concerning the VSA model specifically and marital scholarship in general.

As a first main area of contribution, little previous research has longitudinally examined whether external stress accounts for change in marital adaptive processes. Multiple prospective studies have explored the longitudinal association between stress and couple functioning (e.g., Bodenmann & Cina, 2005; Conger et al., 1999; Neff & Karney, 2004); however, few studies have analyzed whether levels of stress predict actual rates of change (and not merely later levels of martial functioning based on earlier reports of stress). Only one study was identified that tested levels of chronic stress as predicting rates of change in marital quality, finding higher

stress to be associated with more rapid declines in marital satisfaction (Karney et al., 2005). However, the study did not consider how stress impacted rates of change in the more proximal adaptive processes of couples. Accordingly, Study 1 aims to address these gaps by examining whether external stress accounts for any identified variability in rates of change of marital adaptive processes.

Also expanding the VSA model, greater insight is given to the link between stressful events and adaptive processes (path A in Figure 1.1). In their original description of this path, the authors (based on the available research) primarily emphasized behavioral linkages from stress onto adaptive processes, while mentioning "variations in the stressors spouses experience may also affect other (non-behavioral) aspects of adaptation, such as the capacity of spouse to provide social support and the attributions that spouses make for partners' behaviors" (Karney & Bradbury, 1995, p. 23). Since the formulation of the VSA, marital scholarship has begun to identify additional, non-behavioral mechanisms (e.g., perceptual, physiological, emotional) that explain how stress impacts couple process (see Neff, 2012; Repetti, Wang, & Saxbe, 2009). However, few studies to date have considered multiple mechanisms simultaneously or compared them to determine the relative strength of one mechanism versus another, which Study 1 also considers.

Another main area for contribution, exhibited in Studies 2 and 3, entails expanding the understanding of if and how specific, lesser-studied adaptive processes alter the link between external stress and marital outcomes. Adaptive processes, as originally described, encompass any number of behaviors or cognitions related to "the ways that couples treat and respond to each other" (Karney & Bradbury, 1995, p. 22). Thus far, most research on behavioral adaptive processes in marriage has concentrated on conflict-related themes such as negative

communication and problem-solving (see Fincham, Stanley, & Beach, 2007). However, such an exclusive focus may omit a distinct set of other marital constructs that heavily inform the variability existing in marital outcomes (Fincham et al.). As Bradbury and Karney (2004) note,

> 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. (p. 865)

In response to the hegemonic focus on conflict and negative communication, various researchers have called for increased attention to marital processes and internal dynamics that create a supportive, safe, and secure marital environment (e.g., Fincham & Beach, 2010). Some of the previously-highlighted processes and constructs within this area include forgiveness, positive affect, and spousal support (Bradbury & Karney, 2004; Fincham & Beach, 2010). The nomenclature for such adaptive processes varies, such as "transformative processes" (Fincham et al., 2007) or "maintenance strategies" (Canary, Stafford, & Semic, 2002), though all converge in uniformly describing activities that repair, sustain, and strengthen the relationship.

The present work continues to expand this area by examining two additional constructs: perceived partner gratitude (Study 2) and couple social integration (Study 3). Both constructs broadly possess established areas of prior research, yet few studies have employed them as presently conceptualized. For instance, gratitude has largely been assessed outside of romantic relationships, either as an emotion arising following help from others or as a general disposition or life orientation (see A. Wood, Froh, & Geraghty, 2010). When assessed within romantic relationships, attention has been devoted to personal levels of gratitude *for* one's partner (i.e., being grateful; Algoe, Gable, & Maisel, 2010) and not how much gratitude the individual

perceives *from* their partner (i.e., perceived gratitude). Secondly, social integration possesses a voluminous literature at the level of the individual, yet far less assessment has concerned matters of social integration at the level of the couple, namely how well integrated a married couple is with its surrounding community.

Beyond new interpersonal processes, the present collection of studies also aims to further the literature by more clearly depicting how certain adaptive processes function within a relationship. All adaptive processes were originally depicted in the VSA model as mediating mechanisms linking external stress to marital outcomes. Such a pathway appears strongly supported when considering issues such as conflict and poor communication (Falconier & Epstein, 2011a). However, not all adaptive processes may function in the same way.

In particular, interpersonal processes that are more protective and facilitate relationship stability and strengthening may operate in a distinct manner from more maladaptive and destructive processes (Bradbury & Karney, 2004). To illustrate, hostile behaviors have been noted as mediating the effect of financial strain on marital satisfaction, yet warmth behaviors do not consistently appear to operate in this fashion as well (see Falconier & Epstein, 2011a). Additional discussion around specific couple processes reference their 'buffering' or 'controlling' function, such that they reduce the negative impact had by other variables on marital outcomes (Bradbury & Karney, 2004; Fincham et al., 2007). Thus, rather than acting as a pathway by which external stress impacts marital outcomes, certain adaptive processes may more accurately be depicted as a third variable that regulates how much the effect of one variable (i.e., marital quality) changes as a function of a second variable (Fincham et al., 2007). Thus, matters of moderation may be more applicable in describing how certain adaptive processes

function within a marriage. See Figure 1.2 offers a summary of the expanded VSA model under consideration in present study.

[INSERT FIGURE 1.2 HERE]

Overview of Studies

The three studies are integrated through their mutual investigation of the associations between external stress, marital adaptive processes, and marital outcomes. All studies include attention to the direct effects of external stress on marital quality as well as contingencies for the effect of external stress on marital outcomes. In addition, each study offers unique areas of focus and contributes to the literature relating to stress and marriage, adaptive processes, and their interplay.

The first study, *External stressors and trajectories of marital warmth and hostility among African American newlyweds*, longitudinally examines the independent and joint impact of financial strain and perceived neighborhood disorder on trajectories (i.e., initial levels and rates of change) of marital functioning. Using a sample of 280 African American newlyweds followed over the first three years of marriage, analyses maintained within-person change in reported levels of warmth and hostility, thereby permitting a more direct assessment of actual change induced by these external stressors. In addition, the study tests different mechanisms of influence (i.e., behaviors and perceptions), providing greater insight into how stress external to the relationship shapes experiences within it.

The second study, *Mitigating the negative associations between financial distress, demand/withdraw, and marital outcomes – Can perceived gratitude from spouse make a difference?,* explores mediating and moderating effects for the impact of financial distress on marital quality. From a sample of 468 married individuals, analyses first used multiple

mediation models to test demand/withdraw communication patterns (both female-initiated and male-initiated) as mechanisms linking financial distress to various indicators of marital quality. This pathway has been previously identified in single mediation models with respect to marital dissatisfaction (Falconier & Epstein, 2011b), but less in relation to additional marital outcomes or simultaneously considering gender-specific demand/withdraw. Analyses then test a moderated mediation model to explore the direct, joint, and conditional indirect effects of perceived partner gratitude on the associations between financial distress, demand/withdraw, and marital outcomes.

The third study, *With a little help from our friends: Couple social integration in marriage*, investigates determinants of couples social integration as well as well as its impact on marital satisfaction. Across a sample of 492 married individuals, a first set of analyses explores how a set of demographic, relationship, and contextual factors predict levels of couple social integration. Secondly, a latent interaction structural equation model investigates how social integration directly impacts marital satisfaction as well as the potential of couple social integration to buffer the negative effects on marital satisfaction from certain contextual stressors.

Conclusion

Marital unions are not impervious to the external contexts in which they reside, and any holistic understanding of marital quality necessitates attention to both the internal and external factors impinging on the union. Given the centrality of marriage to the individual lives of spouses, investigations into marriage are not purely a theoretical exercise. Marital satisfaction represents the strongest contributor to overall life satisfaction (Fleeson, 2004), and stable, satisfying unions are positively associated with the well-being of individuals, families, and communities (Wilcox et al., 2011).

With the growing disparity in marital entry, quality, and stability among classes (Cherlin, 2004; Wilcox, 2009, 2010), understanding how to assist unions among lower- and middle-class segments of society reflects a pressing matter of concern. Though not a panacea, understanding how external stress – which appears more concentrated among these populations and more heavily influences their relationship satisfaction (Maisel & Karney, 2012) – impacts marital well-being offers timely and relevant insight for this endeavor. Marriages will never be immune to individual and environmental 'contagions', but by better understanding their influence as well as how couples can protect themselves from any deleterious impact, these unions can have a better 'shot' for maintaining stable, satisfying unions that are desired by individuals across all classes (Karney & Bradbury, 2005).

The remainder of the document is arranged in the following sections. The ensuing three chapters represent separate manuscripts of the three aforementioned studies. Each chapter includes a review of the literature, methods, results, and discussion pertaining to the respective study, with tables and figures located at the end of each respective chapter. A final chapter provides an integrative summary of the three studies as well as generalized implications and future directions for research. A concluding appendix lists all the measures and specific items utilized in the studies. Formatting, numbering of tables and figures, and stylistic considerations are in accordance with guidelines established by APA (6th edition) and the Graduate School at the University of Georgia.

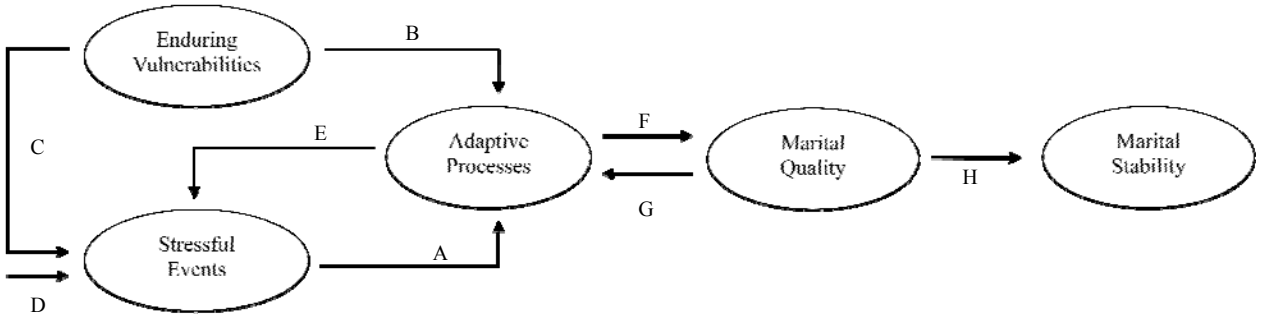

Figure 1.1. Vulnerability-Stress-Adaptation model of marriage.

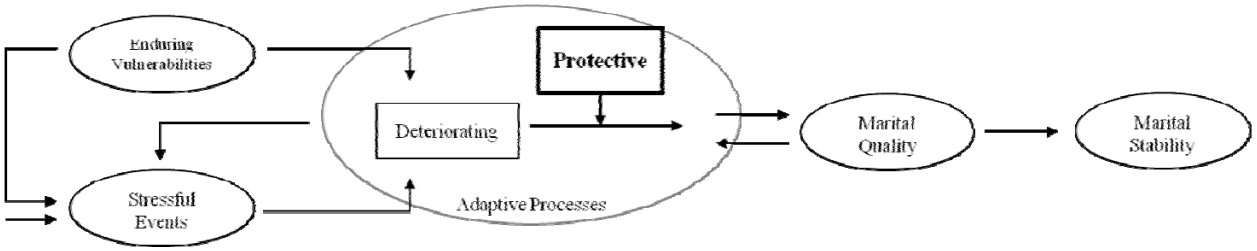

Figure 1.2. Expanded VSA model.

CHAPTER 2

EXTERNAL STRESS AND TRAJECTORIES OF MARITAL WARMTH AND HOSTILITY AMONG AFRICAN AMERICAN NEWLYWEDS [1]

[1] Barton, A. W., & Bryant, C. M. To be submitted to *Journal of Marriage and Family*.

Abstract

The study of external stress and marriage has recently received increased attention, though few studies have longitudinally assessed whether such stressors account for variability in trajectories of marital functioning. Using a sample of 280 African American couples followed over the first three years of marriage, the present study explored how levels of financial strain and neighborhood disorder impact levels of reported spousal warmth and hostility over time. Univariate latent growth curves revealed a mean decline in warmth and mean increase in hostility, with variability between individuals in rates of warmth decline. Conditional interlocking growth curves revealed that levels of external stress significantly predicted lower initial levels of warmth and, marginally, steeper rates of decline in warmth over time. Attention is also devoted to elucidating mechanisms through which external stress impacts marriage, with findings that suggest stressors more noticeably shape individuals' perception of the behavior of their spouse rather than altering individuals' own behavior.

Introduction

The internal dynamics that comprise a marriage are not immune to the external context in which spouses and their union reside. Beginning with pioneering work by Hill (1949) and continuing in the decades since, a host of studies document the adverse impact external stress can have on marital functioning and outcomes. Such a spillover effect from external stress has been shown to occur at both the immediate, daily level (e.g., Ledermann, Bodenmann, Rudaz, & Bradbury, 2010; Repetti, 1989) as well as the prolonged, long-term level (e.g., Bodenmann & Cina, 2005; Conger et al., 1999).

Despite voluminous literature linking stress to marital behaviors and outcomes, far less research has explored whether external stressors account for actual rates of change in marriage. Namely, are the shifts over time – whether increases or decreases – that characterize married life partly attributable to levels of external stress? Previous writing has suggested an "eroding" effect of stress on marital quality (Bodenmann, Ledermann, & Bradbury, 2007), though infrequently have analyses tested for this effect. Further, the mechanisms through which external stress impacts marital outcomes – while having begun to receive increased attention (see Bodenmann & Cina, 2005; Neff & Karney, 2004; Repetti et al., 2009) – still merit additional understanding. In essence, *that* external stress impacts a marriage is well-documented, but less is known about *how* this impact occurs.

To address these shortcomings, the present study longitudinally examines the independent and joint impact on marital functioning of two common chronic external stressors, namely financial strain and neighborhood disorder. Analyses maintained within-person change over time, thereby more directly assessing actual rates of change accounted for by these stressors. In addition, the study tests different mechanisms of influence to provide greater insight

into how stress external to the relationship shapes experiences within it. This comparison specifically explores external chronic stress in relation to shaping individuals' own behaviors or their perceptions of their spouses' behaviors.

Literature Review

Theoretical Framework and Mechanisms of Influence

All marriages are comprised of and simultaneously impacted by factors at the micro-level (i.e., interpersonal transactions between spouses) and the macro-level (i.e., external events and circumstances). The Vulnerability-Stress-Adaptation (VSA) model of relationship development (Karney & Bradbury, 1995) offers a useful framework illustrating the multiple domains that impact marital outcomes. Specifically, the model suggests that marital quality and stability can be accounted for based on the interplay between three different factors – individual vulnerabilities (e.g., personality, family of origin experiences), stressful life events (e.g., job strain, job loss), and adaptive processes (e.g., problem-solving, attribution-making). Causally, the VSA model depicts external stress and individual vulnerabilities contributing to marital satisfaction and stability through their impact on adaptive processes. The present study focuses on one particular aspect of the general VSA model, namely the longitudinal association between stressful life events (chronic financial strain and neighborhood disorder) and adaptive processes (warmth and hostile behaviors).

Over the last decade, increased research has been devoted to identifying mechanisms for this association between stressful life events and marital processes. In her synthesis of this literature, Neff (2012) outlines two main routes of influence. First, external stressors are seen to influence marriage by increasing the frequency of negative relationship events (e.g., partner withdrawal; Story & Repetti, 2006) and reducing time the couple has for activities that serve to

promote the relationship (e.g., involvement in leisure activities; Crouter, Perry-Jenkins, Huston, & Crawford, 1989). As a second route, external stressors are seen to influence marriage by negatively altering spouses' cognitive appraisals as well as cognitive capacity to handle relationship events in a beneficial manner. Illustrative of this, spouses are more likely to blame their partners for behavioral transgressions when experiencing above-average levels of stress (Neff & Karney, 2004). Further, wives (and husbands, marginally) under greater stress report decreased cognitive capacity to separate daily stressors from overall relationship perceptions (Neff & Karney, 2009).

Additional summaries of how external stress influences marriages and family life appear by Repetti, Wang, and Saxbe (2009) and Bodenmann and Cina (2005). Based on a series of naturalistic, short-term studies, Repetti and colleagues (2009) suggest stressors experienced outside the home subsequently influence family life by impacting an individual's mood, physiology, perceptions, and social behavior. Bodenmann and Cina (2005), in their longitudinal model, emphasize that the link between chronic external stress and marital satisfaction occurs through four mediating processes: decreasing time partners spend together, lowering the quality of communication and interaction, increasing risk of psychological and physical problems, and increasing the likelihood of problematic personality traits being expressed.

In light of the various research findings and models, Figure 2.1 offers an integrative summary of pathways through which stress affects a marriage. Building upon work by Neff (2012) and her two-route structure, each route (reclassified as *Interpersonal* and *Intrapersonal*) in the figure contains greater elaboration of the different mechanisms operating within these pathways. An empirically-supported example from research is contained with each mechanism. At present, little work has simultaneously compared multiple pathways, which the current study

intends to do by examining two such mechanisms outlined in the figure, that of perceptions and behaviors.

[INSERT FIGURE 2.1 HERE]

Chronic External Stressors and Marriage

By definition, chronic external stressors refer to stable stressors that originate from issues outside of the relationship (Randall & Bodenmann, 2009). The present study focused on the spillover effect of two specific chronic external stressors, namely financial strain and neighborhood disorder. Guiding the selection of these two factors were their frequent appearance in discussions of external stressors as well as higher prevalence rates within African American populations compared to national averages (Lincoln & Chae, 2010; McLoyd, Hill, & Dodge, 2005).

Financial strain represents a frequently assessed external stressor in marital research, with the collection of findings related to the Family Stress Model (Conger & Elder, 1994) offering some of the most robust illustrations on the topic. Studies employing this framework have linked greater financial strain to increased levels of marital distress (Conger et al.), lower marital satisfaction (Lincoln & Chae, 2010), and lower general assessments of marital quality (Cutrona et al., 2003; Kinnunen & Feldt, 2004). These associations have appeared across many different ethnicities (see Conger et al., 2010), including studies specifically involving African American samples (Cutrona et al., 2003; Lincoln & Chae, 2010). While this association has been noted with longitudinal data (e.g., Conger & Conger, 2002; Conger et al., 1999), such analyses have been limited by relying on group-level mean differences and not maintaining within-person change over time. Concerning the second external stressor, greater neighborhood economic disadvantage has been found to be associated with less warmth (but not hostility) between

spouses and, rather unexpectedly, higher marital quality (Cutrona et al., 2003). Additionally, perceived community disorder has been associated with lower marital satisfaction (Bryant & Wickrama, 2005) as well as greater levels of hostility among husbands (Wickrama, Bryant, & Wickrama, 2010).

Despite these findings, the degree to which external stressors account for actual change in marital patterns and outcomes remains a lingering question. Cross-sectional studies and longitudinal studies that fail to preserve intra-individual continuity are both incapable of assessing this issue. If external stressors truly "erode" relationship quality, then rates of change in indicators of relationship quality should be, in part, explained by the presence of these external stressors.

A study by Karney and colleagues (2005) offers one of the few previous examples of research examining stress as a predictor of rates of change in marital quality. Following a sample of newlywed couples over a period of four years, chronic stress significantly predicted rates of change in marital satisfaction, with higher stress associated with steeper declines in marital satisfaction. Higher stress was also significantly associated with lower initial levels of marital satisfaction. Along a somewhat similar vein, Lavner and Bradbury (2010) found levels of chronic stress reliably varied between different classes of marital satisfaction trajectories. Specifically, trajectory classes characterized by lower initial levels and steeper declines in satisfaction reported higher amounts of chronic stress at the first assessment period. However, this study did not use external stress to predict growth model parameters (i.e., intercept and slope), but only introduced external stress in subsequent categorical analyses following the identification of trajectory classes via group-based mixed modeling.

As an additional point for consideration, both aforementioned studies explored trajectories in marital satisfaction, bypassing how stress influences the more proximal and mediating adaptive processes within couples. As outlined in the VSA model, such adaptive processes function to connect external stressors to marital satisfaction. Thus, understanding how stress links to marital satisfaction first requires understanding its linkage to adaptive processes. Further, analyses in both studies tested husband and wife models separately and also measured chronic stress via an aggregate composite of life stress across multiple domains, with no attention given to the predictive nature of specific stressors. The present study addresses these limitations in previous research by uniquely exploring how specific external stressors are associated with trajectories in marital adaptive processes while accounting for the interdependence between partners.

Present Study

Four primary areas of inquiry guided the present study. First, the study aimed to identify mean trajectories for reports of spousal warmth and hostility among African American newlyweds. It was hypothesized that warmth behaviors would exhibit an average decline during the newlywed years and hostile behaviors an average increase, in line with previous work (James & Amato, 2012). A related question within this first area of inquiry – and one that has received far less attention – concerned the degree of variability between individuals in rates of change. In effect, do similar rates of change appear across all spouses, or do some individuals report more precipitous rates of change than others?

Second, the study explored whether financial strain and neighborhood disorder independently accounted for any observed variability in initial levels or rates of change of marital warmth and hostility. It was hypothesized that financial strain and neighborhood

disorder would each predict lower initial levels of marital warmth and higher initial levels of hostility, given the associations identified in prior research (e.g., Falconier & Epstein, 2011a; Wickrama et al., 2010). In a similar fashion, based on the proposed eroding quality of stress, it was hypothesized that higher levels of each stressor would be associated with steeper rates of change.

Third, the study sought to examine the impact of both stressors jointly. While earlier work suggested a plateau effect for stress pile-up (Bolger, DeLongis, Kessler, & Schilling, 1989), recent research has highlighted a exacerbated cumulative effect of risk, with the impact of one stressor intensified by higher levels of others (Rauer et al., 2008). Accordingly, it was hypothesized that the combination of financial and neighborhood stressors would have a greater effect compared to each stressor individually.

Last, the present study evaluated two different mechanisms of influence for the link between external stress and marital functioning. By nature of assessment, the study was able to test whether chronic stress influenced marital functioning through individuals' own behavior and/or how individuals appraise and perceive their spouses' behavior. Behavioral assessment was obtained from partner reports, as self-report and observational data were not available. As this is one of the first studies, to author knowledge, comparing between mechanisms, no a priori hypotheses are stated.

Method

Participants and Procedures

The sample for the present study consisted of 280 newlywed African American couples residing in a southeastern US state. Study participants were identified and recruited through public marriage license records. Letters were mailed to couples inviting them to participate in

the study. In order to be included in the study, couples needed to be African American and at least 20 years old. Upon consent, a team of two interviewers went to participants' homes during their first year of marriage and separately conducted interviews with each spouse. Though most questions were comprised of standard self-report measures, interview-like reading of questions was performed in order to remove any literacy issues as well as better personalize questions (e.g., inserting the participant's name or their spouse's name into the wording of particular questions). All interviewers were African American, with interviews lasting between 1-2 hours on average. Subsequent interviews of similar format were conducted annually with couples over the next two years of marriage.

A total of 700 hundred couples participated in the larger research project. The subsample of 280 couples was selected as, at the time of the study, these couples had completed all three interview phases. Attrition analyses using logistic regression (1 = *included in study*) were conducted to determine if any significant baseline differences appeared between couples included in the present study and those not included. Overall, comparisons between included and excluded individuals revealed very few differences with year 1 responses. The two groups did not differ with regard to wives' reports of husband warmth, financial strain, or perceived neighborhood disorder or concerning husbands' reports of wife warmth, hostility, or financial strain. Those included in the study also did not differ from those excluded with respect to marital satisfaction, desire for their marriage to succeed, or various demographic characteristics (e.g., age, income, remarriage). For differences that did appear, wives included in the present study reported lower levels of husband hostility and had higher levels of education then wives not included. Husbands in the present study differed from husbands not included in only one area, with those in the sample reporting lower levels of neighborhood disorder at year 1.

Among the final sample of 280 couples, husband median age was 34 (range 21–79) and wife median age was 31 (range 20–71). Highest level of education completed spanned from grade school to master's degree, with 57% of husbands and 75% of wives having completed some schooling past high school. Regarding year 1 personal income levels, 47% of husbands and 63% of wives reported annual personal incomes of less than $30,000, 35% of husbands and 27% of wives reported personal incomes between $30,000-50,000, and 19% of husbands and 10% of wives reported personal incomes greater than $50,000.

Measures

Marital warmth and hostility. Marital warmth and hostility were measured using items from the Behavioral Affect Ratings scale (Conger, 1989), which asks participants to report the frequency of various warmth and hostility behaviors exhibited by their spouse. The 5-item assessment of marital warmth (4-point Likert scale) asked individuals how often their spouse did things such as "tell you he/she loves you" and "listen carefully to your point of view" (α = .66, .80, .77 for wife warmth [husband report]; α = .75, .81, .82 for husband warmth [wife report] at years 1, 2, and 3, respectively). The 6-item assessment of marital hostility (4-point Likert scale) asked spouses to report on items such as how often their spouse "insults you" and "gets angry at you" (α = .77, .79, .76 for wife hostility [husband report]; α = .79, .77, .87 for husband hostility [wife report]). Three physical hostility items included in the original scale were not included in the measure given extreme skewness due to low occurrence and little variability in response from participants. Mean scores at each year were computed from valid cases. Higher values reflected greater levels of each construct.

Financial strain. Financial strain assessed the degree to which spouses reported concern regarding their ability to pay for items such as utilities, food, and medical care (6-items; adapted

from Conger & Elder, 1994). Individuals reported their degree of agreement (5-point Likert scale) with statements such as "my spouse and I have enough money to pay our bills" and "we have enough money to afford the kind of food we need" (α = .76, .80, .85 for husbands; α = .80, .81, .83 for wives). Mean scores at each year were computed from valid cases, with higher scores reflecting greater financial strain. To represent chronic level of financial strain experienced, a latent factor consisting of means levels at each year was created. Factor loadings were constrained to be equal so that each time point would equally contribute to the overall total level of financial strain associated with each person. Within-person correlations for the three waves ranged from .48 to .66 ($p < .01$) for husbands and .40 to .51 ($p < .01$) for wives.

Neighborhood Disorder. Perceived neighborhood disorder was assessed using 11 items from Ross and Mirowsky's (1999) neighborhood disorder scale. The index assessed levels of agreement (5-point Likert scale) on indicators of physical signs (e.g., graffiti, vandalism, and abandoned buildings) as well as social signs (e.g., crime, loitering, and using drugs) of the breakdown of social order. Items reflective of physical and social order or cohesion (e.g., people taking care of their living units, watching out for each other) were coded such that higher scores reflected greater neighborhood disorder (α =.89, .91, .90 for husbands; α = .90, .92, .92 for wives). Mean scores at each year were computed from valid cases. Similar to financial strain, a latent factor for chronic neighborhood disorder was created and factor loadings constrained to be equal. Within-person correlations for the three waves ranged from .46 to .54 ($p < .01$) for husbands and .51 to .59 ($p < .01$) for wives.

Plan of Analysis

Data were analyzed using structural equation modeling (SEM) involving univariate and dyadic (or interlocking) latent growth curves (LGCs). This analytic approach is advantageous

for several reasons. First, LGCs preserve within-subject continuity by identifying a unique slope specific to each person from the first-order factors (e.g., repeated measures of marital behaviors over time). In addition, second order factors (e.g., external stress) can be incorporated in the model to predict the latent growth curve constructs (i.e., initial status and slope) derived from the first-order factors. SEM also permits the dyadic nature of the data to be taken into account by correlating parameters from different LGCs. Although the advantages described thus far largely pertain to both SEM and multi-level modeling (MLM) techniques, SEM techniques also advantageously permit a greater amount of model extensions as well as modeling more complex (i.e., heteroscedastic) error terms (see Wendorf, 2002).

Analyses were conducted in three phases. First, four univariate growth curves were modeled to determine the initial status and rate of change associated with reports of marital warmth and hostility. Initial status (or synonymously, intercept) in all models was set to reflect the first year of marriage (i.e., year 1). Following LISREL notation, this level 1 measurement model can be represented in matrix form as:

$$Y = \tau_Y + \Lambda_Y * \eta + \varepsilon$$

or when expanded algebraically as:

$$\begin{bmatrix} Y_{1j} \\ Y_{2j} \\ Y_{3j} \end{bmatrix} = \begin{bmatrix} \tau_{1j} \\ \tau_{2j} \end{bmatrix} + \begin{bmatrix} \lambda_{11} & \lambda_{12} \\ \lambda_{21} & \lambda_{22} \\ \lambda_{31} & \lambda_{32} \end{bmatrix} * \begin{bmatrix} \eta_{1j} \\ \eta_{2j} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1j} \\ \varepsilon_{2j} \\ \varepsilon_{3j} \end{bmatrix}$$

Here, latent variables η_{1j} and η_{2j} represent initial status and rate of change, respectively, for the j-th person (analogous to level 1 regression coefficients in MLM). Estimates for these latent constructs represent average initial status and average rate of change for all individuals in the sample. The lambda matrix (Λ_Y) contains factor loadings, with all first column values fixed to 1 to reflect initial status as year 1, and second column values fixed to 0, 1, 2 to reflect linear

change. The theta-epsilon matrix (θ_ε) contains heteroscedastic error terms. The tau matrix (τ_Y) contains sample means of Y.

As a second step, three interlocking conditional LGC models were constructed and compared. Each model reflected different pathways for how external stress is associated with marital functioning. The "interlocking" nature reflects LGCs being estimated simultaneously for husbands and wives with corresponding latent parameters allowed to correlate. The "conditional" nature of the model reflects latent intercept and slope terms being regressed on (i.e., conditioned upon) levels of external stress. This level 2 structural model can be represented in matrix form as:

$$\eta = \alpha + \Gamma\xi + \zeta$$

In this equation, η represented a 4x1 column vector containing latent intercept terms (η_{1j}) and latent slope terms (η_{2j}) for husbands and wives. The 4x1 alpha matrix (α) contains means of η_{1j} and η_{2j}. The 4x2 gamma matrix (Γ) contains regression coefficients of second-order predictors. The 2x1 ksi matrix (ξ) contains latent exogenous variables. The 4x1 zeta matrix (ζ) contains error terms.

Thirdly, upon identification of the best fitting model from step two, further analyses explored parameter estimates from singular and joint predictor effects. As prior results have suggested a multiplicative (and not merely additive) effect of multiple risk factors (Rauer et al., 2008), the product of financial strain and neighborhood disorder at each wave was used for the joint effect. Factor loadings were again constrained to be equal to permit each year contributing equally to overall value. All analyses were run using Mplus 6.0 software (Munthén & Munthén, 2007). Missing data in analyses (less than .1%) was handled via full information maximum likelihood (FIML) techniques. FIML techniques do not impute any actual values but use all

available information to provide maximum likelihood estimates of parameters and their standard errors. FIML approaches are widely utilized in structural equation modeling and represent a preferred means to handle missing data (Acock, 2005). Given the wide dispersion of participant ages comprising the sample, models involving structural effects controlled for age. Table results are presented in completely standardized form.

Results

Descriptive Statistics, Correlations, and Between-Gender Comparisons

Table 2.1 displays the correlations and descriptive statistics for measures of warmth, hostility, financial strain, and neighborhood disorder. On average (and not unexpected given the newlywed sample), both husbands and wives reported high average levels of marital warmth from partners and low levels of hostility. Within-person cross-sectional reports of warmth and hostility were significantly correlated at all time periods, ranging from -.43 to -.55 (husband report of wife warmth and hostility) and -.45 to -.47 (wife report of husband warmth and hostility; all $p < .01$). This suggests that, on average, spouses displaying higher warmth also displayed lower hostility (and vice versa). Mean score comparisons between genders within each wave found statistically significant differences in hostility, but not warmth. Specifically, reported wife hostility at each assessment was significantly higher than reported husband hostility (all $p < .01$).

Regarding chronic stressors, average levels of financial strain and neighborhood disorder were moderately low for both husbands and wives. Cross-sectional correlations between these constructs were significant for both husbands and wives, with correlations ranging from .32 to .34 (for husbands) and .23 to .32 (for wives) (all $p < .01$). Thus, experiencing one stressor was associated with increased likelihood of experiencing the other. Significant cross-sectional

gender differences appeared with financial strain at all three time points as well as neighborhood disorder at year 3. Specifically, wives consistently reported higher levels of financial strain than husbands and husbands at year 3 reported greater levels of neighborhood disorder than wives.

[INSERT TABLE 2.1 HERE]

Univariate Growth Curves

Four Univariate Growth Curves (UGC) were modeled to identify trajectories of marital warmth and hostility, as well as amounts of inter-individual variability therein. Main parameters of interest in these models concern mean level of change (μ_{CH}) as well as variances of initial status (σ^2_{IS}) and change (σ^2_{CH}). A significant mean change represents an average increase or decrease over time in the particular repeated-measures marital behavior. For unconditional latent growth curves, variances of each latent construct represent the amount of between-individual variability. A significant slope variance (σ^2_{CH}) suggests variability in the rate of change between individuals, thus permitting additional analyses that introduce predictor variables to explain this variability.

Summaries of the four UGC are shown in Table 2.2. Mean slopes were all significant, suggesting linear change over time across all individuals. Signs on the slope parameters were in the expected direction, such that reported levels of warmth, on average, decreased over time and reported levels of hostility, on average, increased over time. Comparison of absolute values revealed that average reported warmth declined over time at a greater rate than reports of hostility increased. This pattern held for both husbands and wives.

With respect of variance, initial status (σ^2_{IS}) significantly varied in all models. Thus, first-year reports of warmth and hostile behaviors were not uniform across all husbands and wives. Change parameter variance (σ^2_{CH}) differed by type of behavior reported. Variability in the

decline of warmth was significant for wives (as reported by husbands) and marginally significant for husbands (as reported by wives), indicating that reports of warmth declined at faster rates for some spouses than others. Variances in slope estimates of hostility were not significant for husbands or wives, suggesting a similar rate of increase over time across all individuals.

This non-significant slope variance for hostility precluded additional analyses aimed at identifying longitudinal predictors of rates of change in reported hostility. Thus, subsequent analyses with hostility were limited to multiple cross-sectional assessments. Rates of change in reported warmth behaviors were, however, able to be assessed via conditional latent growth curve modeling. As a final point regarding findings presented in Table 2.2, the covariance between initial status and rate of change was non-significant in all four models, highlighting that rates of change were not associated with initial level (e.g., lower initial level of reported warmth was not significantly associated steeper decline over time).

[INSERT TABLE 2.2 HERE]

Interlocking Growth Curves for Marital Warmth

Given UGC findings for warmth, analyses proceeded to explore whether external stressors accounted for variability in trajectories of marital warmth and through what mechanism(s). To begin, unconditional interlocking growth curves were run with corresponding growth curve parameters from each spouse correlated to reflect the interdependence between husbands and wives. Correlations were significant for both parameters (initial status: $r = .10$, $p < .01$; and rate of change: $r = .02$, $p < .01$) and thus retained in subsequent analyses.

Three models were analyzed to test different mechanisms through which external stress impacts marital warmth. This procedure was performed separately for financial strain and

neighborhood disorder, as different stressors could conceivably impact marital dynamics via different pathways. Figure 2.2 offers a summary of the models.

In the first model, labeled the *Behavior Model*, individuals' external stress was used to predict their level of warmth behaviors, as reported by their spouse (e.g., wife warmth behavior [reported by husband] regressed on wife financial strain score). This model contained only the behavioral paths shown in Figure 2.2, with paths reflecting perceptual linkages fixed to zero. In the second model, labeled the *Perception Model*, an individual's external stress was used to predict his or her perceptions of spousal warmth (e.g., husband report of wife warmth behavior regressed on husband financial strain score). This model contained only perceptual paths, with behavioral paths fixed to zero. In the third model, the *Saturated Model*, both behavioral and perceptual pathways were included to represent the possibility of external stress operating through both mechanisms. The Behavior and Perception models were each nested within the Saturated model, thus permitting model comparison.

[INSERT FIGURE 2.2 HERE]

Results of the model confirmatory tests are shown in Table 2.3. For financial strain models, goodness of fit indices indicated a good fit for the Saturated and Perception models. Comparisons between Saturated and Behavior models revealed a significant difference ($\Delta\chi^2(4) = 47.501$, $p < .01$), suggesting the more complex Saturated model fit the data better and should be retained. Comparison of Saturated and Perception models revealed a non-significant difference ($\Delta\chi^2(4) = 1.028$, $p = .91$), suggesting the more parsimonious Perception model could be retained. Thus, for financial strain, the Perception model provided the best fitting model.

Results for neighborhood disorder followed a similar pattern. Fit indices suggested a good fit for the Saturated and Perception models, but not for the Behavior Model. Compared to

the Saturated model, the nested Behavior model fit was significantly worse ($\Delta\chi^2(4) = 21.452$, $p < .01$), but not the nested Perception model ($\Delta\chi^2(4) = 3.641$, $p = .46$). Thus, the more parsimonious Perception model could again be viewed as the best fitting model relating neighborhood disorder to the internal dynamics of reports of spousal warmth. Accordingly, subsequent structural modeling results are presented using the Perception model.

[INSERT TABLE 2.3 HERE]

Table 2.4 summarizes structural effects of external stress on warmth trajectories from the Perception model. As illustrated in the table, higher financial strain predicted lower initial levels of perceived spousal warmth for both husbands and wives. In addition, financial strain was marginally associated with rate of change in wives' reports of perceived warmth. As the mean level of warmth followed a decreasing trajectory of change (see Table 2.2), the negative sign associated with this effect indicates that higher financial strain among wives was associated with greater declines in warmth reports. In other words, compared to those with lower financial strain, wives with higher levels of chronic financial strain possessed steeper declines in perceived warmth from their husbands over the first three years of marriage.

For models involving neighborhood disorder as the exogenous variable, most paths only trended toward significance and, unlike financial strain, were more concentrated with husbands' than wives' paths. For instance, neighborhood disorder was significantly associated with initial level of husbands' (but not wives') perceptions of warmth, with greater neighborhood disorder associated with lower initial levels. Neighborhood disorder as accounting for rates of decline in husbands' perceived warmth only trended toward statistical significance (p=.10). As with wives' financial strain, this link for husbands was negative, suggesting that husbands who reside in

communities with greater neighborhood disorder report (at a trend level of significance) greater declines over time in perceived warmth behaviors from their wives.

Lastly, the joint effect of both stressors was analyzed to investigate instances when individuals reported high (or low) levels of both external stressors. Results from this model appear in the bottom rows of Table 2.4. Overall, the joint effect model offered the strongest ability to account for variance in growth trajectories of reported partner warmth behavior. Specifically, cumulative stressor scores significantly (or near-significantly) predicted initial level and rates of change for all husbands' and wives' paths. The negative coefficient on all coefficients illustrates the deleterious effect of stress on the initial level and rate of decline in perceived warmth.

[INSERT TABLE 2.4 HERE]

Cross-sectional Analyses for Marital Hostility

As previously discussed, the lack of significant slope variability for hostility precluded additional analyses exploring predictors of rates of increase over time. Similar to results with year 1 as the intercept, additional univariate growth curves for hostility with year 2 and year 3 set as the intercept term (results not shown) also revealed significant variance in intercept. Thus, significant between-individuals variability in reports of hostility appeared at all three time points, permitting cross-sectional analyses to be conducted across each of the three time points.

Figure 2.3 depicts the model analyzed for each wave. Though initially appearing similar to an Actor-Partner Interdependence Model (APIM), this model deviates from an APIM as the dependent variable is not equivalent across partners. Accordingly, rather than 'actor' and 'partner' effects, the regression paths in this model can be appropriately conceptualized as 'perceptual' and 'behavioral' linkages for external stress on reports of marital hostility. For each

wave of data, three models were run for each type of stressor (financial, neighborhood, and joint).

[INSERT FIGURE 2.3 HERE]

Results for hostility analyses were generally consistent across all three years (see Table 2.5). With financial strain, higher stress levels were significantly associated with greater reported partner hostility for both husbands and wives (i.e., the perceptual path). The impact of financial strain on behaviors was only significant for wives at year 1 and for husbands at year 3. For neighborhood disorder, only one significant pathway consistently emerged: husband's neighborhood disorder was associated with higher perceptions of wife hostility. Wives' reports of neighborhood disorder were generally not associated with levels of reported hostility by their husbands. Behavioral paths rarely were significant, with the lone exception being among wives' reported hostility at year 3. Results involving the joint impact of financial strain and neighborhood disorder followed a similar pattern (i.e., perceptual paths consistently significant, varied significance of behavioral paths. In sum, consistent cross-sectional associations were found between financial strain (husbands and wives) and neighborhood disorder (husbands only) in predicting greater perceptions of spousal hostility.

[INSERT TABLE 2.5 HERE]

Discussion

In an effort to account for variability in marital phenomena, understanding how situational contexts impact these unions reflects a prominent, yet relatively understudied, domain (Story & Bradbury, 2004). To this end, the current study explored how chronic levels of financial strain and neighborhood disorder were associated with trajectories of marital warmth and hostility among African American newlyweds. Findings offer unique contributions to this

area by assessing how stress levels can account for actual rates of change, exploring linkages to marital processes (and not satisfaction), as well as testing different mechanisms of influence.

Results from univariate growth curves revealed a decline in warmth behaviors and an increase in hostile behaviors for both husbands and wives. Thus, on average, levels of interaction that mark the initial newlywed years appear unlikely to be sustained, aligning with previous research (James & Amato, 2012). Interestingly, variability in rates of change between individuals only appeared with respect to warmth behaviors and not hostile behaviors. This suggests that, at least in the newlywed years, these couples experienced a similar increase in hostility, but diverged in the degree to which reports of warmth behavior decline.

A central focus of the current study was to examine the proposed "eroding" quality of external stress on a marital union (Bodenmann et al., 2007). Overall, results provided some support for this proposition. First, initial status was significantly predicted by external stress in almost all models, with higher stress associated with worse starting levels. Second, wives with higher levels of financial strain and husbands and wives with higher levels of both financial strain and neighborhood disorder reported steeper declines in perceptions of husband warmth. Third, at a cross-sectional level, greater external stress was also associated with higher reports of perceived partner hostility. Taken together, results highlight how chronic stress lead individuals to start marriage at worse levels of perceived partner behavior and also (at a marginal level) contribute to steeper rates of declines in perceived warmth.

Model comparisons also permitted evaluation of differing pathways of influence for external stress. Results suggest that external stress consistently impacted spouses' *perceptions* of their partners' behavior more so than altering their own behavior. This pattern held for both spousal warmth and spousal hostility. In prior work, greater stress has been associated with

more negative evaluations of one's marital relationship (Neff & Karney, 2009), more perceived specific relationship problems by wives (Neff & Karney, 2004), and more aversive interactions with parents at home by school-aged children (Lehman & Repetti, 2007). In view of these current and previous results, we concur with Repetti, Saxbe, and Wang (2009) that stressors appear to "color social perceptions within the family" (p. 108) by inducing a negative bias towards others in the family. To slightly adapt a colloquial relationship phrase, higher external stress seems to lead an individual to view his or her partner and their relationship with gray- (rather than rose-) tinted lenses.

Marital researchers have previously suggested that a key shift in relationship deterioration occurs when "the presence of the partner becomes increasingly associated with pain and frustration, not pleasure or support" (Stanley, Blumberg, & Markman, 1999, p. 282). If this tenet holds, then accounting for why this cognitive shift occurs represents a highly pertinent issue. Inevitably, a host of factors are involved in producing this shift, but the negative bias associated with external stress may be partially explanatory. Individuals expect their spouse to be a source of support and comfort, yet under conditions of higher external stress – times when individuals are perhaps more likely to be seeking spousal support and to a greater degree – may find their partners more infrequently meeting these exceptions and come to perceive their actions (and eventually their spouse overall) in an exceedingly negative light.

The between-individual variability in rates of change of warmth but not hostility further underscores the importance of distinguishing positive and negative aspects of relationship functioning (Fincham & Rogge, 2010). Rather than representing opposite ends of the same spectrum, warmth and hostility are conceptually better understood as residing on two different continuums. This variability in warmth also suggests that staving off deterioration in marital

quality involves, in part, the ability to maintain warmth and not merely avoid an increase in hostile behaviors.

This study assessed external stressors in terms of their singular and joint longitudinal impact. Between them, financial strain exhibited more consistent singular effects in models of both warmth and hostility. Neighborhood disorder still had a non-trivial impact, particularly among husbands, lending support for greater consideration of this variable in marital research (Bryant et al., 2010). Though each possessed (to differing degrees) independent effects, results also suggest that financial strain and neighborhood disorder explain more variability in marital processes when considered jointly than individually. Thus, the impact of stressors may be best understood in tandem rather than in isolation (Rauer et al., 2008). Accordingly, the concept of cumulative risk, well-versed in scholarship on human development, may prove valuable for greater incorporation in marital scholarship as well (Rauer et al.).

By linking stress to longitudinal changes in dimensions of couple functioning (and not marital satisfaction), associations described in the VSA model were able to be tested more directly. Focusing on adaptive processes offers additional information into how stress impacts different facets of marital dynamics and provides relevant factors to target for prevention and intervention endeavours. From the present study, results underscore the non-trivial impact had by external stressors as well as how such stressors operate to color individuals' perceptions of partner behavior. Individuals under stress may unknowingly (and detrimentally) have negatively-biased perceptions of their partner and their relationship, *irrespective* of any negative (or positive) behaviors exhibited by the partner.

The notion of stressor salience (Neff, 2012) also emerges as another important implication for couples. Though no couples will experience the same number and same intensity

of chronic external stressors, all couples will experience some. Given their negative impact, germane topics when working with couples include recognizing both partners' sources of stress and applicable coping strategies at the individual and dyad-level (see Bodenmann, Pihet, & Kayser, 2006; Story & Bradbury, 2004).

Various limitations are imbedded within the study that warrant consideration when interpreting findings. First, assessments of behaviors were obtained from a single reporter – that is, spouses provided reports of their partners' behaviors. Assessments of behavior by multiple reporter (e.g., self, partner, outside observer) would have been more robust. The single reporter format and stronger associations among perceptual pathways does introduce the potential for shared method variance as an underlying factor. However, the longitudinal nature of analysis abates concern over this issue, as shared method variance would not account for the pathways that suggest differential rates of change over time. Also related to assessment, chronic stress levels were limited to a composite of yearly reports across three years. Ideally, determination and assessment of chronic stress would involve repeated assessments over many days, months, and years, but such intense surveying presents numerous implementation challenges. Significance levels for predictors of rates of change were at marginal level, increasing the likelihood of Type I error. Data from newlyweds do, however, likely provide conservative tests given the highly positive relationship perceptions recently married individuals report and strong motivations to maintain these perceptions (Neff & Karney, 2005b). Last, the nature of the sample, while offering certain advantages, also introduces certain hindrances, particularly for generalization to other populations (e.g., non-newlywed, non-African American married couples). Despite these limitations, this study provides a rare glimpse into the contextual

influences shaping trajectories of marital functioning of newly-married African American couples.

Conclusion

In describing the impact of external stress on married couples, Neff and Karney (2009) note how stress may "act as a double-edge sword, increasing intimates' likelihood of experiencing negative relationship events while simultaneously hindering intimates' capacity to process specific relationship information in an adaptive manner" (p. 437). Current results expand the understanding of the intrapersonal dimension of this "double-edge sword," documenting both cross-sectional and longitudinal contributions of financial strain and neighborhood disorder on spouses' perceptions of warmth and hostility from their partner. Overall, understanding marital processes, the context in which couples are embedded, and their longitudinal associations offer a promising area for marital research in the effort to better understand the maintenance and deterioration of these unions.

Table 2.1

Correlation Matrix and Descriptive Statistics for Study Variables (N = 280 married couples)

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Y1 Report of Spousal Warmth		**.387****	.577**	.558**	-.447**	-.351**	-.264**	-.275**	-.118*	-.165**	-.035	-.010	-.058
2. Y2 Report of Spousal Warmth		.526**	**.326****	.636**	-.365**	-.471**	-.354**	-.182**	-.183**	-.178**	-.085	-.125*	-.142*
3. Y3 Report of Spousal Warmth		.441**	.623**	**.329****	-.351**	-.363**	-.457**	-.210**	-.171**	-.320**	-.055	-.083	-.122*
4. Y1 Report of Spousal Hostility		-.433**	-.370**	-.354**	**.346****	.626**	.564**	.329**	.151*	.169**	.096	.136*	.152*
5. Y2 Report of Spousal Hostility		-.359**	-.545**	-.385**	.611**	**.218****	.641**	.233**	.158**	.143*	.034	.054	.130*
6. Y3 Report of Spousal Hostility		-.312**	-.339**	-.450**	.570**	.566**	**.273****	.156**	.149*	.170**	.100	.096	.149*
7. Y1 Financial Strain		-.196**	-.225**	-.235**	.230**	.196**	.162**	**.423****	.456**	.395**	.232**	.174**	.172**
8. Y2 Financial Strain		-.184**	-.259**	-.178**	.180**	.222**	.059	.499**	**.261****	.508**	.227**	.255**	.173**
9. Y3 Financial Strain		-.215**	-.192**	-.222**	.134*	.172**	.150*	.463**	.547**	**.388****	.188**	.226**	.316**
10. Y1 N'hood Disorder		-.119*	-.124*	-.162**	.195**	.180**	.191**	.317**	.283**	.261**	**.528****	.594**	.505**
11. Y2 N'hood Disorder		-.100	-.158**	-.147*	.093	.173**	.117	.308**	.338**	.313**	.663**	**.529****	.555**
12. Y3 N'hood Disorder		-.142*	-.142*	-.184**	.120*	.104	.249**	.232**	.261**	.323**	.481**	.583**	**.447****
Males	***M***	3.41	3.23	3.12	1.68 [a]	1.75 [b]	1.84 [c]	2.10 [d]	2.12 [e]	2.19 [f]	2.16	2.13	2.14 [g]
	(SD)	(.48)	(.61)	(.62)	(.52)	(.52)	(.53)	(.62)	(.62)	(.64)	(.65)	(.61)	(.57)
Females	***M***	3.34	3.16	3.05	1.40 [a]	1.48 [b]	1.56 [c]	2.20 [d]	2.24 [e]	2.29 [f]	2.16	2.09	2.05 [g]
	(SD)	(.54)	(.64)	(.68)	(.39)	(.44)	(.55)	(.66)	(.66)	(.68)	(.63)	(.62)	(.61)

Note. Correlations for females (n = 280) displayed above the diagonal; correlations for males (n = 280) displayed below the diagonal; correlation for dyad (n=280) along diagonal. Y1, Y2, and Y3 = Year 1, Year 2, and Year 3, respectively. Means (computed from valid cases) and standard deviations for are presented in the horizontal rows at bottom of table. Letter superscript on mean value denotes significant gender difference for particular construct at specific time point. Correlations based on pairwise deletion (n=279 for Y2 Wife Financial Strain, all other n=280).

* $p < .05$. ** $p < .01$.

Table 2.2
Univariate Growth Curves (N = 280 married couples)

Model	Initial Status (IS) Mean (μ_{IS})	Initial Status (IS) Variance (σ^2_{IS})	Change (CH) Mean (μ_{CH})	Change (CH) Variance (σ^2_{CH})	Covariance IS-CH ($\sigma_{IS\text{-}CH}$)	χ^2	df	RMSEA	CFI	TLI
Wife Report of Hus. Warmth	3. 334**	0. 195**	-0.148**	0.033†	0.005	1.82(ns)	1	.054	.997	.991
Wife Report of Hus. Hostility	1.405**	0.095**	0.077**	0.011	0.013	0.01(ns)	1	.000	1.00	1.01
Hus. Report of Wife Warmth	3.401**	0.178**	-0.143**	0.064**	-0.024	1.76(ns)	1	.052	.997	.990
Hus. Report of Wife Hostility	1.682**	0.177**	0.079**	0.006	-0.011	0.14(ns)	1	.000	1.00	1.01

† $p < .10$. * $p < .05$. ** $p < .01$.

Table 2.3

Summary and Comparisons of Conditional Interlocking Latent Growth Curves (LGC; N = 280 married couples)

Model	*df*	χ^2	RMSEA	TLI	CFI	Δdf	$\Delta\chi^2$
			Financial Strain				
F1. $LGC_{Saturated}$	49	95.889**	.058	.957	.942		
F2. $LGC_{Behaviors}$	53	136.883**	.075	.904	.923		
F3. $LGC_{Perceptions}$	53	97.200**	.055	.949	.959		
F1 vs. F2						4	40.994**
F1 vs. F3						4	1.311
			Neighborhood Disorder				
N1. $LGC_{Saturated}$	49	115.723**	.070	.930	.948		
N2. $LGC_{Behaviors}$	53	136.618**	.075	.919	.935		
N3. $LGC_{Peceptions}$	53	122.973**	.069	.932	.946		
N1 vs. N2						4	20.895**
N1 vs. N3						4	7.250

** $p < .01$.

Table 2.4

Structural Effects of External Stressors on Spouses' Warmth Perception Trajectories (N = 280 married couples)

Predictors	Wife Report – Husb. Warmth (WR-HW)				Husb. Report – Wife Warmth (HR-WW)				Covariance WR-HW & HR-WW	
	Initial Status (IS)		Change (CH)		Initial Status (IS)		Change (CH)			
	β	SE	β	SE	β	SE	β	SE	IS_{HR}-IS_{WR}	CH_{HR}-CH_{WR}
Financial Strain (FS)										
Wife FS	-.321**	.08	-.218†	.12					.524**	.355*
Husband FS					-.357**	.07	-.123	.09		
N'hood Disorder (ND)										
Wife ND	-.100	.08	-.164	.12					.537**	.395*
Husband ND					-.202**	.07	-.117	.08		
Joint Stressor										
Wife FS×ND	-.240**	.08	-. 232†	.12					. 547**	. 394**
Husband FS×ND					-. 291**	.07	-. 147†	.08		

Note. For fit indices of financial strain and neighborhood disorder models, see models F3 and N3 in Table 3. For joint stressor model, $\chi^2(53) = 115.05$**, RMSEA = .065, CFI = 0.954, and TLI=0.942. Effects presented control for age.

† $p < .10$. * $p < .05$. ** $p < .01$.

Table 2.5

Cross-sectional Predictors of Spousal Report of Partner Hostility (N=280 married couples)

	Wife Report - Husband Hostility		Husband Report - Wife Hostility					
Predictor	Husb. β (se) [Beh. Path]	Wife β (se) [Percept. Path]	Husb. β (se) [Percept. Path]	Wife β (se) [Beh. Path]	$\chi^2(6)$	RMSEA	CFI	TLI
Financial Strain								
Year 1	.094 (.06)	.294 (.06) **	.142 (.06) *	.203 (.06) **	10.173	.05	.95	.92
Year 2	-.037 (.06)	.167 (.06) **	.209 (.06) **	.065 (.06)	6.428	.02	.99	.98
Year 3	.130 (.06) *	.120 (.06) †	.140 (.06) *	.035 (.06)	1.961	.00	1.00	1.20
Neighborhood Disorder								
Year 1	.059 (.07)	.063 (.07)	.244 (.07) **	-.0802(.07)	4.387	.00	1.00	1.05
Year 2	.071 (.07)	.019 (.07)	.172 (.07) *	.001 (.07)	1.916	.00	1.00	1.37
Year 3	.096 (.07)	.107 (.07)	.188 (.06) **	.132 (.06) *	2.298	.00	1.00	1.14
Joint Stress (FSxND)								
Year 1	.076 (.07)	.220 (.07) **	.230 (.07) **	.064 (.07)	5.765	.00	1.00	1.01
Year 2	.002 (.07) *	.137 (.07) *	.231 (.06) **	.004 (.06)	3.371	.00	1.00	1.14
Year 3	.146 (.06) *	.120 (.06) †	.166 (.06)**	.129 (.06) *	0.562	.00	1.00	1.20

Note. Effects presented control for age. All chi-squared values non-significant.

† $p < .10$. * $p < .05$. ** $p < .01$.

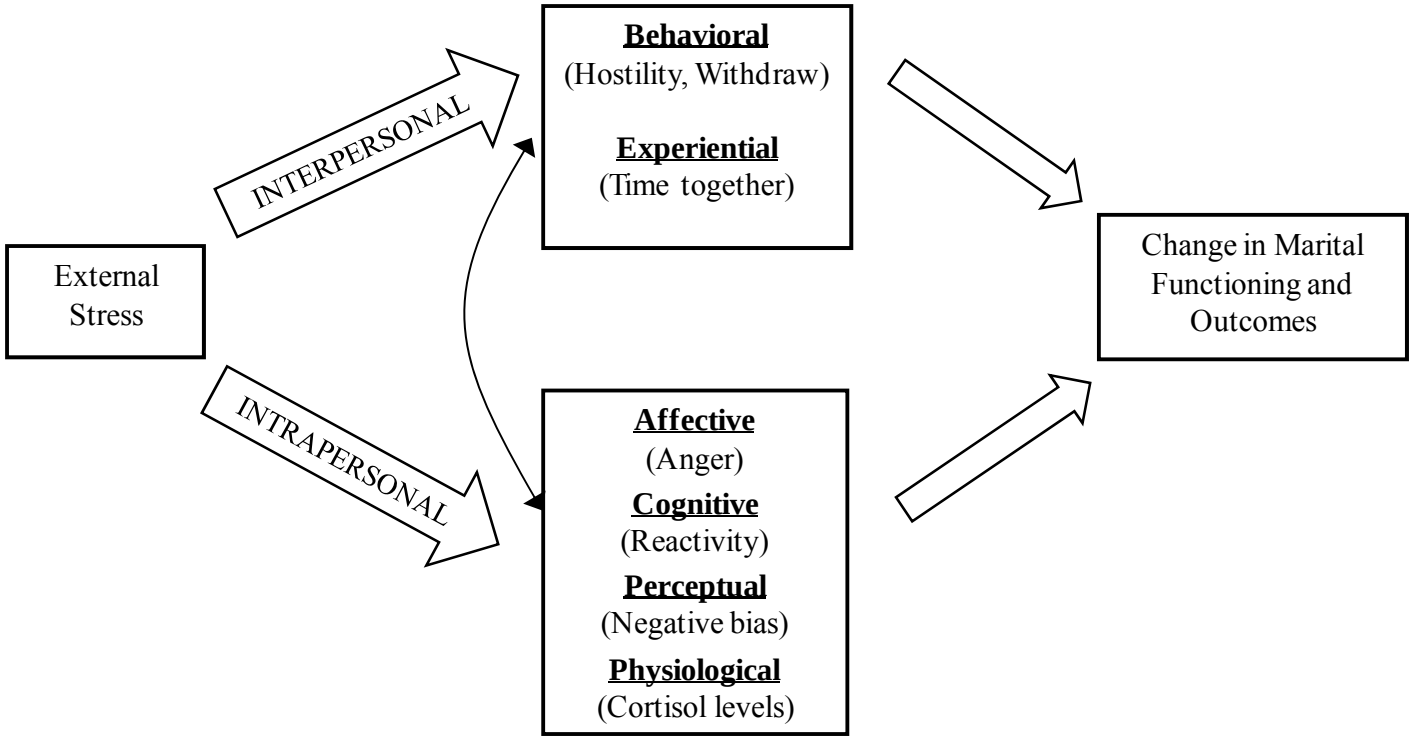

Figure 2.1. Pathways of influence for stress effects on marriage. Examples listed in parentheses.

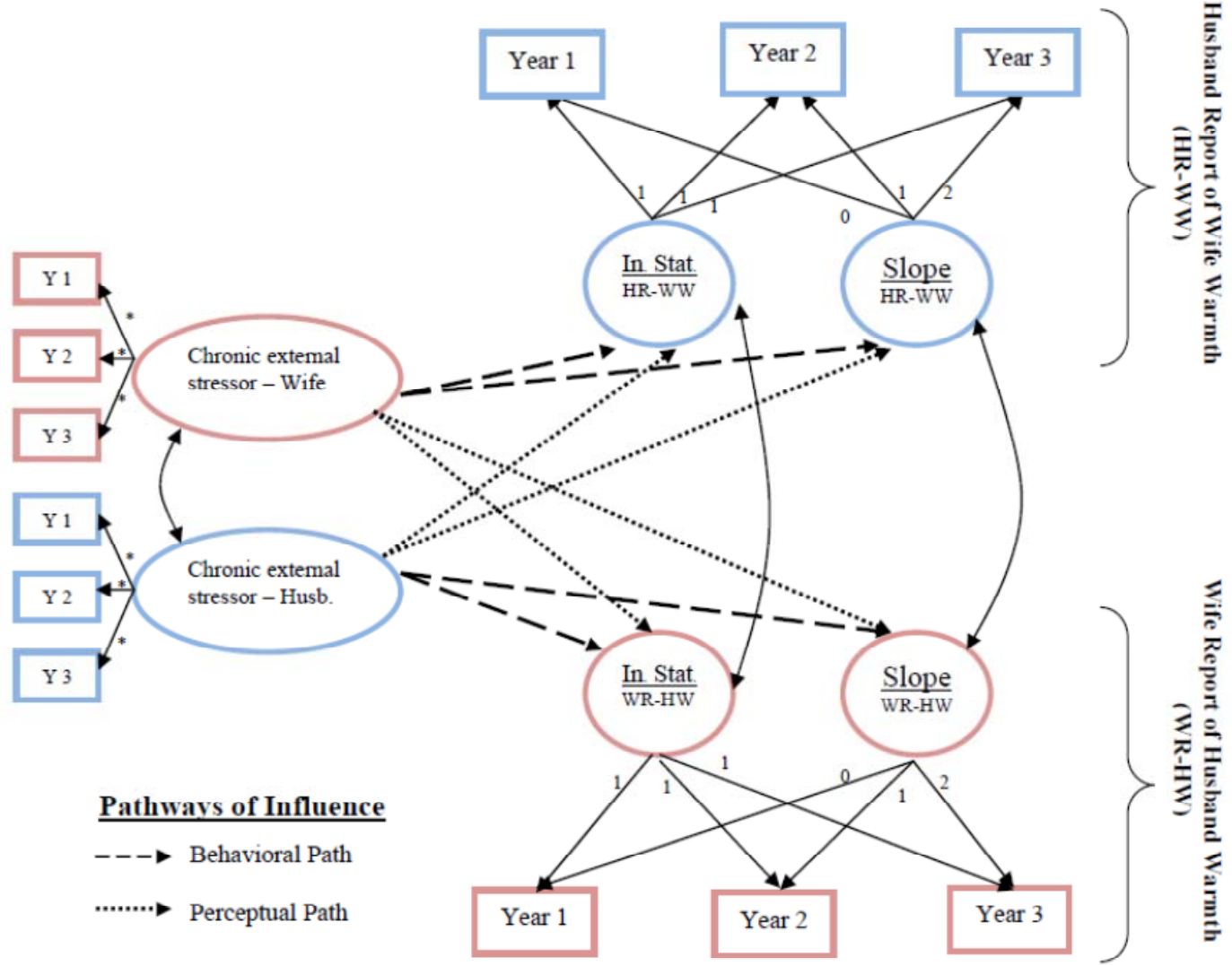

Figure 2.2. Interlocking conditional latent growth curves for reports of partner warmth.
Note. Individual error terms not shown on manifest variables for clarity. Model 1 (Behavioral) – only behavioral (dashed) lines; Model 2 (Perceptual) – only perceptual (dotted); Model 3 (Saturated) – both behavioral and perceptual lines in model.

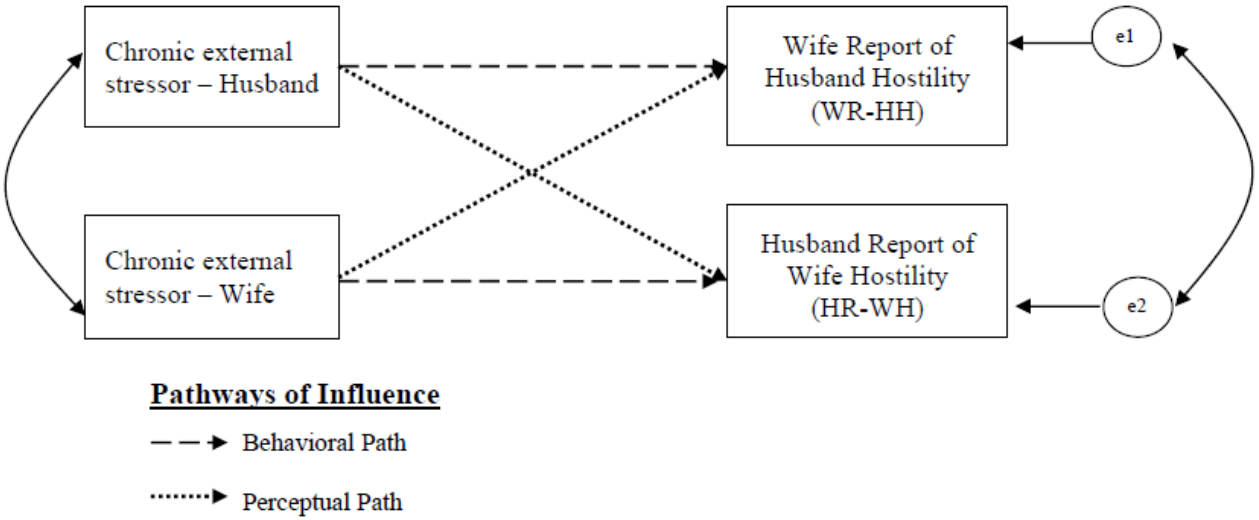

Figure 2.3. Cross-sectional analyses for reports of hostility.

CHAPTER 3

MITIGATING THE NEGATIVE ASSOCIATIONS BETWEEN FINANCIAL DISTRESS, DEMAND/WITHDRAW, AND MARITAL OUTCOMES – CAN PERCEIVED GRATITUDE FROM SPOUSE MAKE A DIFFERENCE? [2]

[2] Barton, A. W., Futris, T. G., & Nielsen, R. B. To be submitted to *Journal of Personality and Social Psychology*.

Abstract

With the general association between financial distress and lower marital quality established, pertinent questions for research shift to understanding the mechanisms through which stress impacts marriage as well as how couples can reduce its impact. Using a sample of 468 married individuals, the present study explored this issue in relation to two main constructs, demand/withdraw communication and perceived partner gratitude. In a first set of analyses, parallel multiple mediation models revealed demand/withdraw communication to link financial distress to six different marital outcomes, though whether this indirect effect involved one or both partners' demanding behaviors slightly differed between males and females. Second, moderated mediation models revealed significant main effects for perceived partner gratitude on nearly all marital outcomes. With certain marital outcomes, perceived gratitude additionally buffered the detrimental impact had by negative communication. Results also indicated instances of moderated mediation, with demand/withdraw no longer containing a significant indirect effect at high levels of gratitude. Findings from the study elucidate conditions for how and when financial distress impacts marital quality as well as provide additional support for perceived partner gratitude as an important variable in marital research.

Introduction

Multiple models have been developed to describe how external stress affects marital unions (e.g., Conger et al., 1999; Neff, 2012; Randall & Bodenmann, 2009). Though each possesses differentiating characteristics, all such models "share the assumption that the relation between stress and marital outcomes is mediated by intradyadic variables" (Ledermann et al., 2010, p. 195). While uniformly emphasizing pathways of influence, markedly absent from most (if not all) of these models is attention to processes within couples that can alleviate the corrosive effect of stress on the union. The mere presence of external stress is clearly not an insurmountable hurdle to maintaining marital quality as some couples, despite encountering such difficulties, do not exhibit the characteristic declines in marital functioning. Rather, as previous research has alluded (Fincham et al., 2007), capacities internal to the couple can promote relationship well-being and protect against negative internal and external events. Identifying such capacities addresses an important issue in basic marital research and also contributes pertinent insight into malleable protective factors to incorporate in prevention and intervention efforts.

Any brief scan of the marital research literature attests to a myriad of behavioral, cognitive, and affective factors that have a bearing on marital unions – some for better, some for worse. Of particular interest to this study is gratitude, a newly-emerging factor that has received markedly increased research attention in recent years. While initial studies of interpersonal gratitude focused primarily on newly-formed, non-romantic relationships (e.g., Algoe, Haidt, & Gable, 2008), researchers has begun to consider the role of gratitude in the formation and maintenance of established romantic relationships, including marriage (e.g., A. Gordon, Impett, Kogan, Oveis, & Keltner, 2012). Preliminary findings suggest gratitude to be highly

advantageous in romantic unions, both by increasing personal relationship satisfaction (Algoe et al., 2010) and motivating relationship maintenance behaviors (A. Gordon et al., 2012). Given its nascent literature, many topics still remain unaddressed in the study of gratitude in interpersonal relationship. For instance, few studies have considered perceiving gratitude from one's partner (as opposed to being grateful for one's partner) or how gratitude interacts with other external and internal events in a relationship to shape marital outcomes.

The present study aims to address these gaps by exploring how perceived partner gratitude shapes multiple dimensions of marital quality along with its ability to alter the pathway by which financial distress affects marital quality. To accomplish this, two series of analyses are performed. First, the study examines a multiple mediation model of demand/withdraw communication patterns (i.e., husband-initiated and wife-initiated) as linking financial distress to various marital outcomes. Next, moderated mediation analyses explore the direct and joint effects of perceived partner gratitude on the associations among financial distress, demand/withdraw, and marital outcomes. By assessing marital quality along various positive and negative dimensions, additional insight occurs into the specific nature and robustness of these effects within marital unions.

Literature Review

Financial Distress and Marriage: Mediating and Moderating Factors

Financial distress represents a frequently identified and commonly researched external stressor for married couples (Falconier & Epstein, 2011a; Randall & Bodenmann, 2009). As with the impact of other external stressors, studies indicate that the relationship between financial distress and marital dissatisfaction is indirect, operating through intrapersonal and interpersonal cognitions, emotions, and behavior (Falconier & Epstein, 2011a). Accordingly, any thorough

understanding of the association between financial distress and marital outcomes warrants consideration of intervening interpersonal variables that may function as pathways of influence.

Financial distress has previously been linked to multiple negative interpersonal behaviors, including hostility, irritability, undermining, demand/withdraw, and psychological aggression (see Falconier & Epstein, 2011a). The present study focuses on demand/withdraw, a negative interactional pattern that detrimentally impacts concurrent marital satisfaction (see Caughlin & Huston, 2002). Prior studies using single mediator models provide support for demand/withdraw as transmitting the effect of financial distress on marital outcomes, focusing on either total couple demand/withdraw (Wilmarth, 2012) and female-demand/male-withdraw (Falconier & Epstein, 2011b).

Beyond functioning as mechanisms accounting for *how* stress shapes marital outcomes, spouses' intradyadic processes may also shape *when* the association appears. In essence, certain couple intrapersonal and interpersonal processes may ameliorate, and others amplify, the mediating pathways proposed in couple stress models. As Neff and Karney (2007) note, "evidence suggests that in some situations, partners may think and act in ways that contain the deleterious effects of stress" (p. 596). Hill's (1958) well-known ABC-X model of stress illustrated this basic tenet by describing the impact of a stressor event (A) to depend on the coping resources of the family (B) and the perceptions of the stressor (C).

The potential for such a phenomenon – processes within the dyad functioning protectively against negative events – appears elsewhere in marital research. For instance, Fincham, Stanley, and Beach (2007) describe "self-regulatory transformative processes" located within the dyad that "provide the average couples with ways to forge deeper connection or to effect repairs of the relationship after experiencing distance and frustration" (p. 278). The

authors highlight four specific domains – forgiveness, commitment, sacrifice, and sanctification – and comment on their ability to function as control variables that disincline a subsequent negative response by one partner to relationship challenges caused by behaviors by the other partner or external events.

Previous research into such protective couple processes has occurred in multiple avenues. One line of research has focuses on marital processes that reduce the effect of external stressors (e.g., economic pressure, role strain) on marital outcomes. Previously-identified protective processes on this association include effective problem-solving skills (Conger et al., 1999; Neff & Karney, 2007), spousal support (Brock & Lawrence, 2008; Conger et al., 1999) and generosity and commitment (Dew & Jackson, 2012). A second line of research has focused on factors that buffer the effects of negative partner behaviors on subsequent marital satisfaction. A collection of findings surrounding positive affect provide a clear depiction of this interaction effect, with high levels of positive affect within a dyad reducing or eliminating declines in marital satisfaction associated with partner negativity (Huston & Chorost, 1994), high demand/withdraw (Caughlin & Huston, 2002), and poor problem-solving skills (M. Johnson et al., 2005). Thirdly, additional research has focused on couple processes that buffer the effect of external stress on couple functioning. As an example, couples with high problem-solving skills reported less increase in negative couple interaction as economic pressure grew when compared to couples with low problem-solving skills (Masarik, Martin, Ferrer, & Conger, 2012). This present study aims to expand this area of research by considering the ability of perceived partner gratitude to function in a similarly protective manner on each of these three pathways.

Perceived Gratitude from Partner

The literature on gratitude has been "burgeoning" at the start of the 21st century (A. Wood et al., 2010, p. 891). This growth has occurred at both the individual (see Wood et al.) and interpersonal (see Fincham & Beach, in press) level. When applied to interpersonal romantic relationships, the majority of research on gratitude has examined the degree to which individuals are 'grateful for' or 'appreciative of' their partner and relationship.[3] Predictors of individuals possessing higher levels of gratitude for their partner include having partners who express more gratitude (C. Gordon, Arnette, & Smith, 2011), perceiving partners as responsive to their needs (Kubacka, Finkenauer, Rusbult, & Keijsers, 2011), and feeling appreciated and valued by their partner (A. Gordon et al., 2012). In turn, individuals who possess higher amounts of gratitude for their partner report feeling closer to romantic partners and being more satisfied in their relationship (Algoe et al., 2010; A. Gordon et al., 2012). Being grateful also appears to have a motivating behavioral influence, as more grateful partners have been found to engage in more relationship maintenance behaviors (Kubacka et al., 2011), be more responsive to partner needs, and have relationships with greater stability (A. Gordon et al., 2012). Individuals who express gratitude to their partner also report more comfort voicing relationship concerns and, over time, greater communal strength in the relationship (Lambert, Clark, Durtschi, Fincham, & Graham, 2010; Lambert & Fincham, 2011).

However, in romantic relationships, equally (or perhaps more) important as individuals' being grateful *for* their partner is their perceiving gratitude *from* their partner. Most research on gratitude has largely neglected this second aspect of gratitude in romantic relationships (see A.

[3] Conceptual clarity remains a lingering issue in the study of gratitude (Fincham and Beach, in press), both in terms of defining gratitude (i.e., generalized vs. benefit-triggered) and differentiating it from appreciation. Gordon and colleagues (2012) note that scholars often use the words appreciation and gratitude interchangeably and indeed, in most measures of gratitude (Algoe et al., 2010; Gordon et al., 2012; Lambert & Fincham, 2011) 'appreciation' is included in item language.

Gordon et al., 2012, p. 258). One study that considered perceived partner gratitude ("being appreciated") found higher levels of perceived gratitude by individuals when partners performed relationship maintenance behaviors (Gordon et al.). Those who perceived being more appreciated by their partners, in turn, subsequently demonstrated higher levels of gratitude for their partner (termed "being appreciative").

Though limited in attention currently, earlier writings have alluded to perceived partner gratitude as a key dynamic for marital satisfaction and stability. For instance, Hochschild's *The Second Shift* (1990) contains a section titled 'The Economy of Gratitude' in which she observes that "when couples struggle, it is seldom over who does what. Far more often, it is over the *giving and receiving of gratitude*" (p. 18, emphasis added). In a similar vein, Nock (2001) suggests that rather than inequality in housework per se, marriages of equally-dependent (i.e., equivalent dual-earner) couples suffer "when husbands fail to *acknowledge the gift* of labor provided by the their wives" (p. 774, emphasis added). Indeed, not feeling loved and appreciated is one of the top reasons cited for divorce (Gigy & Kelly, 1993), further indicating the central role of perceived partner gratitude (or the lack of it) in marital quality and stability.

Present Study

The present study adds to the study of gratitude in marital relationship as well as how financial distress impacts marriage, two respective literatures that have rapidly grown in the past decade. Contribution to research on interpersonal gratitude occurs in multiple means. First, previous research has focused on the role of gratitude in forming new relationships (Algoe et al., 2008; McCullough, Kimeldorf, & Cohen, 2008), but less research has considered gratitude in established relationships, particularly marriage (though see C. Gordon et al., 2011; Kubacka et al., 2011 for exceptions). Second, as previously mentioned, most gratitude research has focused

on the experience of *being* grateful, with scant research exploring *perceived* partner gratitude. Third, gratitude is currently investigated in combination with negative interactions, something prior writing has recommended the value of examining given the motivational shifts associated with gratitude (Fincham & Beach, in press). In sum, this study uniquely considers perceived partner gratitude in relation to multiple indicators of marital quality as well as examines its effects in combination with other situational and relational variables.

The current study also refines and expands the understanding of demand/withdraw communication as linking financial distress to marital outcomes. While previous work has considered demand/withdraw as mediating this association (Falconier & Epstein, 2011b; Wilmarth, 2012) such efforts have not tested the actual significance of the indirect effect itself or considered marital outcomes beyond relationship dissatisfaction. Further, despite the gender differences in demand/withdraw behavior (Eldridge & Christensen, 2002), previous studies have not simultaneously tested female-demand/male-withdraw and male-demand/female-withdraw in a multiple mediation model to compare specific versus total indirect effects.

The present study specifically tested two main models, depicted in Figures 3.1 and 3.2. Building on the central mediating role of negative partner behaviors (including demand/withdraw) identified in other studies (Falconier & Epstein, 2011a), the first series of analyses tested a multiple mediation model (see Figure 3.1). In this, financial distress was expected to covary with each of the six outcomes of marital quality, with demand/withdraw mediating these associations (Hypothesis 1). Given gender asymmetries in demand/withdraw patterns, the indirect effect of financial distress though demand/withdraw may itself be gendered. While female-demand/male-withdraw appears more frequently (Eldridge & Christensen, 2002) and has been found to link financial distress to marital distress (Falconier & Epstein, 2011b), this

does not conceivably preclude male-demand/female-withdraw behaviors from also having an indirect effect and contributing to the total indirect effect. Illustrative of this, following more stressful days at work, husbands and wives both report more anger and withdrawal (Story & Repetti, 2006) and both patterns of demand/withdraw have been concurrently linked to lower marital satisfaction (Caughlin, 2002). Thus, this study tests a multiple mediation model to examine whether the mediating effect of demand/withdraw between financial distress and a range of marital outcomes for husbands and wives appears through female-demand/male-withdraw, male-demand/female-withdraw, or the collective set of total couple demand/withdraw (see Figure 3.1). No specific *a priori* hypotheses were stated regarding the specific indirect effect for each mediator given the limited amount of prior research testing multiple mediation models of demand/withdraw.

[INSERT FIGURE 3.1 HERE]

Based on the identified mediator(s) for each of the marital outcomes in the first set of analyses, a moderated mediation model was then tested to investigate main and joint effects of perceived gratitude on this pathway (see Figure 3.2). Here, significant main effects were expected for perceived gratitude on each of the six marital outcomes of study (Hypothesis 2). Perceived gratitude was also investigated as moderating the effect of three different paths. In light of the pro-relationship motivational changes suggested to be associated with gratitude (Fincham & Beach, in press), perceived gratitude was expected to buffer the negative association between financial distress and demand/withdraw (Hypothesis 3a), demand/withdraw and marital outcomes (Hypothesis 3b), and financial distress and marital outcomes (Hypothesis 3c).

[INSERT FIGURE 3.2 HERE]

Method

Participants and Procedures

Adult residents residing in a southeastern state were contacted by phone in 2011 and asked to participate in a survey on financial management behaviors and relationship quality as part of a multidisciplinary research project entitled Healthy Families, Healthy Finances (Nielsen & Futris, 2011). Using a random-digit dialed sampling of phone numbers across the state, individuals were contacted and asked to complete a survey via a computer assisted telephone interviewing (CATI) instrument. To be eligible to participate, individuals had to be 18 years or older, currently married, and presently sharing a residence with their spouse. Selection of whether the husband or wife would complete the survey was randomized in an attempt to obtain equal percentages. Rural telephone numbers were oversampled to increase geographic diversity.

A total of 9,170 phone numbers were called, with 1,008 successful contacts made (i.e., entry stored in database). From this, 540 individuals were eliminated from the sample due to being non-married (257 individuals), refusal to provide marital status (4 individuals), or ending the phone call before any information was obtained (235 individuals) or any information was obtained on necessary study variables (44 individuals). Thus, the final sample comprised 468 married individuals, ranging in age from 21 to 86 years old (M=51.39, SD=13.99; n=465) and with a majority of respondents being female (63%). Marital durations ranged from less than one year to 66 years[4] (M=23.09, SD=16.03; n=465) and 35% of the unions reflected re-marriages for one or both spouses (n=467). The majority of individuals (78%) reported having children from the current (n=295) or current and prior (n=73) relationship. About one-quarter (22%) of the sample resided in a rural area. Concerning race, 75% of the sample identified as White, 22% as

[4] One implausible marital duration value (i.e., longer duration than age of respondent) was removed and treated as missing.

Black/African American, 3% multi-racial, and 1% Asian American (n=460). Only 2% reported being Latino/a. Highest level of education completed ranged from grade school to advanced/professional degree, with median completion level being a bachelor's degree.[5] About one-third (31.6%) of participants did not report level of household income. Based on multiple imputation (details described in later section), household income levels were, on average, between $70-80,000, with 19% reporting household incomes of less than $50,000, 42% with household incomes between $50-90,000, and 39% with household incomes greater than $90,000.

Measures

Financial wellness. Individuals' reports of financial wellness/financial distress were assessed via the Personal Financial Wellness (PFW) Scale™ (Prawitz et al., 2006). This eight-item measure (10-point Likert scale) assessed the level of stress and well-being individuals currently felt regarding their financial situation (α = .91 entire sample [α =.92 for males; α =.91 for females]). The PFW Scale™ identifies both objective ("How frequently do you find yourself just getting by financially and living paycheck to paycheck") and subjective (e.g., "How stressed are you about your personal finances in general") indicators of personal financial wellness. Given contractual obligations with survey developers and conventional usage of the PFW Scale™, higher mean composite scores reflected greater financial well-being/lower financial distress, with the mean score computed from all valid cases. Originally devised for a written (pen and paper) format, the measure has since been shown to be reliable and valid for use with a CATI instrument (Nielsen, 2010).

Negative communication. The Communication Patterns Questionnaire–Short Form (Christensen & Heavey, 1993) was employed to assess respondent's perception of their own and

[5] One education value of '49' was removed and treated as missing, given impermissibility within range of available options.

their spouse's typical communication behaviors. This form has been commonly employed to assess communication patterns in marital relationships, particularly among non-clinical samples (see Futris, Campbell, Nielsen, & Burwell, 2010). For demand/withdraw communication specifically, six items (9-point Likert) assessed the likelihood that one partner is demanding while the other withdraws when issues or problems arise (e.g., "How likely is it that your spouse criticizes while you defend yourself"). Three items reflected male-demand/female-withdraw and three items female-demand/male-withdraw patterns, with total couple demand/withdraw representing the aggregate of these two subscales. From this, mean scores from all valid cases were computed for male-demand/female-withdraw (α = .58 [male report], = .65 [female report]), female-demand/male-withdraw (α =.69 [male report], = .65 [female report]), and total couple demand/withdraw (α =.77 [male report], = .77 [female report]).

Perceived gratitude. Reports of perceived spousal gratitude were assessed via an adaptation of an interpersonal gratitude measure developed by Lambert and Fincham (2011). The original three-item measure gauged respondents' demonstration of gratitude for their partner (e.g., "I express my appreciation for the things that my partner does for me"). The current measure was adapted to assess individual's perceived gratitude *from* their spouse (e.g., "My spouse expresses appreciation for the things I do for him/her"). Higher scores reflected greater levels of perceived gratitude (5-point Likert scale), with a mean score computed from valid cases. The original measure has previously demonstrated strong internal reliability (α=.92, see Lambert & Fincham, 2011) and the adapted version in the present study also reported strong reliability (α =.90 entire sample [α =.91 for males; α =.89 for females]).

Previous writing has conceptualized two different types of gratitude – *benefit-triggered*, that which is elicited by a specific transfer of a benefit, and *generalized,* an awareness and

appreciation of that which is valuable and meaningful to oneself (Lambert et al., 2009). The measure employed by the current study assesses generalized gratitude, which has been previously suggested as the form of gratitude likely to exert stronger effects in more established, long-term relationships (Kubacka et al., 2011). Since development and application of this measure, another measure assessing perceived gratitude – the Appreciation In Relationships (AIR) scale – has been devised and employed (A. Gordon et al., 2012). Comparison between the two measures indicated high face validity (AIR example: "My partner often expresses her/his thanks when I do something nice, even if it's really small").

Marital quality. Marital quality reflected a set of six conceptually distinct yet empirically correlated dimensions (see Amato, Booth, Johnson, & Rogers, 2007, p. 41), that reflected both positive and negative cognitions and behaviors. Selection of measures intentionally aimed to maintain conceptual clarity between individuals' personal cognitions concerning aspects within their union versus more behavioral matters of relationship functioning (Fincham & Rogge, 2010). First, *marital satisfaction* was assessed via a single item that asked "all things considered, how happy are you with your marriage" (10-point Likert scale). Previous usage of one-item indicators of marital satisfaction have been found to be highly correlated with multi-item measures and noted to provide similar results (D. Johnson, 1995). Second, *relationship dedication* was assessed via a 4-item index from The Commitment Inventory (Stanley & Markman, 1992), a subscale that has been employed in multiple other studies assessing dedication (e.g., Stanley, Markman, & Whitton, 2002). Individuals were asked to report (7-point Likert) on items such as their desire for the relationship to continue and thinking more collectively rather than individually (α =.68 entire sample [α =.62 for males; α =.71 for females]).

Four additional aspects of marital quality were assessed via subscales created from the Revised Dyadic Adjustment Scale (RDAS; Busby, Christensen, Crane, & Larson, 1995). *Mutual consensus* reflected the amount of agreement or disagreement (6-point Likert) between spouses on seven different topics, such as handling finances and demonstrations of affection (α =.82 entire sample [α =.85 for males; α =.80 for females]). *Relationship cohesion* was measured using 4-items that assessed how frequently spouses spent time doing activities together, such as engaging in outside interests or working on a project (standardized, given different Likert scales among questions; α =.65 entire sample [α =.70 for males; α =.61 for females]). A two-item measure of *relationship conflict* assessed frequency of "spouse quarrelling" and "getting on each other's nerves" (6-point Likert; α =.61 entire sample [α =.67 for males; α =.58 for females]). Last, *dissolution risk* was assessed via two items asking about regrets getting married and personal discussion or consideration of divorce (6-point Likert; α =.64 entire sample [α =.68 for males; α =.62 for females]). Variation and expansion from the original RDAS subscales occurred given the need to differentiate cognitions from behaviors. For multi-item measures of marital outcomes, a mean score was computed from valid cases. Higher scores reflected greater levels of each outcome of interest (e.g., more consensus, more dedication, more conflict). Scores on three variables – marital satisfaction, dedication, and relationship conflict – indicated non-normal distributions (skewness above or approaching 3 and kurtosis of greater than 7). Variable transformations were subsequently conducted (square for right-skewed, square root for left-skewed) to adjust distributions to better approach normality.

Controls. Control variables included in the analyses were education, marital duration, having children, and whether the marriage represented a first-order or higher-order union. For the final item, higher-order marriages reflected couples in which either spouse had been

previously married. These control variables were included based on previous findings suggesting their potential to influence levels of marital satisfaction (Sweeney, 2010; Twenge, Campbell, & Foster, 2003; VanLaningham, Johnson, & Amato, 2001; Wilcox, 2010).

Plan of Analyses

Analysis of the data occurred via PROCESS, a statistical macro package for SPSS and SAS developed by Hayes (2012) that offers analytical capabilities for testing moderation, mediation, and other conditional process models. The PROCESS macro computes coefficients for variables following standard ordinary least squares regression techniques as well as direct and indirect effects for mediation, conditional effects for moderation, and conditional indirect effects for moderated mediation. Importantly, intervening variable effects (i.e., mediation) are assessed by quantifying the indirect effect itself and not relying on a causal steps approach (as popularized by Baron & Kenny, 1986), which has been prominently critiqued by multiple methodologists (see Hayes, 2009). The PROCESS model utilizes a bootstrapping approach to test the significance of the indirect effect. In this, if zero is not between the lower and upper bound of the confidence interval for the range of computed indirect effect values, then the indirect (i.e., mediation) effect is non-zero with confidence equal to the size of confidence interval (for more details, see Hayes, 2012). Current analyses used 5,000 bootstrapped samples with a 95% confidence level (conceptually the same as rejecting the null hypothesis that the true indirect effect is zero at the $p = .05$ level of significance).

Analyses were performed in two main phases. The first set of analyses tested the multiple mediation model depicted in Figure 3.1. Testing multiple mediators permits the identification of whether an overall indirect effect exists across the set of mediators, as well as the extent to which each intervening variable mediates the effect of X on Y, accounting for the

presence of any other mediator(s) in the model. Upon identifying the nature of the mediating variable from the first set of analyses, the next phase of analysis proceeded to test the moderated mediation model depicted in Figure 3.2. Of interest from this model were the direct, joint, conditional direct, and conditional indirect effects contained with the figure.

Financial wellness, perceived partner gratitude, and demand/withdraw were all mean-centered prior to moderation analyses. Mean centering variables does not remove collinearity among first- and higher-order terms (as is commonly assumed), but does advantageously permit better interpretability of results when variables do not have meaningful zero-points (Dalal & Zickar, 2012; Echambadi & Hess, 2007). Less than 1% of the data was missing among the variables used in the models. To account for missing data, multiple imputation was conducted using five imputations via NORM software (Schafer, 1999). Multiple imputation is favorable to traditional means for dealing with missing data (i.e., listwise deletion, pairwise deletion, mean substitution), given its ability to impute values and produce unbiased standard errors through pooling parameter estates (Acock, 2005). Pooled estimates of regression coefficient parameters and their standard errors followed procedures outlined by Rubin (1987), which takes into account both within- and between-imputation variances.

Results

Descriptives and Correlations

Table 3.1 presents the descriptive statistics and correlations among main predictor and criterion variables involved in the analyses. Overall, females and males reported high positive marital quality within their respective unions. This appeared with respect to all six marital outcomes of interest. Correlations among these items ranged in magnitude from .23 to .62 ($p <$

.01) among females and from .24 to .45 ($p < .01$) among males, illustrative of their interrelated yet distinct nature.

For marital processes, low demand/withdraw communication patterns were exhibited as well as high average levels of perceived gratitude. Correlations between male-demand/female-withdraw and female-demand/male-withdraw were strong as reported by both females ($r = .59$, $p < .01$) and males ($r = .62$, $p < .01$), suggesting that the presence of one was likely to be associated with the presence of the other. Average levels of financial well-being/financial distress, as classified by the criteria of the PFW Scale™, were moderate for both females and males. However, by one standard deviation below the mean, individuals were already characterized as having poor financial well-being/high financial distress.

Zero order correlations between perceived gratitude and constructs of marital communication and outcomes were significant and in the expected direction, ranging in absolute value from .23 to .55 for males and females. In this, higher levels of gratitude were positively associated with marital satisfaction, consensus, cohesion, and dedication, while being negatively associated with demand/withdraw patterns, relationship conflict, and dissolution risk.

Independent sample t-test comparisons found significant gender differences in only one variable, dissolution risk, with females reporting higher dissolution thoughts than males (Welch two sample t-test: $t(390.566)=-2.508$, $p<.05$, given unequal sample variances). The lack of any other differences indicated that neither males nor females were likely to report any particular type of relationship behavior or cognition with greater frequencies (e.g., average male and female reports for female-demand/male-withdraw were at similar levels). Paired-sample t-test comparisons found female-demand/male-withdraw did, on average, appear more frequently than male-demand/female-withdraw across the entire sample ($t(462) = 5.392$, $p < .01$).

[INSERT TABLE 3.1 HERE]

Parallel Multiple Mediation for Demand/Withdraw

With significant correlations in the expected directions among all variables of interest, analyses proceeded to test a multiple mediation model. The two mediators – male-demand/female-withdraw and female-demand/male-withdraw – were included in parallel for linking financial well-being to marital outcomes. Separate analyses were conducted for females and males across the six marital outcomes.

When interpreting results with parallel multiple mediation, the specific indirect effect through any particular mediator 'M' is not equivalent to the indirect effect through M alone (except in the unlikely case that all mediators are uncorrelated). Instead, the specific indirect effect through M represents "the ability of M to mediate the effect of X on Y conditional on the inclusion of the other mediators in the model" (Preacher & Hayes, 2008, pp. 881-882). Given the correlation between demand/withdraw patterns identified in Table 3.1, the effects of one or both mediators in the current study may be attenuated. Following recommended guidelines for multiple mediation (Preacher & Hayes), the initial focus of results involved investigating the total indirect effect. Consideration of specific indirect effect significance occurred only when the total indirect effect was non-significant.

Table 3.2 summarizes indirect effects from the multiple mediation models. For females, results suggest that, taken as a set, female-demand/male-withdraw and male-demand/female-withdraw significantly transmit the effect of financial well-being to each of the six marital outcomes, as zero is consistently not contained in the confidence interval for the total effect. The direction of the paths from financial well-being to each of the two mediators (i.e., a_1 and a_2) indicated lower financial well-being to be significantly associated with higher demand/withdraw

behaviors (both male- and female-initiated demanding). Also, each of the demand/withdraw behaviors was similarly associated with lower satisfaction, consensus, cohesion, and dedication, as well as higher conflict and dissolution risk (paths b_1 and b_2; tabulated results not shown). The non-significant specific indirect effect of female-demand/male-withdraw in certain female models suggests this pattern does not significantly contribute to the indirect effect above and beyond that of male-demand/female-withdraw.

A slightly more nuanced set of results appears among males. Similar to females, male-demand/female-withdraw and female-demand/male-withdraw collectively mediated the association between financial well-being and outcomes of marital satisfaction, cohesion, and conflict. Among the other marital outcomes (consensus, dedication, and dissolution risk), the set of total demand/withdraw patterns did not appear to mediate the pathway linking financial well-being to marital outcomes. Rather, only female-demand/male-withdraw demonstrated a significant specific indirect effect; male-demand/female-withdraw was not significantly different from zero and had an indirect effect in the opposite direction. Significant path coefficients between financial well-being and gender-specific demand/withdraw patterns (a_1 and a_2 paths) as well as demand/withdraw patterns and marital outcomes (b_1 and b_2 paths) were in the expected direction, as found with female models.

[INSERT TABLE 3.2 HERE]

In sum, demand/withdraw patterns demonstrated significant indirect effects for the pathway linking financial well-being to all marital outcomes among husbands and wives, supporting Hypothesis 1. Gender-specific patterns (i.e., female-demand/male-withdraw) appeared singularly explanatory as a mediating variable for certain male outcomes, with total

couple demand/withdraw functioning as a mediator in all other instances studied. Based on these results, analyses proceeded to investigate the impact of perceived gratitude on this pathway.

Moderated Mediation with Perceived Gratitude.

Results from the second model of study (Figure 3.2) focused on three areas: (1) main effects of independent variables, particularly perceived gratitude; (2) joint effects of perceived gratitude with financial well-being and perceived gratitude with demand/withdraw, thereby testing the suggested protective function of gratitude; and (3) conditional indirect effects (i.e., moderated mediation), or the extent to which the indirect effect of financial well-being on each marital outcome through demand/withdraw communication depends on perceived gratitude.

Main and joint effects are depicted in Tables 3.3 and 3.4. To begin, Table 3.3 summarizes results from the first-stage of the model, highlighting predictive variables for levels of the mediating demand/withdraw variable employed in various models. Results indicate that among both females and males, financial well-being led to lower levels of total demand/withdraw communication. Additionally, greater perceived partner gratitude was significantly associated with lower total demand/withdraw patterns for females and males. For male models with the outcome of female-demand/male-withdraw, perceived gratitude again demonstrated a significant main effect, but financial well-being did not. Across all models, the interaction between financial well-being and perceived gratitude was not statistically significant, suggesting that the association between financial well-being and demand/withdraw communication did not depend on levels of perceived gratitude. Thus, Hypothesis 3a was not supported.

[INSERT TABLES 3.3 AND 3.4 HERE]

Table 3.4 summarizes results for the second stage of the moderated mediation model, examining direct and joint effects on various marital outcomes. Looking at direct effect results for females, perceived gratitude exhibited significant main effects across all marital outcomes. After controlling for all other variables, higher levels of perceived gratitude were associated with greater marital quality, supporting Hypothesis 2 for females. A second independent variable with consistent main effects was demand/withdraw. In this, demand/withdraw patterns were significantly associated with lower levels of marital quality on all six marital outcomes. Wives' financial well-being significantly predicted higher levels of marital satisfaction and relationship consensus and lower levels of conflict, even after accounting for levels of demand/withdraw, perceived gratitude, and control variables.

For males, significant main effects of perceived gratitude appeared in all four measures assessing positive dimensions of marital quality (i.e., satisfaction, consensus, cohesion, and dedication), and approached significance with relationship conflict. In all instances, perceived gratitude was positively associated with increased levels of marital quality (e.g., higher dedication, cohesion). The main effect of perceived gratitude on dissolution risk was non-significant, though this result should be qualified given the significant interaction between perceived gratitude and demand/withdraw in this model (to be discussed in more detail later in results). Thus, Hypothesis 2 was largely supported for males as well. Demand/withdraw communication also had consistent significant (or nearly-significant) main effects on all six marital outcomes, each in the expected direction. Financial well-being, while possessing a significant zero-order correlation with each of the husbands' marital outcomes, had an impact that waned once the effects of other variables were considered. Specifically, financial well-being

only maintained significance as a predictor variable in two models, with higher financial well-being associated with greater levels of dedication and lower levels of conflict.

[INSERT TABLE 3.4 HERE]

Comparisons of effect magnitudes provide additional notable findings. Specifically, values of standardized coefficients (tabulated results not shown) suggest that, relative to demand/withdraw, the impact had by perceived gratitude was of similar magnitude or greater for nearly every marital outcome among both females and males. Only with relationship conflict did demand/withdraw possess a standardized coefficient of greater magnitude than perceived gratitude. Moreover, among males' outcomes of relationship consensus, cohesion, and dedication, the coefficient of perceived gratitude was more than twice the order of magnitude than demand/withdraw (e.g., for male dedication: β_{grat}= .30, $\beta_{D/W}$ = -.14). Similarly, for females, perceived gratitude coefficients were twice the order of magnitude relative to demand/withdraw in regards to marital satisfaction, relationship consensus, and cohesion.

The two interaction terms contained in these analyses also afforded information of interest. The first interaction term – between financial well-being and perceived gratitude – was non-significant across all outcomes for both female and male respondents, leading to Hypothesis 3c being rejected. Thus, any effect of financial well-being/financial distress on each of the marital outcomes, after accounting for other variables included in the model, did not depend on levels of perceived gratitude.

In contrast, a significant interaction between perceived gratitude and demand/withdraw appeared in four instances: females' and males' dissolution risk, females' marital satisfaction, and females' dedication. Thus, the impact of demand/withdraw on these marital outcomes varied according to levels of perceived gratitude. To investigate this finding in more detail,

simple slope tests were performed for each of the four cases. Figure 3.3 shows these results. Supporting Hypothesis 3b, the presence of higher levels of perceived gratitude reduced the negative impact of higher levels of demand/withdraw communication. Greater perceived gratitude, in essence, buffered wives' marital satisfaction and dedication from the characteristic declines associated with higher levels of demand/withdraw as well as buffered husbands' and wives' dissolution thoughts from the typical increases that result as demand/withdraw levels rise.

[INSERT FIGURE 3.2 HERE]

Lastly, the presence of a significant interaction effect in certain models offers the possibility for moderated mediation, namely that the indirect effect of financial well-being through demand/withdraw is conditioned on level of perceived gratitude. The test of such an effect occurs in an analogous manner to testing interaction effects for moderation, in that the indirect effect is examined at various values of the moderator and corresponding inferential statistical tests are examined at these values (see Hayes, 2012). A summary of these results are shown in Table 3.5.

[INSERT TABLE 3.5 HERE]

With respect to outcomes of females' marital satisfaction and dedication, the indirect effect was consistently positive but decreasing in magnitude at higher levels of perceived gratitude. The 95% bootstrapped confidence interval for the conditional indirect effect contained zero for those high (one standard deviation above the mean) in perceived gratitude, thus indicating moderated mediation. Thus, couple demand/withdraw patterns mediated the effect of financial wellness on females' marital satisfaction and dedication, but only among those with low and moderate levels of perceived gratitude. In a similar fashion, the indirect effect on females' dissolution risk approached zero with higher levels of perceived gratitude. Among those

at high levels of perceived gratitude, the bootstrapped confidence interval for the indirect effect again contained zero, suggesting that only among those with low or average levels of gratitude does an impact of financial well-being on females' dissolution risk occur through demand/withdraw communication. For the model involving male dissolution risk, results indicated that the indirect effect no longer existed across all levels of gratitude, thus precluding any inferences on conditional effects.

Control Variables

Lastly, review of findings related to control variables revealed few significant main effects. The outcome of female marital satisfaction contained the greatest number of significant control variables, namely marital duration, education, and having children. Beyond this, in only two other models did a control variable (presence of children [for male marital satisfaction] and first marriage [for female relationship cohesion]) appear statistically significant. Hence, the majority of variance in marital outcomes was explained by dynamic interpersonal factors and processes (e.g., demand/withdraw, perceived gratitude), and to a somewhat lesser degree, external stress (e.g., financial well-being). Once these factors are considered, static demographic variables appeared less influential.

Discussion

The present study converges two areas of growing interest in marital research, namely pathways of influence linking external stress to marital outcomes (e.g., Neff, 2012) and the role of gratitude in promoting and maintaining relationship well-being (e.g., A. Gordon et al., 2012). Overall, results from the multiple mediation and moderated mediation models provide insight into the interplay between financial distress, demand/withdraw, perceived partner gratitude, and various marital outcomes. In doing so, greater understanding appears related to the two main

marital processes of interest – one well-established in marital research (demand/withdraw) and another recently receiving increased attention (gratitude).

Building upon previous research (e.g., Falconier & Epstein, 2011b; Wilmarth, 2012), demand/withdraw functioned to mediate the association between an individual's financial distress and various marital outcomes. This mediation effect appeared across all marital outcomes for both females and males, highlighting the role of demand/withdraw in the impact of financial distress on marital quality. Further, the multiple mediation model found that this indirect effect was accounted for by the set of dual mediators (i.e., female-demand/male-withdraw and male-demand/female-withdraw) in all marital outcomes for females. For males, total couple demand/withdraw appeared as a significant mediator in three instances (satisfaction, cohesion, and conflict) and female-demand/male-withdraw as the significant mediator for three other outcomes (consensus, dedication, and dissolution risk). Thus, among females, the negative impact of financial distress on marital outcomes was experienced due to increases in both male-demand/female-withdraw and female-demand/male-withdraw patterns, which in turn negatively impacted marital outcomes. However, for men experiencing financial distress, the specific pattern of female-demand/male-withdraw may be the more influential link to marital outcomes.

Turning attention to perceived gratitude, notable findings emerged with respect to main and joint effects. Perceived gratitude from one's partner were favorably associated with nearly all marital outcomes, a finding that held for both females and males. Thus, not only does possessing gratitude *for* one's partner lead to favorable relationship outcomes (Algoe et al., 2010; A. Gordon et al., 2012; Lambert & Fincham, 2011), but as shown by this study, perceiving gratitude *from* one's partner also appears to strengthen relationships. This beneficial impact of

perceived partner gratitude was found across multiple dimensions, as previous writing has alluded (Fincham & Beach, in press).

Joint effects of perceived gratitude provide some support for its suggested protective role in a marriage. This function of perceived gratitude appeared exclusively through its ability to buffer negative internal dynamics (i.e., demand/withdraw communication; see line 2 in Figure 3.2) and less with altering negative external events (i.e., poor financial well-being; see line 3). Thus, of the various protective couple processes previously identified, perceived gratitude demonstrated a pattern of findings most similar to positive affect and its ability to mitigate the typical declines in marital satisfaction associated with negative communication skills (M. Johnson et al., 2005).

The joint effect of perceived gratitude with demand/withdraw appeared among three marital outcomes for females versus only one for males, tentatively suggesting that perceived partner gratitude may have a greater protective effect on females' marital outcomes than males'. Previous work has found no differences between genders in levels of possessed or expressed gratitude towards one's spouse (C. Gordon et al., 2011), but no prior work has extended this to consider gender differences for gratitude as a buffer for marital outcomes. To the extent that wives' sense of being cared for and valued is more reactive to negative communication patterns, perceived partner gratitude can logically be a protective factor of greater impact for females.

Further, comparisons of standardized coefficients revealed perceived gratitude accounted for variability in aspects of marital quality among females and males at equivalent or greater levels than demand/withdraw. Between the two constructs, demand/withdraw has clearly received the overwhelming amount of attention in marital research, yet this may be a prominent oversight. Echoing recent comments from other relationship researchers, gratitude seems to be

"vital for the maintenance of existing interpersonal bonds, such as romantic relationships" (A. Gordon et al., 2012, p. 257).

Why does gratitude have this effect? As one explanation, mutually experiencing, extending, and receiving gratitude can set in motion a positive upward spiral of mutual growth (Wieselquist, Rusbult, Foster, & Agnew, 1999). In this, perceiving partner gratitude and appreciation leads individuals to be more grateful, which, in turn, causes the individual to perform more relationship maintenance behaviors. Such behaviors then produce corresponding perceived gratitude by the partner, which initiates a similar sequence in the other partner, thus continuing the cycle (A. Gordon et al., 2012; Kubacka et al., 2011). Secondly, previous writings (Algoe et al., 2010; Kubacka et al., 2011; Lambert et al., 2010) have also emphasized gratitude as a key signal of a communal (rather than exchange) relationship orientation, one that is characterized by mutual concern for partner well-being and each partner giving help and benefits as needed rather than on the basis of quid pro quo reciprocity (Clark & Mills, 1979). As illustrated in the current work, gratitude may help to both create (main effect findings) and restore (joint effects findings) a supportive, communal relationship. In sum, when mutual expressions of gratitude are present within a union, a relationship environment appears to be fostered that leads each person to feel appreciated and valued, motivates responsive pro-relationship maintenance behaviors, engenders favorable views of the partner and the relationship, and offsets the deleterious effects induced by negative behaviors and events. Thus, gratitude may help to both *form* communal-oriented relationships as well as *keep* communal relationships as communal and not revert back to exchange-oriented (also see Algoe & Haidt, 2009).

Implications

Findings from this study offer important implications for research and practice. To begin, addressing the experience, expression, and perception of gratitude in marital relationships seem particularly warranted for attention. Given the demonstrable effects in both the current and previous research, the marked inattention to gratitude and appreciation suggests marital researchers may be omitting a key process related to the development and maintenance of these unions. The recent development of measures to assess gratitude – both in terms of being grateful and perceiving partner gratitude (A. Gordon et al., 2012; Lambert & Fincham, 2011) – provides researchers with improved means for including this construct in future efforts.

Secondly, the protective effect of gratitude against detrimental communication patterns offers a potentially promising new area of assisting couples. The thrust of most couple and relationship education programming concentrates on problem-solving and communication skills, the impact of which appears modest on average (Blanchard, Hawkins, Baldwin, & Fawcett, 2009). To the degree that gratitude is a more malleable factor than communication patterns, efforts to target this construct may assist in preventative and intervention marital strengthening efforts regardless of any changes that occur in problem-solving and couple communication skills.

Current findings also highlight how efforts to encourage and enhance gratitude in romantic relationships would be short-sighted to singularly focus on individuals' experience of being grateful. In the context of intimate relationships, each partner perceiving gratitude and appreciation from their partner also seems pivotal. Practically, this could include ensuring couples devote attention to expressing appreciation for intentional efforts that one partner performs for the benefit of the other person, their relationship, or their lives together (e.g., performing household labor; Nock, 2001).

Some experimental programs designed to enhance gratitude have begun to emerge (for individual level, see A. Wood et al., 2010, and for interpersonal level, see Fincham & Beach, in press, and Leong, 2009). Initial efforts to increase married couples' gratitude demonstrate positive effects, with one longitudinal study demonstrating increases in both partners grateful mood via one of two interventions: having one partner keep a daily gratitude journal or overtly express greater amounts of gratitude to the other (Leong, 2009). Additionally, though not framed as an intervention, couples participating in a 14-day daily dairy study involving nightly assessments of different forms of gratitude demonstrated significant increases over time in levels of reported expressed gratitude (C. Gordon et al., 2011). Importantly, increases did not appear for perceived gratitude or relationship satisfaction, which were also measured daily. Thus, simply asking individuals to daily report their levels of expressed gratitude may help prime individuals to be more verbally expressive of gratitude to their partner. As an important qualification, all gratitude-enhancement efforts must avoid implementing gratitude expressions that the recipient perceives as lacking sincerity, which (not surprisingly) decrease the positive impact of gratitude (Leong, 2009).

As a final implication, the consistent indirect effects identified with demand/withdraw illustrate this communication pattern to be a dominant pathway by which financial distress affects marital outcomes. Accordingly, spouses can increase their understanding of how stress impacts their unions – such as increasing the tendency to engage in demanding or withdrawing behaviors – as well as strategies to combat its effects. In particular, this may assist spouses to avoid such behaviors themselves during times of stress and be less judgmental of or reactive to their partners' behaviors when in similar conditions (Neff, 2012).

Limitations and future directions

Certain limitations merit consideration when interpreting findings from this study. First, the cross-sectional nature of the data hinders the ability to make strong causal statements about the associations. In recognition of this, the presentation of results has attempted to avoid language heavily indicative of causality. The paths in the study models are, however, consistent with other approaches linking gratitude to relationship satisfaction (Algoe et al., 2010) and follow previously-supported models of stress and relationship development (e.g., Conger et al., 1999; Ledermann et al., 2010), providing support for the directionality of impact presently outlined. Second, information was only available from one spouse in the marital union, precluding the possibility of exploring dyadic analyses. Information from both spouses would permit greater understanding of whether spousal reports of perceived partner gratitude align with their partners' reports of perceived gratitude. Further, dyadic analyses would be able to test partner effects from personal stressors on levels of gratitude expression. Such analyses immediately lend themselves to future research. Lastly, sample size limitations (particularly for males) and measurement error in composite variable computations both increase the likelihood of Type II error, particularly for moderating terms (Aguinis, 1995). Thus, the results presented here are likely conservative estimates of any protective effects of perceived gratitude. Future research with larger samples and a collective set of measures with less measurement error may be more likely to detect main and moderating effects. Hence, this limitation may actually provide somewhat stronger conclusions for the significant moderation findings that do appear, in light of their lowered likelihood of identification.

Within models of external stress and marital functioning, additional work can begin to consider how to depict the boundaries conditions (i.e., moderators) relating to the proposed

pathways. As found in this study, under certain conditions, the mediating interpersonal variables no longer function as such pathways. While direct path models possess conceptual simplicity, their adequacy in sufficiently classify how constructs are interrelated may be limited.

Levels of gratitude in a relationship (both being grateful and perceived partner gratitude) are clearly not static entities, but likely to fluctuate over time. As such, future longitudinal efforts could be devoted to identifying the degree of stability versus change in various types of gratitude over time. As gratitude fluctuates, predictors could be included in models to see their potential to account for above- or below-average levels of gratitude (similar to analyses between stress and relationship reactivity by Neff & Karney, 2009). Longitudinal efforts could also investigate the "spillover" effect from gratitude onto other pro-social cognitions, emotions, and behaviors, a potential impact various authors have also suggested (Fincham & Beach, in press; Kubacka et al., 2011). Spillover thus far in marital scholarship has been typically described in relation to external stress and hence carried a negative connotation (e.g., Brock & Lawrence, 2008). However, shifting attention to identifying catalysts for "positive spillover" offers new and exciting avenues for future research.

Lastly, as mentioned elsewhere (Kubacka et al., 2011), comparison studies could examine if and how dimensions of gratitude differ based on characteristics of the relationship (e.g., dating, cohabitation, or married; children in the home; employment status of spouses). For instance, perceived partner gratitude may be especially relevant in marital relationships, given the more pronounced effect in spouses (compared to those in dating relationships) that feeling loved has in corresponding views of one's partner (S. Murray, Holmes, Griffin, Bellavia, & Rose, 2001). In such long-term unions, habituation can lead partners to neglect, ignore, or forget the various acts each person does for the relationship, causing spouses to no longer perceive

being valued, cared for, or appreciated as they once were, a prominently-cited reason for divorce (Gigy & Kelly, 1993). As such, declines in gratitude could be a main catalyst for deterioration in relationship quality and stability.

Conclusion

In an age when feelings of love – and not duty – tie marital unions (Coontz, 2005), ensuring each partner feels valued and appreciated may be increasingly central for the stability of these unions. As such, mutually expressing and perceiving gratitude entails a foundational process in modern marriages. Whether by its direct impact on raising marital quality or protective influence against the detrimental effects of negative communication, results from the present study add to the literature that emphasize the important role gratitude – and perceived gratitude in particular – has in marriage. For spouses seeking to maintain marital quality, a simple and sincere 'thank you' really does appear to be nice.

Table 3.1
Correlation Matrix and Descriptive Statistics for Study Variables (pairwise deletion)

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Fin. Wellness		.92/.91	-.209**	-.174**	-.205**	.159**	.215**	.206**	.095	-.216**	-.168**	.176**
2. Total Couple D/W		-.243**	.77/.77	.903**	.881**	-.294**	-.297**	-.326**	-.303**	.306**	.328**	-.315**
3. Fem. demand / Male withdraw		-.206**	.918**	.69/.65	.592**	-.233**	-.288**	-.290**	-.267**	.232**	.316**	-.253**
4. Male demand / Fem. withdraw		-.231**	.879**	.618**	.58/.65	-.311**	-.245**	-.293**	-.269**	.327**	.269**	-.313**
5. Perceived gratitude		.147	-.363**	-.383**	-.249**	.91/.89	.441**	.466**	.550**	-.260**	-.389**	.332**
6. Marital satisfaction		.206**	-.277**	-.292**	-.195*	.287**	---	.364**	.344**	-.336**	-.620**	.530**
7. Relationship Consensus		.105	-.297**	-.321**	-.203**	.528**	.351**	.85/.80	.365**	-.313**	-.308**	.295**
8. Relationship Cohesion		.162*	-.358**	-.336**	-.299**	.544**	.242**	.445**	.70/.61	-.266**	-.315**	.321**
9. Relationship Conflict		-.276**	.296**	.274**	.257**	-.312**	-.332**	-.410**	-.245**	.67/.58	.386**	-.234**
10. Dissolution Risk		-.166*	.193*	.281**	.040	-.328**	-.375**	-.416**	-.262**	.350**	.68/.62	-.381**
11. Dedication		.253**	-.264**	-.284**	-.176*	.412**	.286**	.346**	.421**	-.307**	-.328**	.62/.71
Females (N=293)	***M***	7.00	2.86	3.08	2.63	4.23	82.62	5.06	.01	2.72	1.16[a]	42.80
	(SD)	(2.31)	(1.82)	(2.14)	(1.94)	(.90)	(24.63)	(.79)	(.69)	(1.03)	(.28)	(9.76)
	n	293	292	290	290	289	290	292	291	289	288	292
Males (N=175)	***M***	7.41	2.93	3.16	2.72	4.29	85.71	5.09	-.03	2.60	1.11[a]	43.83
	(SD)	(2.38)	(1.70)	(2.07)	(1.71)	(.88)	(21.88)	(.83)	(.72)	(1.05)	(.25)	(9.51)
	n	175	174	173	173	174	173	172	175	168	171	175

Note. Correlations for females (n = 293) displayed above the diagonal and correlations for males (n = 175) displayed below the diagonal. Reliabilities listed on diagonal (male/female). Means, standard deviations, and sample size for construct are presented in the horizontal rows at bottom of table. Letter superscript on mean value denotes significant gender difference. Composite variable means computed from valid cases of that construct.
$^{\dagger}p < .10$. * $p < .05$. ** $p < .01$.

Table 3.2
Summary of Indirect Effects

	Females (N=293)			Males (N=175)		
	Indirect Effect	Bootstrap LLCI	Bootstrap ULCI	Indirect Effect	Bootstrap LLCI	Bootstrap ULCI
			Marital Satisfaction			
Total Indirect Effect	**0.509**	**0.118**	**1.108**	**0.461**	**0.003**	**1.156**
F Demand / M Withdraw	0.327	0.047	0.853	0.398	-0.029	1.320
M Demand / F Withdraw	0.182	-0.111	0.761	0.063	-0.599	0.688
			Relationship Consensus			
Total Indirect Effect	**0.019**	**0.006**	**0.038**	0.018	-0.002	0.041
F Demand / M Withdraw	0.008	0.001	0.023	**0.021**	**0.004**	**0.053**
M Demand / F Withdraw	0.011	0.001	0.033	-0.003	-0.026	0.020
			Relationship Cohesion			
Total Indirect Effect	**0.016**	**0.005**	**0.032**	**0.022**	**0.006**	**0.045**
F Demand / M Withdraw	0.006	0.000	0.019	0.015	0.002	0.039
M Demand / F Withdraw	0.009	0.001	0.024	0.008	-0.007	0.026
			Dedication			
Total Indirect Effect	**0.235**	**0.068**	**0.511**	0.161	-0.033	0.405
F Demand / M Withdraw	0.053	-0.015	0.196	**0.210**	**0.035**	**0.634**
M Demand / F Withdraw	0.182	0.042	0.465	-0.049	-0.414	0.150
			Relationship Conflict			
Total Indirect Effect	**-0.025**	**-0.049**	**-0.009**	**-0.025**	**-0.061**	**-0.003**
F Demand / M Withdraw	-0.003	-0.017	0.004	-0.014	-0.050	0.003
M Demand / F Withdraw	-0.022	-0.051	-0.006	-0.011	-0.054	0.014
			Dissolution Risk			
Total Indirect Effect	**-0.007**	**-0.014**	**-0.002**	-0.002	-0.007	0.005
F Demand / M Withdraw	-0.004	-0.011	-0.001	**-0.007**	**-0.019**	**-0.001**
M Demand / F Withdraw	-0.002	-0.009	0.001	0.005	0.000	0.017

Note. F = Female. M = Male. LLCI (ULCI) = Lower (Upper) Limit 95% Confidence Interval for bias-corrected bootstrapping (5,000 samples). Bolded items reflect indirect pathway tested in moderated mediation model (Figure 3.2).

Table 3.3

Predictors of Demand/Withdraw Patterns, with Controls

	Females (N=293)		Males (N=175)[1]			
Mediator	Couple Demand/Withdraw		Couple Demand/Withdraw		F Demand/M Withdraw	
Predictor	*B*	se	*B*	se	*B*	se
Financial Well-being	-0.105*	0.05	-0.114*	0.05	-0.082	0.06
Perceived gratitude	-0.526**	0.12	-0.717**	0.15	-0.986**	0.17
Fin.Well-being x Perc. Grat.	0.043	0.04	-0.104	0.07	-0.160†	0.09
Mar. Duration	-0.005	0.01	-0.002	0.01	-0.006	0.01
First Marriage	-0.265	0.23	-0.218	0.29	-0.468	0.34
Education	-0.099†	0.06	-0.032	0.07	-0.072	0.08
Have Children	0.127	0.27	0.291	0.31	0.438	0.37
constant	0.784†	0.46	0.211	0.50	0.622	0.60
R^2	.130**		.185**		.210**	

Note. F = Female. M = Male. [1]Per results from Table 3.2, for males, Couple Demand/Withdraw employed as intervening variable for outcomes of satisfaction, cohesion, and conflict, and Female-demand/Male-withdraw employed as intervening variable for outcomes of consensus, dedication, and dissolution risk

$^{\dagger}p < .10$. * $p < .05$. ** $p < .01$.

Table 3.4
Predictors of Marital Outcomes

	Satisfaction		Consensus		Cohesion		Dedication		Conflict		Dissolution Risk	
Predictor	*B*	*se*	*B*	*se*	*B*	*se*	*B*	*se*	*B*	*se*	*B*	*se*
							Females (N=293)					
Fin. Well-being	1.54**	0.57	0.04*	0.02	-0.01	0.02	0.25	0.24	-0.07**	0.03	-0.01	0.01
Demand/Withdraw	-2.16**	0.73	-0.08**	0.02	-0.05**	0.02	-1.04**	0.30	0.13**	0.03	0.032**	0.01
Perceived gratitude	8.67**	1.67	0.34**	0.05	0.39**	0.04	2.13**	0.66	-0.18*	0.07	-0.07**	0.02
FW x Felt Grat	0.27	0.66	0.03	0.02	0.02	0.02	0.19	0.25	0.01	0.03	-0.04	0.01
D/W x Felt Grat.	1.87*	0.78	0.03	0.02	0.02	0.02	0.97**	0.31	-0.01	0.03	-0.03**	0.01
Mar. Duration	0.19*	0.09	0.00	0.00	-0.00	0.00	0.03	0.04	-0.01†	0.00	-0.00	0.00
First Marriage[a]	0.51	2.85	0.04	0.09	0.18*	0.08	1.88	1.19	0.09	0.13	0.00	0.03
Education	-1.54*	0.73	-0.04†	0.02	0.03	0.02	0.40	0.30	0.03	0.03	0.01	0.01
Have Children[a]	-9.30**	3.40	-0.06	0.11	-0.03	0.09	-2.16	1.41	0.18	0.15	0.03	0.04
Constant	95.50**	5.72	5.29**	0.18	-0.20	0.15	40.64**	2.39	2.51**	0.26	1.11**	0.07
R^2	.300**		.282**		.346**		.211**		.163**		.262**	
							Males (N=175)					
Fin. Well-being	1.32†	0.72	0.022	0.03	0.026	0.02	0.88**	0.30	-0.10**	0.03	-0.01	0.01
Demand/Withdraw	-2.24*	1.03	-0.065*[b]	0.03	-0.07*	0.03	-0.63†[b]	0.35	0.12*	0.05	0.02†[b]	0.01
Perceived gratitude	5.18*	2.34	0.36**	0.08	0.41**	0.07	3.28**	0.97	-0.19†	0.11	-0.04	0.03
FW x Perc. Grat.	1.23	1.02	-0.03	0.03	0.00	0.03	-0.30	0.40	-0.00	0.05	0.00	0.01
D/W x Perc. Grat.	0.99	1.38	0.028	0.03	-0.02	0.04	0.31	0.36	-0.04	0.06	-0.03**	0.01
Mar. Duration	0.15	0.10	0.005	0.00	-0.01†	0.00	-0.07†	0.04	-0.00	0.01	-0.00†	0.00
First Marriage[a]	5.77	3.77	-0.17	0.13	0.02	0.11	2.10	1.59	0.11	0.19	-0.04	0.04
Education	-2.19*	0.87	-0.04	0.03	-0.01	0.03	-0.36	0.37	0.05	0.05	-0.01	0.01
Have Children[a]	-6.84†	3.98	-0.15	0.14	-0.05	0.12	1.47	1.68	0.06	0.19	0.02	0.04
Constant	97.55**	6.52	5.47**	0.23	0.20	0.19	45.63**	2.76	2.30**	0.34	1.21**	0.07
R^2	.216**		.325**		.351**		.242**		.194**		.239**	

Note. [a] 1= *Yes*. [b] Per results from Table 3.2, Demand/Withdraw measure reflective of female-demand/male-withdraw (all other instances reflect total demand/withdraw within couple).
† $p < .10$. * $p < .05$. ** $p < .01$.

Table 3.5

Summary of Conditional Indirect Effects

Level of moderator (Perceived gratitude)	Indirect Effect	Bootstrap 95% Confidence Interval	
		Lower Limit	Upper Limit
Financial Well-being ⇨ Couple Demand/Withdraw ⇨ Marital Satisfaction (female)			
Low	0.548	0.100	1.352
Medium	0.226	0.046	0.562
High	0.032	-0.070	0.362
Financial Well-being ⇨ Couple Demand/Withdraw ⇨ Dedication (female)			
Low	0.272	0.051	0.666
Medium	0.109	0.021	0.275
High	0.012	-0.042	0.171
Financial Well-being ⇨ Couple Demand/Withdraw ⇨ Dissolution Risk (female)			
Low	-0.009	-0.020	-0.002
Medium	-0.003	-0.007	-0.001
High	0.000	-0.003	0.002
Financial Well-being ⇨ Female Demand / Male Withdraw ⇨ Dissolution Risk (male)			
Low	0.003	-0.004	0.019
Medium	-0.001	-0.005	0.000
High	0.003	-0.004	0.013

Note. 5,000 bias-corrected bootstrap samples. Lower and upper limits at 95% Confidence Interval.

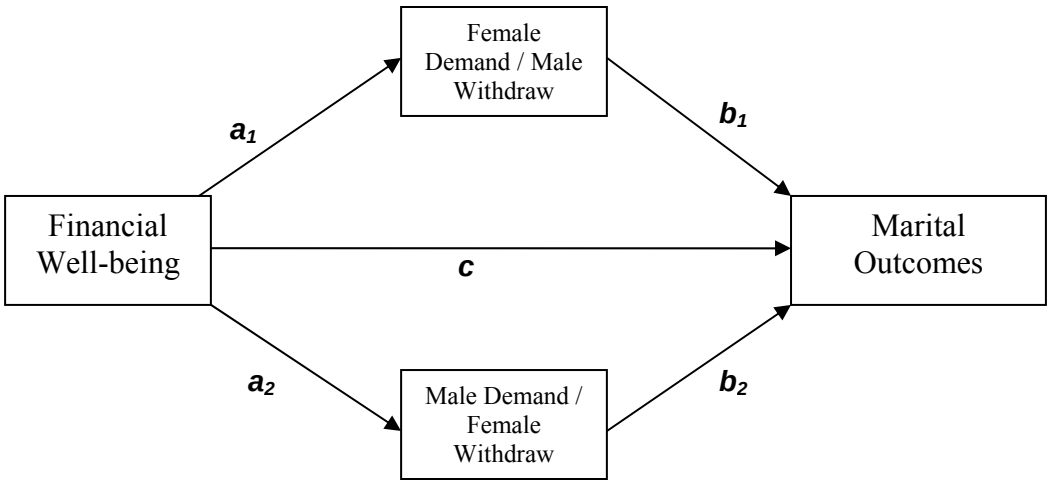

Figure 3.1. Multiple Mediation.

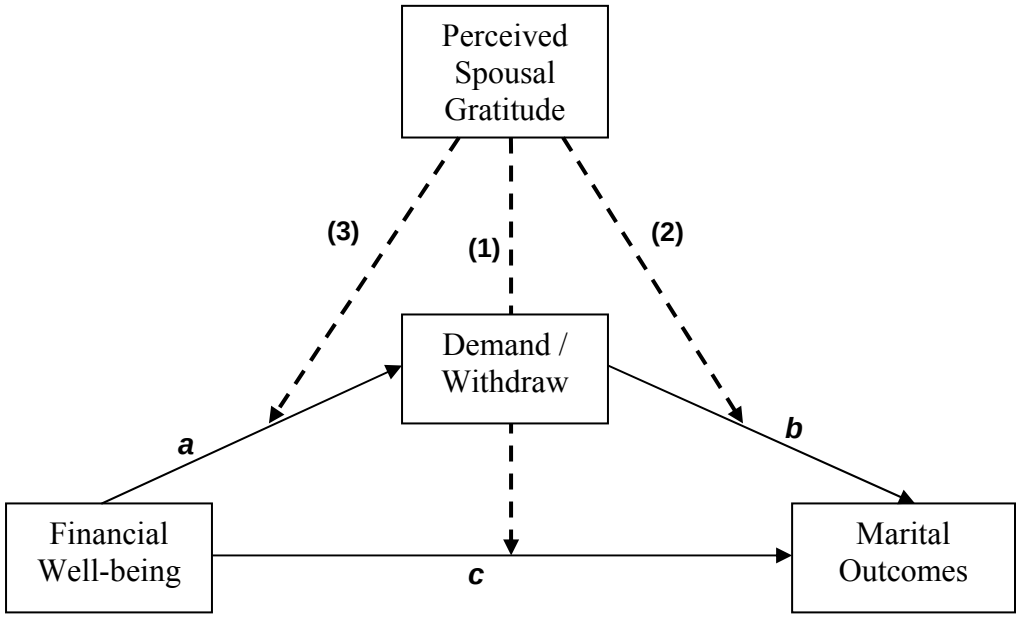

Figure 3.2. Moderated Mediation.

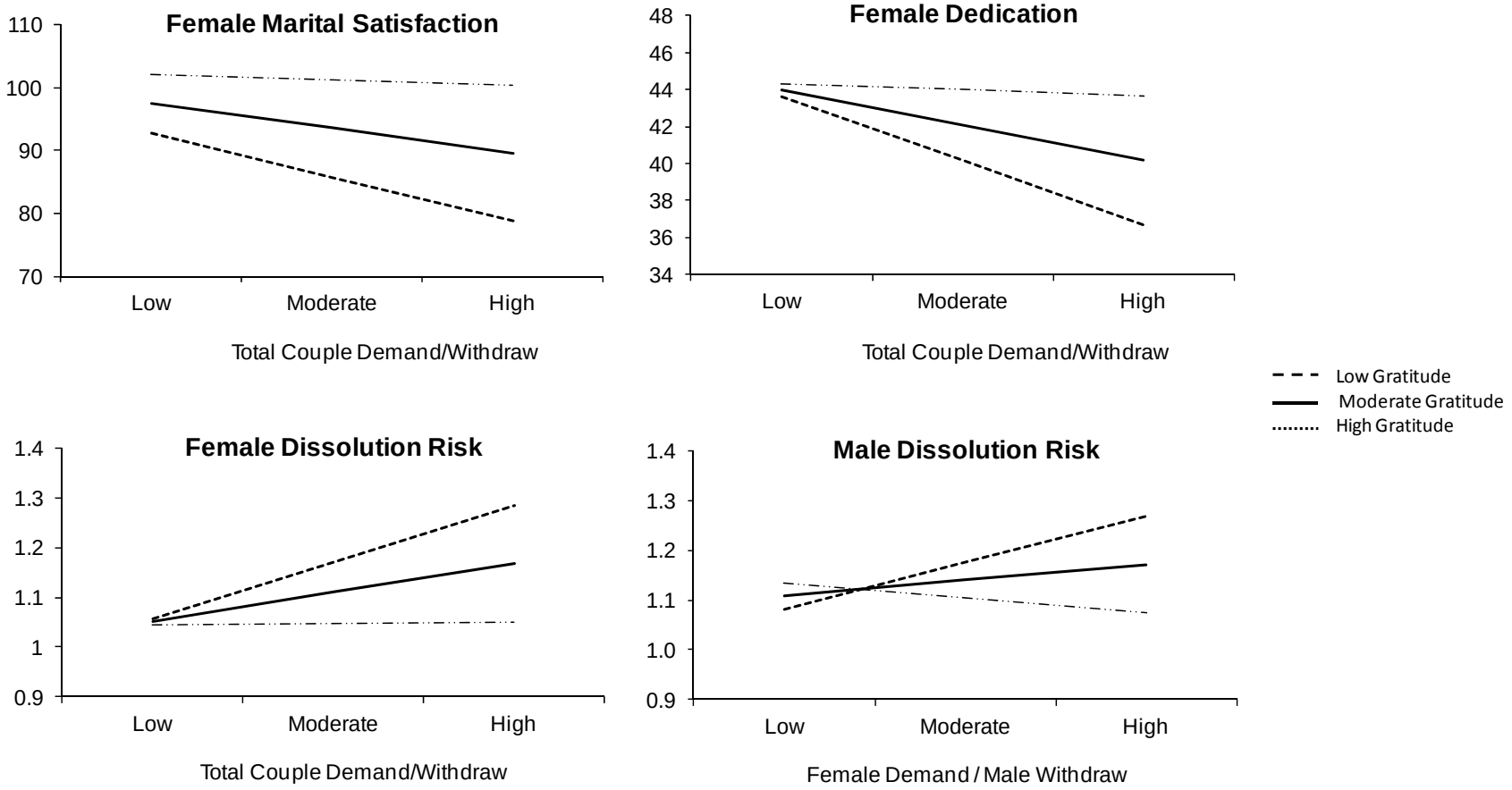

Figure 3.3. Effect of demand/withdraw on marital outcomes at different levels of perceived gratitude from partner.

CHAPTER 4

WITH A LITTLE HELP FROM *OUR* FRIENDS: COUPLE SOCIAL INTEGRATION IN MARRIAGE [6]

[6] Barton, A. W., Futris, T. G., & Nielsen, R. B. To be submitted to *Journal of Marriage and Family*.

Abstract

While the benefits of social integration have been often identified at the individual level, far less research has considered the degree of connectedness a couple has with their social context and its subsequent implications. Using a sample of 492 married individuals, the present study explored both predictors of couple social integration as well as its main and protective effects on marital satisfaction. First, two significant determinants (financial distress and racial status) were identified for couple social integration. Second, results from latent interaction structural equation modeling indicated couple social integration to be associated with greater marital satisfaction and, importantly, to offset declines in marital satisfaction associated with financial distress and residing in more urban areas. In light of cultural shifts that have led to lower levels of communal ties and involvement throughout society, findings highlight couple social integration as an increasingly pertinent variable for consideration in marital research and enrichment efforts.

Introduction

In characterizing American living, demographers and sociologists have commonly noted a shift away from community-oriented married and family life and towards an increasing degree of privatization and individualism (e.g., Cherlin, 2009). Communal ties and involvement are weakening and the private sphere is, in a sense, becoming ever more private. In *Bowling Alone*, Putnam (2000) formidably documents the extensive nature of declines in social involvement appearing across all parts of American society with respect to both formal (e.g., civic participation) as well as informal (e.g., sharing meals with friends) means of social connectedness. Married life has also been affected by this cultural shift, and unions are consequently more likely to be detached from broader community ties and obligations. To illustrate, longitudinal research comparing married couples in 1980 to couples in 2000 finds spouses in more recent years to report fewer mutual friends and decreased joint participation in community organizations (Amato et al., 2007).

The significance of this shift begins to emerge when considering the impact social integration has in the lives of individuals and marital unions. Among individuals, well-documented associations appear between higher levels of social integration and better personal well-being (Thoits, 2011). Though not as extensively researched, social integration for couples also seems beneficial for marital well-being, as more isolated couples tend to have less satisfying and more troubled marriages compared to couples with supportive networks of kin and friends (see Amato et al., 2007, p. 176). The decline in social connectedness across society along with evidence indicating its salutary benefits suggests couple social integration to be a pressing topic for further exploration within marital research.

To date, research on couple social integration has predominantly documented levels of, and shifts in, its presence or absence over time along with direct associations with marital quality (e.g., Amato et al., 2007). Less attention appears related to questions regarding its determinants as well as how social integration interacts with other contextual factors to impact marital outcomes. The present study addresses these issues by first exploring demographic and contextual predictors of couple social integration. Secondly, the study estimates the extent to which couples' social integration directly affects levels of marital satisfaction as well as tests the ability of social integration to buffer the negative effects of contextual stressors. Namely, does social integration at the couple level protect marital satisfaction from declines associated with financial distress and urbanicity? In addition, the present sample contains married individuals with a wide range of marital durations, thereby facilitating generalizability of findings to couples across multiple life stages.

Literature Review

Social Integration

The construct of social integration has been extensively studied, with writing dating back to Emile Durkheim (1893), a foundational figure in the field of sociology. In scholarship since, its importance for individuals is commonly noted, being favorably associated with greater physical, behavioral, and psychological well-being (see Thoits, 2011). The unit of analysis in this research has almost exclusively remained at the level of the individual, focusing on the degree of instrumental and emotional connectedness a person has with their social context.

The study of social integration in relation to marriage, when occurring, has generally reflected a similar individual-level focus. That is, the integration of *each spouse* into aspects of social and community life is studied in relation to marital outcomes. Illustrative of this,

Voyanoff (2005) found spouses' individual reports of affective community resources (e.g., sense of community, neighborhood attachment, support from friends) to be associated with higher levels of marital satisfaction and lower levels of risk for dissolution. Higher amounts of and greater participation in community organizations have also both been positively correlated with time spent as a couple doing activities together (Wickrama, Lorenz, Conger, Matthews, & Elder, 1997) and general family satisfaction (Voydanoff, Donnellan, & Fine, 1988). Moreover, received support from friends, family, and in-laws specifically related to one's martial relationship has been found to predict greater marital success over time, an impact that did not also appear from having a good relationship with spouses' friends or general personal network support (Bryant & Conger, 1999). Additional research on social integration among married couples has explored being married as facilitating social integration (Stevens & Westerhof, 2006), social network density and composition between married and non-married (Hurlbert & Acock, 1990), and shifts (i.e., declines) in integration following divorce (Kalmijn & van Groenou, 2005). Most of these efforts have, however, again remained largely at the individual level.

A less-researched area of social integration in marriage entails the degree of connectedness a *couple* has with their social context. That is, how much joint involvement does the couple have in the broader community (i.e., structural social integration) as well as how much mutual support and attachment does the couple report with its surrounding environment (i.e., affective social integration)? At present, prior research considering married couples' social integration has typically measured structural aspects of social integration. In *Alone Together*, Amato and colleagues (2007) provide one of the most thorough investigations of social integration and marriage (at both the individual and couple level). Based on nationwide data sets

collected in 1980 and 2000, findings indicated a decline in both number of shared friends and number of shared group affiliations. Spouses who had more shared friends reported more positive marital interactions and fewer marital problems, illustrating its relevance to marital quality. Over time, this decline in shared friends was a significant factor in the decline in marital quality that occurred throughout society over the same 20 years (Amato et al.). Beyond shared friends and group affiliations, other assessments of structural aspects of couple social integration have included joint participation in religious activities (Mahoney et al., 1999) and in community, household, and socializing activities (Wickrama, Surjadi, & Bryant, 2011). These forms of couple integration have been positively associated with various dimensions of marital quality and health-promoting behaviors, respectively.

In addition to empirical findings, the importance of couple social integration has been noted descriptively as well. For instance, Stafford and Canary (1991) highlight "social networks" as one of five core maintenance strategies that promote relationship resilience, though studies building upon this work have not empirically tested its independent effect, relying instead on a combined measure of multiple maintenance strategies (e.g., Canary et al., 2002). The presence and importance of couple social integration within kinship and fictive kinship support networks has also been noted within particular racial minority populations (e.g., Hatchet & Jackson, 1992), including the ability of these networks to insulate individuals from negative psychological outcomes (e.g., Owen et al., 2012). Thus, previous studies suggest couple social integration to be highly favorable for marital unions, though the majority of this work has presently focused on structural rather than affective qualities of social integration. Further, the protective effect of couple social integration, while being emphasized, appears rarely tested analytically.

Contextual variables affecting social integration and marital satisfaction

The degree to which a couple is integrated with their surrounding context is likely shaped by various factors. Just as Pearlin (1989) noted for social support and integration at the individual-level, the availability and experience of social integration for couples is expected to "arise substantially out of contemporary and developmental conditions of life" (p. 308). The following discussion highlights particular situational, demographic, and community characteristics in relation to their potential to influence levels of social integration and marital satisfaction.

To begin, financial distress prominently emerges as a situational factor relevant to levels of both social integration and marital satisfaction. As suggested by the social support deterioration model (Barrera, 1986), individuals under higher levels of stress tend to report decreased amounts of social support. Multiple prior studies lend support for this model and the inverse association between stress and perceived social support (see Gjesfjeld, 2008), including findings that specifically relate higher financial distress to lower social support (Schulz et al., 2006). In regards to marital satisfaction, objective and subjective measures of financial distress have, on average, been repeatedly shown to be associated with poorer marital outcomes (Falconier & Epstein, 2011a).

Among personal demographics, potentially relevant variables include marital duration, previous marital history, and race. With length of marriage and marital satisfaction, cross-sectional findings demonstrate a u-shaped (i.e., concave up) association, with marital satisfaction being highest at early and late marital durations (VanLaningham et al., 2001).[7] With respect to marital duration and the criterion of social integration, a quadratic association may also exist,

[7] Prospective longitudinal study for the relationship between marital duration and marital happiness documents a negative cubic curve (rather than u-shaped) with steeper declines at early and late durations (VanLaningham et al., 2001).

albeit being concave down. Specifically, social integration may be lower at the onset of marriage when spousal networks contain less interdependence (Kearns & Leonard, 2004) and prior to rises in integration associated with raising children (Nomaguchi & Milkie, 2003) as well as lower among longer marital durations in later life, a period when social integration characteristically declines for all individuals (Shaw, Krause, Liang, & Bennett, 2007). This position differs slightly from previous work which found one aspect of couple social integration (percentage of shared friends) to be positively and linearly related with age (Amato et al., 2007).

Second, spouses' previous marital history may also possess an effect on marital satisfaction and social integration. Remarried individuals, compared to first-order marriages, report lower levels of marital stability (Sweeney, 2010), which may also correlate with lower marital satisfaction. For couple social integration, experiencing a divorce is generally associated with a decline in social integration for an individual (Kalmijn & van Groenou, 2005), though little previous work has investigated levels of integration (individual or couple) upon re-entry into marriage. Lastly, race may also effect marital satisfaction and social integration. While heterogeneity exists within races, racial minorities have been previously identified to report fewer shared friends than Whites (Amato et al., 2007) and marital satisfaction tends to be lower for certain races compared to Whites, including Blacks (Broman, 2005).

At a broader, more regional level, the degree of urbanicity or rurality within one's community may also alter levels of social integration and marital satisfaction. Population density, for instance, has been linked with marital instability, with individuals in urban areas having a higher risk of divorce than couples living in rural areas (Kalmijn & Poortman, 2006; Shelton, 1987). Explanations for this association are varied, including greater anonymity, availability of other partners, higher residential mobility, or unmeasured community

characteristics associated with urban areas, such as being more culturally liberal (see Lyngstad, 2011). With respect to social integration at the individual level, findings on community impacts are mixed. Traditionally, living in an urban environment has been perceived as deterring community engagement and social integration. Other writing, however, has taken a less critical view of greater urbanization, noting community characteristics (e.g., population density, city size, rural-urban division) do not affect individuals' levels of social integration (for review, see Hooghe & Botterman, 2012). Given these mixed findings, the present study aims to offer greater clarity into how one particular community characteristic (population density) is related to social integration for a married couple.

Present Study

Social integration as a whole has been commonly conceptualized along two main dimensions: one structural – such as participation in formal volunteering and amount of time spent with friends – and the other affective – such as perceived supportive friendships and a sense of community (Voydanoff, 2005). The present study focuses on the affective dimension, which reflects a more cognitive and perceptual aspect of social integration. Selection of this later area is supported by previous writing that suggests "the role of perception – and not structure components – is likely to more accurately depict the actual impact of social integration" (Turner & Turner, 1999, p. 303). Though others have argued conversely (Wickrama et al., 1997), the current perspective on social integration aligns with writing by House (1981), such that "social support is likely to be effective only to the extent perceived" (p. 27).

Two main areas of research inquiry framed the current study. First, couple social integration was treated as the outcome of interest and analyses conducted to identify its determinants. Based on the previous review of the literature, it was hypothesized that higher

levels of couple social integration would be predicted by lower financial distress, lower population density, and being White (Hypotheses 1.1 – 1.3). A curvilinear relationship was hypothesized for marital duration and social integration (Hypothesis 1.4). No *a priori* hypothesis was stated regarding the predictive ability of order of marriage (first-order versus higher-order). Second, analyses investigated the main effects of social integration and other previously-described variables on marital satisfaction as well as joint effects between social integration and certain contextual factors. Overall, it was hypothesized that higher levels of marital satisfaction would appear with greater couple social integration, lower financial distress, residing in less populated areas, being White, and in a first-marriage for both spouses (Hypotheses 2.1 – 2.5). Marital duration was expected to have a quadratic concave up relationship with marital satisfaction (Hypothesis 2.6).

Regarding joint effects, greater social support has commonly been described as "buffering" the effects of life stress for individuals (Cohen & Wills, 1985), with such support being more consequential in instances where stress exposure levels are relatively high (Turner & Turner, 1999). Among married individuals, greater levels of couple social integration have been proposed to function in a similarly protective fashion (Owen et al., 2012). Accordingly, social integration was expected to moderate any negative associations identified between financial distress and marital satisfaction (Hypothesis 3.1) and between population density and marital satisfaction (Hypothesis 3.2). As a final note, both sets of analyses controlled for gender. The first model accounted for gender as wives, given their more diverse social networks and sources of support than men (Stevens & Westerhof, 2006; Turner & Turner, 1999), may be more apt to view their marriage as more socially integrated within such networks as well. With respect to gender effects and marital satisfaction, findings are somewhat mixed (Kurdek, 2005), though

findings generally indicate husbands to report higher levels of marital satisfaction and other dimensions of marital quality (Amato et al., 2007; Voydanoff, 2005).

Method

Participants and Procedures

Adult residents residing in a southeastern state were contacted by phone in 2011 and asked to participate in a survey on financial management behaviors and relationship quality as part of a multidisciplinary research project entitled Healthy Families, Healthy Finances (Nielsen & Futris, 2011). To be eligible to participate, individuals had to be 18 years or older, currently married, and presently sharing a residence with their spouse. Selection of whether the husband or wife would complete the survey was randomized in an attempt to obtain equal percentages. Individuals were contacted using a random-digit dialed sampling of phone numbers across the state and completed the survey via a computer assisted telephone interviewing instrument. Rural telephone numbers were oversampled to increase geographic diversity.

A total of 9,170 phone numbers were called, with 1,008 successful contacts made (i.e., entry stored in database). The final sample size of 492 reflected all surveyed individuals who reported being married (n=512), less those who stopped participating in the survey before answering any items on the constructs of interest (n=20). Individuals comprising the final sample ranged in age from 21 to 86 years and had a median age of 51 years (M=51.32, SD=13.95; n=). A majority of respondents (63%) were female (n=465). Marital duration ranged from less than one year to 66 years (M=23.47, SD=16.25; n=488), 34% of the unions reflected re-marriages of one or both spouses (n=491), and 78% of participants reported having children (n=). Concerning race, the majority of the sample (75%) identified as White, 22% as Black/African American, 3% multi-racial, and 1% Asian American (n=459). Only 2% of

participants were Latino/a (n=). Highest level of education completed ranged from grade school to advanced/professional degree, with median level of completion being a bachelor's degree.[8] Median household income level was between $70-80,000, with 20% of households reporting incomes less than $50,000, 41% with household incomes between $50-90,000, and 39% with household incomes greater than $90,000.[9] This level, above the average for the state ($46,242 in 2010; Bureau of Labor Statistics, 2011), may be attributable to sample participants being mostly in middle- to later-life as well as recruitment procedures (i.e., individuals willing to participate in phone survey, predominately having home phone line).

Measures

Marital satisfaction. Individuals' satisfaction with their marriage was assessed via a one-item measure that asked "all things considered, how happy are you with your marriage" (10-point Likert). One-item indicators of marital satisfaction have been shown to be highly correlated with multi-items measures and provide similar results (D. Johnson, 1995). Further, the one-item measure maintains conceptual clarity in gauging individuals' subjective assessment of satisfaction with their union and avoids conceptual confusion with matters of relationship functioning that are embedded within other measures of marital satisfaction (see Fincham & Rogge, 2010). To correct for a right-skewed distribution, a squared variable transformation was performed prior to analysis.

Financial wellness. Individuals' reports of financial wellness/financial distress were assessed via the Personal Financial Wellness (PFW) Scale™ (Prawitz et al., 2006). This eight-item measure (10-point Likert scale) assessed the level of stress and well-being individuals

[8] Two responses were changed to missing, as their values were deemed impermissible. This included one marital duration value (73), as it exceeded the age of the individual as well as one education value (49), which was not in range of available options.

[9] Household income level percentages were based on imputed data, as 35% of data were missing for this variable due to either refusal to provide answer or stopping survey before reaching this penultimate question.

currently felt regarding their financial situation (α =.91). The PFW Scale™ identifies both objective ("How frequently do you find yourself just getting by financially and living paycheck to paycheck") and subjective (e.g., "How stressed are you about your personal finances in general") indicators of personal financial wellness. Given contractual obligations with survey developers and conventional usage of the PFW Scale™, higher mean composite scores reflected greater financial well-being/lower financial distress. Originally devised for a written (pen and paper) format, the measure has since been shown to be reliable and valid for use with a computer-assisted telephone interviewing instrument as well (Nielsen, 2010).

Couple social integration. Reports of couple social integration were assessed via the Couple Social Integration Measure (Stanley & Markman, 2007). This 4-item index asked respondents to indicate their degree of agreement (7-point Likert scale) regarding items such as "many of our friends are friends of both of us" and "we know people who care about us and our relationship." Though limited, previous research involving this construct (e.g., Owen et al., 2012) has documented acceptable levels of reliability (α =.69 and .78 at two different time points), consistent with the present study (α =.70).

Population density. Community level urbanicity (or its converse, rurality) was assessed via county population density. Overall, 115 counties were represented (72% of counties within the state), with number of participants per county ranging from 1 to 36. These counties were dispersed throughout the state and reflected 15 different metropolitan statistical areas (MSA), in addition to rural areas. The majority of individuals in the sample (78%) resided in an MSA, with the remaining in rural areas. Population density was computed by dividing the 2011 county population (U.S. Bureau of the Census, 2011) by its square mileage. Across all individuals, mean county population density was 770 individuals per square mile (*SD* = 789; range 8 –

2,611). For equivalent value purposes, population density in results reflects 1,000 people per square mile (range 0 – 2.6).

Accurately capturing the urban/rural continuum is difficult for any single dimension, and population density is no exception. Potential issues with using a regional population density measure include large geographic sizes and inability to assess proximity to nearby municipal regions. Characteristics of respondents' state of residence, though not abating all issues, favorably assist using this assessment, as the state contains a large number of counties relative to its size, thereby facilitating county-level assessments with greater proximity and specificity than other similarly-sized states. Further, this nature of assessment has been similarly employed by other studies that investigated community characteristics in relation to both community integration (Hooghe & Botterman, 2012) and marriage (Lyngstad, 2011). Analyses were also conducted using a urban/rural dichotomous variable based Beale code classification[10] (Economic Research Service, 2003). A similar pattern of results were found in both models. Population density was retained as it afforded a more descriptive, continuous measure and facilitated clearer interpretation when considering joint effects.

Plan of Analysis

Data were analyzed using structural equation models with maximum-likelihood estimation within Mplus 6.0 software (Munthén & Munthén, 2007). Latent variables were created for financial well-being/financial distress and couple social integration. Using latent variables permits improved assessment by allowing multiple indicators of a theoretical construct that accounts for measurement error associated with each item.

[10] Further classification by Beale code (i.e. metro county; non-metro but adjacent to a metro county; and non-metro, non-adjacent county) was not possible given small numbers in certain Beale subcategories.

The current study analyzed two separate models. The first model explored determinants of couple social integration, with the second model investigating predictors of marital satisfaction. Direct and joint effects were included in the second model, with joint effects tested using latent interactions (further described in the results section). Indicators of financial well-being and couple social integration were both mean-centered prior to inclusion in the second model to facilitate better interpretation of joint effects (Dalal & Zickar, 2012). The overall fit of models followed criteria by Marsh, Hau, and Wen (2004), in that "(TLI and CFI values) greater than .90 and .95 typically reflect acceptable and excellent fit to the data…(and) RMSEA values of less than .05 and .08 reflect a close fit and a reasonable fit to the data, respectively" (cited in Marsh et al., 2009, p. 459). Instances of missing data (3.1% of all items used in analyses) were handled via full imputation maximum likelihood (FIML) techniques. FIML techniques do not impute any actual values but use all available information to provide maximum likelihood estimates of parameter estimates and their standard errors. FIML approaches are widely utilized in structural equation modeling and provide unbiased and more efficient estimates than other methods such as listwise deletion, pairwise deletion, and similar response pattern imputation (Acock, 2005; Enders & Bandalos, 2001)

Results

Table 4.1 displays descriptive statistics and correlations for individual items. Levels of marital satisfaction were quite high across the entire sample. For the social integration indicators, mean levels were also high, indicating that spouses, on average, reported high levels of affective couple social integration. The indicators for financial well-being/financial distress suggested average low levels of financial distress across the general sample. Individual item correlations were generally significant and in the expected direction. For instance, items

reflecting greater financial well-being/lower financial distress were positively associated with items reflecting social integration and marital satisfaction. Given these preliminary results, additional analyses proceeded to test more elaborate models and the proposed nature of associations among the variables of interest.

[INSERT TABLE 4.1 HERE]

Measurement Model

A measurement-only model (i.e., no structural paths) was initially analyzed for the two latent constructs of financial well-being and couple social integration. The two latent factors were allowed to correlate, given their presumed non-independence. Results found acceptable level of overall fit: $\chi^2(53) = 207.925$, $p < .01$; CFI = 0.94; TLI = 0.92; RMSEA = 0.08. After inspection of modification fit indices, specific indicators of financial well-being appeared to have common error variance that was not accounted for in the latent construct. A total of three covariances were added between specific indicators for financial well-being and the resulting measurement model demonstrated good fit: $\chi^2(50)=129.134$, $p < .01$; CFI = .97, TLI = .96, RMSEA = .06. All factor loadings were significant and contained standardized loadings at or above acceptable levels for both the four-item couple social integration construct (range .551 – .731, $p < .01$) and the eight-item financial well-being construct (range .645 – .838, $p < .01$). Accordingly, all indicators from the original scale items were retained for each latent construct.

Determinants of Social Integration

To address the first research question, couple social integration was regressed on a set of predictors. Table 4.2 summarizes the results for model fit indices and path coefficients. Fit indices suggested an acceptable model fit, permitting interpretation of parameter estimates. Financial well-being and race were the only predictors that reached statistical significance,

though population density and marital duration (squared) trended toward significance. higher financial well-being/lower financial distress was associated with greater social integration and racial minority status was associated with lower social integration. With 85% of the race minority sample being comprised of Black/African Americans, this difference can be largely understood as differences between Whites and Black/African Americans. Indeed, when separated by racial groups (White, Black/African American, Asian, Multiracial), a one-way analysis of variance found significant group differences ($F(3,454) = 2.792$, $p < .05$); post-hoc tests indicated one significant mean difference: Black/African Americans reported lower mean levels of couple social integration than Whites (6.06 vs. 6.40; Welch's $t(145.17)=2.706$ $p<.01$).[11] For marital duration, though only approaching significance, coefficients on the higher-order term indicated an inverse quadratic relationship. In this, higher levels of social integration were marginally predicted by moderate (rather than many or few) years of marital duration. Remarriage status was not significant. Thus, Hypotheses 1.1 (financial distress) and 1.3 (racial minority) were supported, with Hypotheses 1.2 (population density) and 1.4 (marital duration) marginally confirmed. The control variable gender was not significant, indicating that neither males nor females reported higher levels of couple social integration.

[INSERT TABLE 4.2 HERE]

Determinants of Marital Satisfaction

The second model tested determinants of marital satisfaction, with a particular focus on the main and joint effects related to couple social integration. Latent variable interactions were used to test joint effects. Various approaches have been described for testing latent interactions and other nonlinear effects in structural equation models (see Moosbrugger, Schermelleh-Engel,

[11] Asian and multi-racial groups were not statistically different from Whites or Black/African Americans, though small subgroup sizes (n=6 and 12, respectively) preclude any group differences to be robustly considered. For this ANOVA test, missing data (6.7%) was handled via pairwise deletion).

Kelava, & Klein, 2009). The present study employed a latent moderated structural equation (LMS) approach that Mplus 6.0 utilizes to estimate latent interaction effects. This approach, while more computationally demanding than other approaches, estimates continuous latent interaction effects using the full, continuous distribution of the moderator variable. Simulation studies have shown the LMS approach provides efficient parameter estimators, unbiased standard errors, and is preferable to other approaches (Klein & Moosbrugger, 2000; Moosbrugger et al.).

The model was estimated using a maximum-likelihood estimator and a numerical integration algorithm. This method of analysis does not produce Type I, II, and III fit indices (e.g., NFI, TLI, CFI, respectively), but does still provide absolute fit indices of Akaike, Bayesian, and adjusted Bayesian information criteria (AIC, BIC, BIC_{adj} respectively). To report a meaningful estimation of model fit for the latent interaction model, a nested model containing no interactions was first run and then compared to the more complex model. This nested model was found to adequately fit the data: $\chi^2(116) = 254.433$, $p < .01$; CFI = 0.95; TLI = 0.94; RMSEA = 0.05. As would be expected given the inclusion of additional predictors, the model containing the interactions had lower AIC, BIC, and BIC_{adj} values (i.e., less deviance) than the model without the interaction terms. In addition, because the no-interaction model was nested in the interaction model, the significance of model fit improvements could be evaluated using a log likelihood difference chi-squared test. This test was significant, $\Delta\chi^2(2) = 16.32$, $p < .01$, indicating that the more complex model that included the interaction parameters provided a better model fit than when those terms and paths were omitted.

Results from this model are summarized in Figure 4.1. Main effects on marital satisfaction were nearly all in the expected direction and nearly all statistically significant.

Results indicated that greater marital satisfaction was directly predicted by higher financial well-being, higher couple social integration, and residing in less densely-populated areas. Contrary to expectations, marital duration was positively and linearly related to marital satisfaction, suggesting that within this sample, longer marital durations were associated with greater satisfaction.[12] Gender approached significance, with wives reporting lower marital satisfaction compared to husbands, as expected. Racial minority status, as well as being a higher-order marriage for at least one partner, were both non-significant. Thus, Hypotheses 2.1-2.3 (involving social integration, financial distress, and population density) were confirmed, and Hypotheses 2.4-2.6 (involving demographic characteristics of race, remarriage, and marital duration) were largely disconfirmed.

[INSERT FIGURE 4.1 HERE]

Quite notably, paths from both interaction terms were significant. With financial well-being and social integration, coefficient signs on the main and interaction effects indicated that the negative effect of greater financial distress on marital satisfaction was lessened with increasing levels of social integration. Similarly, coefficient signs for population density, social integration, and their interaction demonstrated that the declines in marital satisfaction associated with residing in more densely populated areas were reduced as couple social integration increased. In other words, couples who retained high levels of social integration did not exhibit the average declines in marital satisfaction associated with greater financial distress or residing in more urban areas. Thus, results confirmed the hypothesized protective effect of couple social integration with financial distress (Hypothesis 3.1) and greater population density (Hypothesis 3.2). Figure 4.2 demonstrates these effects graphically.

[12] When included in the model, a squared term for marital duration to test for a quadratic relationship was non-significant and not retained in analyses.

[INSERT FIGURE 4.2 HERE]

Discussion

Marital scholarship has an extensive history of attempting to elucidate how matters of social context (notably external stress) affect marital relationships (e.g., Conger et al., 1999; Karney & Bradbury, 2005; Neff & Karney, 2009). However, understanding marital relationships within their broader social context may entail not only how the external environment spills over into the internal environment, but also how the couple is connected to, or integrated with, the external environment. The present study investigated one dimension of this later issue by analyzing determinants of couple social integration as well as how levels of couple social integration affect marital satisfaction. Overall, results provide support for couple social integration being a key factor for marital relationships, both in terms of directly and protectively shaping marital satisfaction.

Addressing the first research question, two factors were found to predict social integration. Consistent with the social support deterioration model (Barrera, 1986) and previous studies involving financial distress and individual social integration (Schulz et al., 2006), greater financial distress was found to be associated with lower couple social integration. This finding suggests that financial well-being/financial distress not only impacts how couples interact with each other (Falconier & Epstein, 2011a), but also how well integrated couples are with their surrounding community. Racial minority status (specifically Black/African American) was associated with lower couple social integration, replicating previous findings (Amato et al., 2007). This finding is somewhat peculiar, given the stronger kinship networks associated with certain minority groups (Hatchet & Jackson, 1992). This finding may partially result from the general decline in marital entry and stability observed among Black/African Americans (U.S.

Bureau of the Census, 2010; Wilcox, 2010). To the degree that couple social integration occurs with individuals who are also married and of the same race, the general decline in marriage among this population may have an additional negative effect on existing marriages by eroding the availability of other married couples with whom spouses can share affective connection and support.

Greater population density was, at the marginal level, also associated with lower couple social integration. Thus, as has been suggested at the individual level (see Booth, Edwards, & Johnson, 1991), increased urbanization may also weaken social ties at the couple-level as well. Though also only approaching statistical significance, the quadratic relationship between marital duration and couple social integration offers potential insight into how couple social integration develops over the course of a marriage. Findings illustrate an inverse u-shaped (i.e., concave down) relationship, such that couple social integration is lower at early and later marriage. Thus, given the instability that characterizes the early years of marriage (Gottman & Levenson, 2000), targeting matters of couple social integration may be a relevant area of focus.

Concerning the second analytic model, various results of interest emerged. As hypothesized, couple social integration was positively associated with marital satisfaction. Thus, similar to spouses' individual social integration (Amato et al., 2007), spouses whose marriages are connected to and receive support from their social context reported greater marital satisfaction than married individuals lacking such integration. Higher population density and increased financial distress were each also associated with lower marital satisfaction, replicating previous findings involving marital distress and instability (Conger et al., 1999; Kalmijn & Poortman, 2006). In contrast to previous cross-sectional findings, marital duration was linearly associated with greater marital satisfaction. This may be attributable to greater percentages of

middle- to later-life couples comprising the sample, as newer-married couples reported lower marital satisfaction than previous generations when at similar marital durations (VanLaningham et al., 2001) and later life marriages being, by definition, still intact relationships and certain unions with much lower satisfaction having divorced and no longer being in the population of interest.

The significant interaction effects are particularly insightful, affirming the proposed protective function of couple social integration. In one instance, couple social integration mitigated the declines in marital satisfaction found with greater population density. Various explanations have been given to account for the decreased marital stability associated with more urban areas (Lyngstad, 2011), including increased anonymity and lack of social ties (Shelton, 1987). If so, then couples in more urban areas who retain connectedness should report smaller declines in marital satisfaction – which is precisely the finding of this study. With the rise in urbanization across society, identifying means to offset its apparent detrimental impact on marital satisfaction reflects a germane topic for marital researchers and practitioners alike. Results from the present study suggest ensuring couple interconnectedness with individuals and couples around them provide one such means of assistance.

The interaction effect between couple social integration and financial well-being is equally important to highlight. Thus far, marital research has frequently focused on *how* financial distress impacts marital satisfaction (e.g., Falconier & Epstein, 2011b). However, as financial distress is clearly not a decisive setback to the marital satisfaction for all couples, greater attention to understanding *when* financial distress does (and does not) affect marital outcomes is warranted. In this vein, current results illustrate couple social integration as one potential controlling factor that lessens the negative impact of financial distress on marital

outcomes. The protective influence of couple social integration is particularly novel given its divergence from previous research (e.g., Dew & Jackson, 2012) involving moderators exclusively internal to the relationship.

As such, results suggest a promising area to target within couple and relationship education (CRE) programming, namely ensuring participating couples develop a network of other individuals and couples with whom they can receive and extend support. This may occur through fostering 'marriage mentoring' programs or via group-based CRE programs that create a space and time for connectedness to build between participants (see Amato et al., 2007, p. 256-257 for similar discussion). In sum, findings further the call to broaden the lens of marital research, intervention, and policy to consider the situational context, albeit with a slightly different slant. Rather than only focusing on the external context in regards to how it impacts the internal context (Karney & Bradbury, 2005), attention can also focus on how the couple relates to and is connected with the external context.

Limitations

Various limitations contained within the study warrant consideration when interpreting the results. First, the data are cross-sectional and thus limited in the degree of causality that can be inferred. Conceivably, couples' marital satisfaction could promote or deter their likelihood to seek social integration. However, the proposed relationships align with the pathways employed (and supported) by previous studies (Amato et al., 2007; Bryant & Conger, 1999), strengthening the causal order presumed. Second, measurement considerations limit the extent to which community characteristics (i.e., population density) and couple social integration can be extended. As previously highlighted, assessing the degree to which an individual resides in an 'urban' versus 'rural' area is far from straightforward, with population density offering only one

means to gauge the rural/urban continuum. Regarding couple social integration, the employed measure targeted the more affective dimension, thus precluding any comments on aspects related to structural social integration, such as mutual participation in social organizations or time spent jointly socializing with friends. If and how more structural aspects of social integration shape marital outcomes – including in combination with other factors – remains an area for future research. Lastly, given the small overall variance explained in social integration, other factors may also account for levels of couple social integration. Additional work could attempt to more fully account for variability in couple social integration by considering factors related to the individual (e.g., religiosity, personality), previous experiences (e.g., parental divorce, residential mobility), and other contextual variables (e.g., neighborhood conditions, job type).

Conclusion

Nearly half a century ago, John Lennon and Paul McCartney penned the well-known lyrics "I get by with a little help from my friends." In the decades since, social science researchers have demonstrated the veracity of this statement for individuals, with social integration demonstrating salutary effects for multiple dimensions of individuals' well-being. Moving beyond the individual, findings from this study and others increasingly illustrate that the number, quality, and durability of bonds that *couples* have with their surrounding community is highly germane for the well-being of marriages. By illustrating its protective effects, the present study contributes new insight into how couples' social integration advantageously helps these unions 'get by.'

Table 4.1

Correlation Matrix and Descriptive Statistics for Study Variables (N = 492, with pairwise deletion)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1. Marital Satisfaction	–																	
2. SI1	.38**	–																
3. SI2	.29**	.48**	–															
4. SI3	.28**	.30**	.39**	–														
5. SI4	.20**	.35**	.43**	.38**	–													
6. FW1	.19**	.02	.04	.14**	.00	–												
7. FW2	.19**	.15**	.05	.16**	.11*	.52**	–											
8. FW3	.25**	.08	.09	.18**	.06	.67**	.47**	–										
9. FW4	.12*	.04	.04	.12*	.03	.50**	.41**	.44**	–									
10. FW5	.16**	.12**	.04	.15**	.02	.54**	.48**	.56**	.57**	–								
11. FW6	.18**	.10*	.04	.19**	.00	.54**	.52**	.56**	.59**	.72**	–							
12. FW7	.12*	.11*	.04	.19**	.15**	.42**	.53**	.46**	.47**	.54**	.61**	–						
13. FW8	.16**	.08	.01	.12*	-.03	.62**	.56**	.62**	.53**	.65**	.71**	.59**	–					
14. Pop. Density[a]	-.12*	-.06	-.05	-.06	-.07	.07	.04	.03	.05	.12*	.07	.06	.09*	–				
15. Marital Duration[b]	.14**	.11*	-.03	.02	.03	.11*	.14**	.01	.12*	.08	.10*	.10*	.09	.09*	–			
16. Racial Minority[c]	-.17**	-.12**	-.09	-.15**	.03	-.06	-.14**	-.08	-.04	-.08	-.10*	-.20**	-.05	.10*	-.17**	–		
17. Female[c]	-.06	-.02	.11*	.05	.13**	-.08	-.01	-.02	-.09*	-.06	-.13**	-.10*	-.06	-.04	-.02	.09	–	
18. Remarr.[c]	.01	-.06	.06	.01	.03	.02	.10*	.03	.03	.10*	.08	.06	.09	-.02	-.28**	-.04	.04	–
Mean	83.71	5.94	6.50	6.42	6.41	6.72	6.46	6.74	7.64	6.81	7.42	7.98	7.08	.77	2.35	.25	.63	.34
SD	23.69	1.79	1.21	1.37	1.15	2.69	2.81	2.81	2.83	3.43	3.13	2.95	2.81	.79	1.62	.44	.48	.48
n	461	466	468	467	466	486	487	485	476	482	485	484	482	492	488	465	459	491

Note: [a] In 1000 people/sq mile. [b] In 10s of years. [c] Spearman correlation. SI = Couple Social Integration. FW = Financial Well-being.

* $p < .05$. ** $p < .01$.

Table 4.2

Predictors of Couple Social Integration (N=492)

Predictor	B	se	t
Financial Well-being	.082*	.03	2.40
Population Density	-.141†	.08	1.86
Marital Duration	.212	.13	1.62
Marital Duration^2	-.038†	.02	1.71
Racial Minority	-.284*	.14	2.00
Remarriage	.002	.13	0.02
Female	.191	.12	1.56
R^2		.062*	

† $p < .10$. * $p < .05$. ** $p < .01$.

Note. Model Fit Statistics: $\chi^2(110)=221.230$; $p < .01$; CFI=0.96, TLI=0.95 , RMSEA=0.05. All continuous exogenous variables allowed to correlate. Population density in 1,000 people/sq mile. Marital duration in 10s of years.

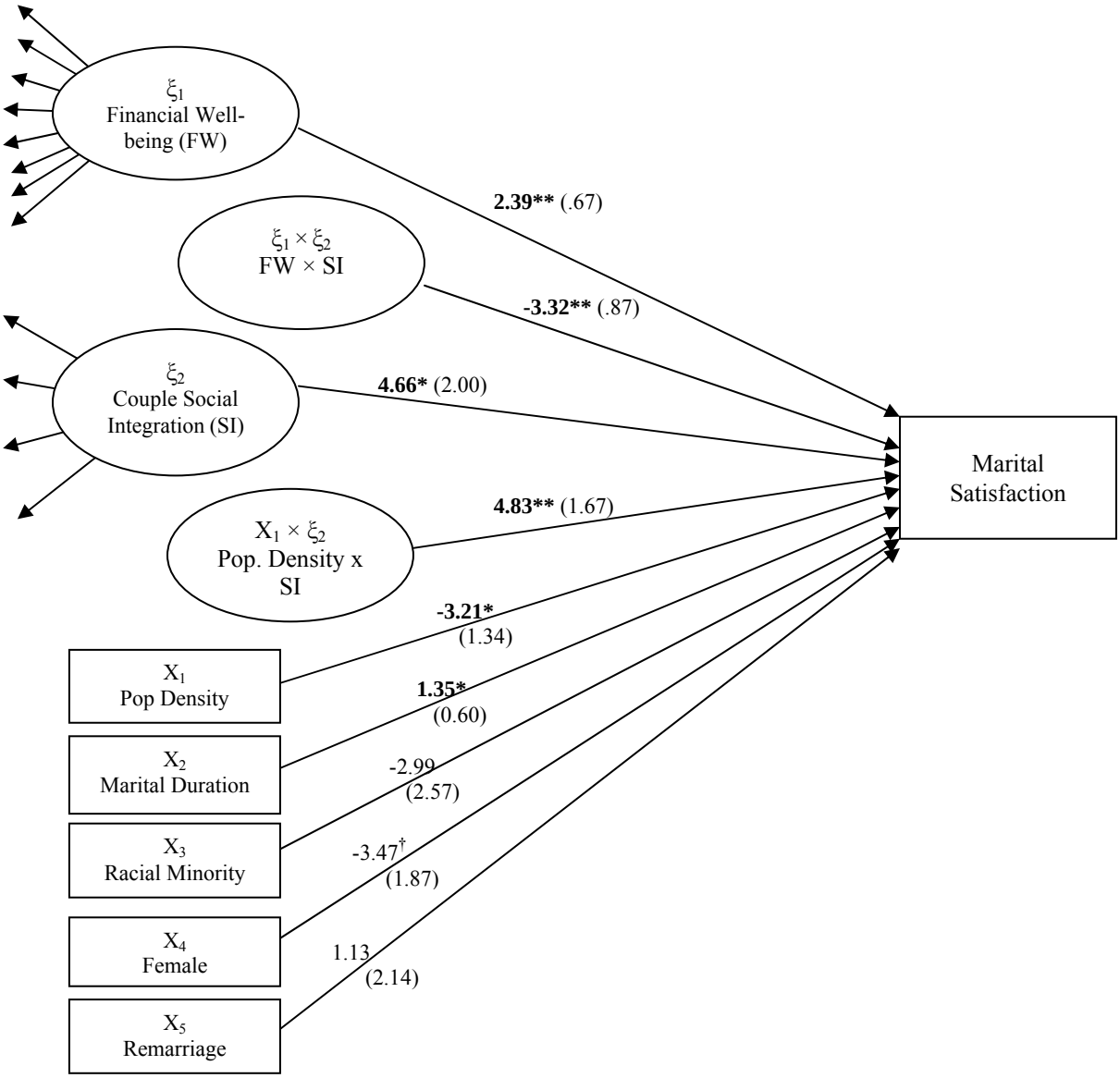

Figure 4.1. Direct and interaction effects for marital satisfaction.
Note: All continuous exogenous variables allowed to correlate (not shown). For clarity purposes, individual items and error terms of latent variables also not shown. Population density in 1,000 people/sq mile. Marital duration in 10s of years.
† $p < .10$. * $p < .05$. ** $p < .01$.

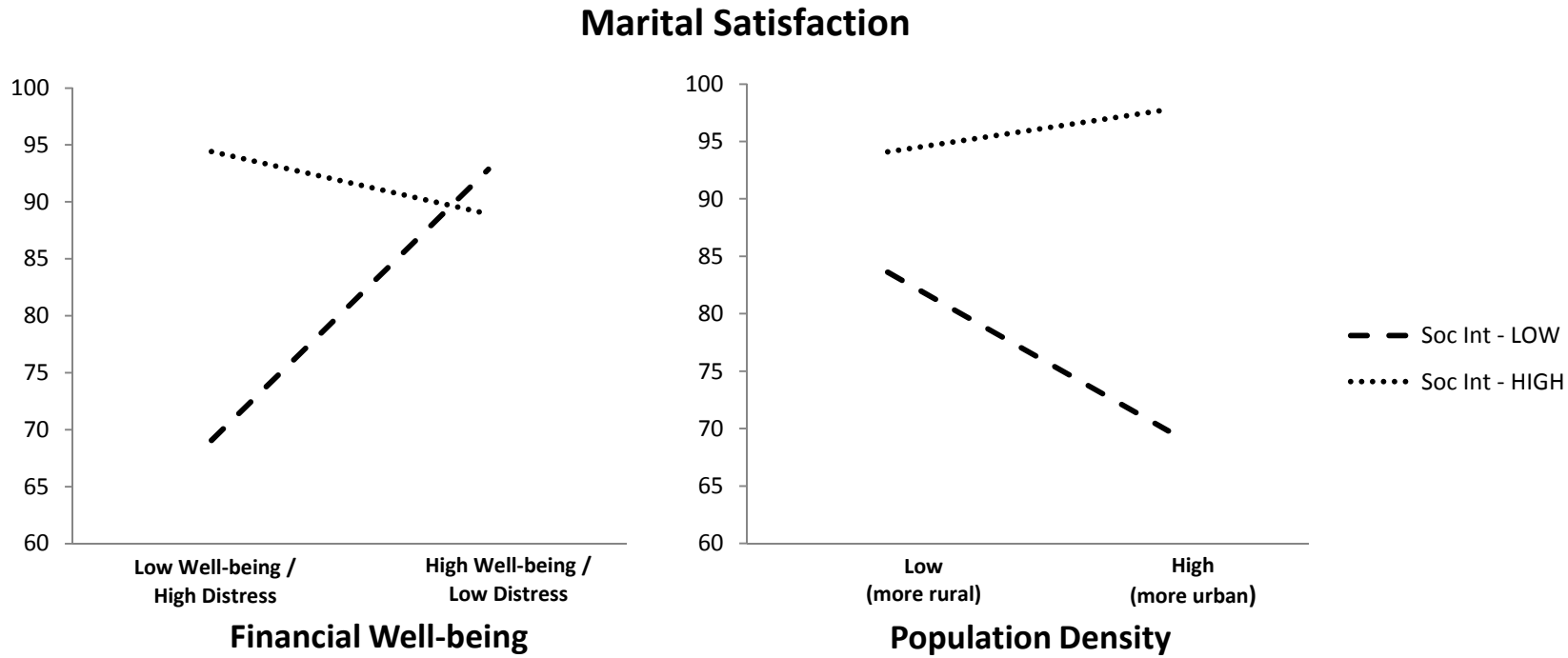

Figure 4.2. Protective effects of social integration (Soc Int) on marital satisfaction in relation to financial well-being (left) and population density (right).

CHAPTER 5

DISCUSSION AND CONCLUSION

General Discussion

> The interior of marriages has been reasonably well explored, but relatively little is known about marriages in context and the interplay between the two. (Bradbury & Karney, 2004, p. 837)

A central chord reverberating through this piece has been a recognition that marital relationships are not immune to the contexts they inhabit. In light of their influence on spouses' cognitions, behaviors, and overall marital outcomes, the mounting evidence from this collection of studies and others suggests that issues of context represent non-ignorable factors in the study of martial unions. While writing on contextual stressors is not new in marital and family research (e.g., Hill, 1949; Patterson, 1988), only recently has concentrated investigation occurred into more specifically elucidating pathways (how) and contingencies (when) related to the effect of stress on marital unions.

The current studies offer additional insight into this pressing area of marital research by exploring different facets of how external stressors impact marital quality as well as internal marital processes that promote or inhibit this association. By doing so, this work advances the literatures on stress and marriage, marital processes, and their interplay. Findings also provide new insights for practitioners and educators working with couples. In what follows, a summary and integration of study findings are presented, followed by subsequent sections discussing

implications of these findings for marital prevention and intervention as well as future avenues of research for marital scholars to pursue.

Summary of Results

Referring back to Hayes' (2012) quote from the introduction (p. 5), once a body of research has established the existence of an effect, a deeper understanding of 'how' and 'when' this effect occurs is necessary for maturation of research on the topic. With the general negative association between stress and marital quality established (Randall & Bodenmann, 2009; Story & Bradbury, 2004),[13] the three studies sought to further this literature by investigating particular mechanisms ('how') and contingencies ('when') for this association.

Focusing first on Study 1, latent growth curves models explored the ability of levels of external stress to predict trajectories (i.e., intercepts and rates of change) in marital processes. Having been previously linked with lower starting levels and steeper rates of decline in marital satisfaction (Karney et al., 2005), greater external stress in the present study was also associated with lower starting levels and, marginally, steeper declines in perceptions of spousal warmth. This finding offers preliminary support for the 'eroding' effect of stress over time, which previous studies have postulated but not tested (e.g., Bodenmann et al., 2007). Different mechanisms linking external stress to marital processes were also able to be considered (measurement limitations withstanding), with results demonstrating external stress most consistently impacting on individuals' perception of spousal behavior rather than altering individuals' own behavior. This stronger 'perceptual' pathway of influence was observed with marital warmth both cross-sectionally and longitudinally as well as with marital hostility at three different cross-sectional time points. Such findings between stress and spousal cognitions align

[13] In limited instances, moderate (Neff & Broady, 2011; Tesser & Beach, 1998) or high (Karney, 2011) levels of external stress may have a direct positive – or at least non-negative – effect on marital quality (see referenced articles for more discussion on this topic).

with previous work that has found higher levels of stress to be associated with more perceived relationship problems and more blaming attributions for partner behaviors (Neff & Karney, 2004).

Findings from Study 2 predominantly expounded on two marital adaptive processes, one with a well-established history in marital research (demand-withdraw communication) and another just recently beginning to receive attention (gratitude). Regarding the prior, demand/withdraw communication patterns consistently demonstrated a significant indirect effect between husbands' and wives' financial distress and multiple marital outcomes. Couple demand/withdraw (i.e., female-demand/male-withdraw and male-demand/female-withdraw) intervened for all wives' outcomes and some husband outcomes (marital satisfaction, cohesion, and conflict), with wife-demand/husband-withdraw demonstrating the only indirect effect for others (husband relationship consensus, dedication, and dissolution risk). Thus, differences between husbands and wives were evident in the pathway(s) linking financial distress, communication, and marital outcomes (see also Falconier & Epstein, 2011b). Wives' marital quality appeared sensitive to both their own-demand/partner-withdraw and partner-demand/own-withdraw, whereas for particular husband outcomes, the negative effects were most concentrated with wife-demand/own-withdraw, having marital outcomes less affected by levels of their own-demand/wife-withdraw. Mirroring a larger body of research, female-demand/male-withdraw appeared more frequently (Christensen & Heavey, 1990), but differed from prior research (Falconier & Epstein, 2011b) as financial distress was associated with both female-demand/male-withdraw and male-demand/female-withdraw.

Study 2 also contributes to the study of gratitude, a rapidly-emerging construct of interest for researchers of romantic relationships (see Fincham & Beach, in press). By assessing

perceived gratitude *from* one's partner (rather than possessed gratitude for one's partner), this study explored a less-researched, but potentially equally important, aspect of gratitude in romantic relationships. Results demonstrated perceived gratitude from one's partner to be favourably associated with nearly all husbands' and wives' marital outcomes. Further, perceived gratitude had an effect on marital quality comparable to or even greater than demand/withdraw communication. Partial support was found for perceived gratitude as a protective buffer in marriage, specifically in relation to the effect from demand/withdraw on marital quality. Hence, at least regarding perceived gratitude, the direct effects of financial distress on negative communication and financial distress on marital quality appear less liable to influence, whereas the link between negative communication and marital quality does appear more able to be influenced (particularly for wives). This suggests that while external stress hampers communication, these communication deficits do not automatically equate to lowered marital quality. Rather, certain couple capacities and interpersonal processes can function protectively against destructive communication patterns (also see M. Johnson et al., 2005).

Study 3 focused its attention on affective couple social integration, a lesser-studied construct in marital research whose importance may be growing in light of cultural trends away from social connectedness in American society (Putnam, 2000). Findings from the study illustrated spouses' sense of connectedness and integration with others to be strongly associated with increased marital satisfaction, aligning with previous research involving more structural aspects of social integration (Amato et al., 2007). Further, higher levels of couple social integration buffered marital satisfaction from the negative effects of both financial distress and residing in more densely populated regions. Accordingly, couple social integration appears to function in a somewhat analogous 'buffering' manner as social support and integration at the

individual level (Cohen & Wills, 1985). The lack of predictive variables explaining variability in couple social integration suggests additional attention is warranted to identifying factors that account for why some couples are more socially integrated than others.

Prior to concluding this section, the moderation results from Studies 2 and 3 (depicted in Figures 3.3 and 4.2) provide a final point to revisit. Two conclusions can be drawn from the graphs. One conclusion – which has received most of the attention thus far – originates from focusing on the relatively stable 'high gratitude' and 'high social integration' lines. Here, individuals with high levels on each of these constructs had particular marital outcomes that were relative impervious to elevated levels of negative, contextual factors. Such results naturally lead to the first conclusion regarding the 'protective' effect of these processes. However, a second conclusion appears by focusing attention to the sloping 'low gratitude' and 'low social integration' lines contained in the figures. Namely, marital outcomes were worst among couples who experienced high levels of a particular negative contextual variable *and* lacked protective, stabilizing marital processes. This second conclusion provides further support for studying marital stability and satisfaction from a cumulative risk approach (Rauer et al., 2008), provided risk factors are not limited to external stress and individual vulnerabilities, but also consider risk factors associated with interpersonal marital processes. Marriages appear more 'at-risk' when encountering stressful environmental conditions *and* when pro-relationship behaviors and cognitions are absent within the dyad. As internal processes do not occur in isolation from helpful and harmful environmental factors, understanding the external context in tandem with the interior of marriage offers key terrain for researchers to explore in efforts to account for marital outcomes.

In summary, all three studies replicated the negative link between external stress and marital processes or outcomes, as found in multiple previous studies (see Neff, 2012; Randall & Bodenmann, 2009). Results from the current collection of studies also indicated specific pathways (e.g., demand/withdraw communication) as well as boundary conditions (e.g., couple social integration) related to this effect. All three studies also provide additional support for the general Vulnerability-Stress-Adaptation model of relationship development (Karney & Bradbury, 1995) that collectively informed them, with particular evidence affirming and expanding its proposed linkages between stress, adaptive processes, and marital quality.

Implications for Clinicians and Educators

The extensive amount of money and resources devoted to stabilizing and strengthening marriages – from distressed couples paying for marital therapy to government-funded national and state initiatives (Brotherson & Duncan, 2004) – necessitates programs that provide a return on investment. Accordingly, how research findings inform the content of such practices and policies is a highly germane topic for studies on marriage, including this present collection. Implications of findings in relation to low-income and fragile families are of particular interest, where marital unions are least stable and where most federal funding has been devoted (see Hawkins & Fackrell, 2010; Trail & Karney, 2012). Though not exhaustive, a few key implications are noted from the current work.

The salience of stress. First, addressing matters of stress seems non-ignorable given their deleterious impact on multiple dimensions of marital quality. That individuals rarely acknowledge how the relationship context may have factored into marital outcomes (Berscheid, Lopes, Ammazzalorso, & Langenfeld, 2001) and often overestimate how much partners are aware of their stressors (Pickersgill & Beasley, 1990) further underscores this need. Hence,

basic matters of stress salience – increasing individuals' awareness of current sources of stress for both themselves and their spouse along with its subsequent impact personally and relationally – provide a logical first step.

However, simply increasing spouses' awareness of stress may not sufficiently address this issue. Given the research here and elsewhere elucidating different mechanisms through which stress impacts marital quality, couples could also be instructed about *how* conditions of stress may spill over into their relationship – such as negatively altering their perceptions of their partner and their relationship (Neff & Karney, 2004), physiologically raising stress hormones (Saxbe, Repetti, & Nishina, 2008), and increasing levels of marital anger and withdraw (Story & Repetti, 2006). This 'pathway' information can potentially reduce partner and relationship reactivity to elevated conditions of stress. For instance, when individuals come to attribute the source of a partner's mood or behavior to a temporary stress-induced situation, they tend to not react as negatively to their partner's distress or negative behavior (Thompson & Bolger, 1999). Overall, a greater awareness of stressors and their means of impact can encourage anticipatory socialization efforts and pro-relationship behavioral strategies that mitigate the spillover effect.

The issue of stress and context appears particularly relevant with lower-income marriages, who characteristically experience a greater amount of stressors (Karney & Bradbury, 2005; Trail & Karney, 2012) and, notably, have relationships more impacted by them (Maisel & Karney, 2012). Accordingly, to the degree that marital enrichment programs are able to effectively address and reduce the impact of such stressors on these unions, marital outcomes may be noticeably improved. At minimum, the inconsistent findings appearing with current programming that emphasizes skills-based communication and problem-solving within this

population (see Hawkins & Fackrell, 2010; R. Wood, Moore, Clarkwest, Killewald, & Monahan, 2012) suggests the need to reconsider efforts in this area.

The centrality of climate. Second, devoting emphasis to creating a supportive climate within the dyad (and less reducing conflict and negative patterns) may be especially central for marital stability. As noted in Chapter 1, couples do not marry because they manage problems well, but for the enjoyment, comfort, and satisfaction they obtain from their partner's presence. General attitude surveys document 'romantic love' as the number one reason individuals report to get and stay married (see Amato, 2007), illustrating this tenet. Hence, spouses today enter and view their marriages with a dominant focus on the emotional quality of their union. Helping couples communicate and problem-solve better may reduce conflict, but may not help create the strong, satisfying relationship that is ultimately desired (Fincham & Beach, 2010).

In light of these cultural shifts, being able to maintain a particular emotional climate – particularly in the face of issues that lead to its decline – represents a key issue for maintaining marital stability. Multiple maintenance strategies and protective processes have been previously identified as providing this effect, such as positive affect (M. Johnson et al., 2005) and spousal support (Brock & Lawrence, 2008). Current results from Studies 2 and 3 provide two additional processes that can facilitate such a context: ensuring a mutual sense of being appreciated by one's spouse and having a marital relationship integrated within a supportive local community network.

The relevance of skills. Third, various critiques of the current skills-based, communication-dominated approach to marriage and relationship education have recently appeared (e.g., Bradbury & Lavner, 2012; Trail & Karney, 2012). The basis for this critique largely stems from the mixed findings of the effect of communication skills on relationship

satisfaction (see Bradbury & Lavner, 2012, p. 3) as well as findings that illustrate spouses may not be able to call upon certain 'skills' when they are needed (Neff & Karney, 2004). For instance, performing positive relationship behaviors is less likely in more stressful contexts, meaning simply having a particular skill or 'tool' in one's 'relationship toolbox' does not equate to actually having the capacity to use said skill at any given moment, or use it in the appropriate manner. To offer an analogy, a person can be trained how to use a crescent wrench, but if in the time when needed, is unable to correctly utilize it – whether due to cognitively not remembering how, physically not being able to, or motivationally not wanting to – the tool will be rendered useless in the moment. To the degree that stressful situations inhibit or hinder the capacity of an individual or couple to perform certain skills, focusing on such skills may be inconsequential or, worse, detrimental to marital quality as spouses know *how* they or their spouse should behave, but are not doing so (see Bradbury & Lavner, 2012).

Recognizing the limitations of skills under stress, what is the appropriate antidote? One possibility, as previous writing has alluded, is to strengthen the dyad in a manner such that "conflicts are less consequential when they do occur" (Bradbury & Karney, 2004, p. 868). Metaphorically, make a deeper and heavier ballast on the 'marriage sailboat' to prevent the vessel from tipping over when heavy winds arise. Such an approach expands attention beyond effective problem-solving and conflict management and to promoting unity, growth, and resilience (Fincham & Beach, 2010). Karney and Bradbury (2004) illustrate the same point with their own analogy, noting that "positive engagement seems to envelope the couple like Teflon, so unskilled behavior and negative emotions do not stick to the couple as they negotiate different tasks and situations" (p. 868). Gottman's (1994a) extremely well-publicized '5-to-1' ratio of positivity to negativity also reflects this similar tenet, in which an overall marital environment is

maintained where negative events do not deteriorate or dominant matters of relationship functioning and quality. Expressions of gratitude and integrating the marriage with the surrounding community both appear to facilitate this type of constructive marital climate.

As an important consideration, one critique of this 'stress-buffering' approach – that spouses with better adaptive processes should be less prone to experiencing stress spillover effects – is how most of the studies informing these conclusions (such as Studies 2 and 3) are based on single, between-subjects measurements that assume relationship processes are impervious to situations and will remain at stable levels throughout a relationship (Neff, 2012, pp. 187, 196). Such cognitive and behavioral 'buffers' are, however, unlikely to be static entities but rather fluctuate over the course of a relationship, with levels being particularly lower during challenging times (Neff & Karney, 2009). In accord with this, expressions of gratitude would be expected to decline during periods of higher stress.

However, to state that this fluctuation precludes perceived gratitude and other adaptive processing from being a stress buffer (see Neff, 2012) omits a key principle previously discussed. Namely, these processes, when repeatedly performed over the course of a relationship (irrespective of levels of stress) foster couple cohesion and a marital climate such that when elevated levels of stress do occur (and pro-relationship skills decline), the corrosive impact of stress, negative behaviors, and maladaptive cognitions on relationship quality is less severe. Importantly, gratitude and social integration can both be established, enacted, and encouraged in the ordinary, 'everyday' rhythm of relationships such that when negative things happen, they do not have as pronounced an effect.

In summary, over the course of a marriage, all couples will encounter job struggles, illnesses, role strain, and a plethora of other issues that can tax marital quality. One remedy,

however utopian, is to attempt to eliminate the external stressors that couples face (Karney, 2011b). However, given the inevitability of both external stressors as well as stressors that originate within the dyad (e.g., mismanaged conflict, negative partner comments), a second equally tenable – and potentially more realizable – solution would aim to reduce the immediate and long-term impact had by such stressful events. Efforts here concentrate on identifying "mechanisms located within the dyad that provide the average couple with ways to forge deeper connection or to effect repairs of the relationship after experiencing distance and frustration" (Fincham, Stanley, & Beach, 2007, p. 278). This later approach centrally considers how the effects of stressors are buffered by individual and couple processes. Writing on accommodation over two decades ago, Rusbult and colleagues (1991) emphasized this foundational tenet of lasting relationships by noting how preserving a relationship requires individuals to devote energy into minimizing negative relationship events by behaving and thinking in ways that promote the relationship. Identifying and then assisting couples in being able to enact these relationship-promoting thoughts and behaviors in response to negative relationship events continues to represent a highly-relevant issue for marital research and enrichment efforts.

Future Directions[14]

Empirical marital research is nearing a century of study, with initial work dating back to Terman (1938) and studying spousal characteristics in relation to marital outcomes. In the decades since, the research lens has focused on different facets of these unions, including personal characteristics, conflict processes, behavioral interactions, cognitions, and, most recently, context (see Karney, 2007). Building from the current results, particular areas warrant

[14] Future directions contained in this section reflect more general assessments originating from themes across the studies. For specific areas of future direction more closely linked to results from each study, refer to sections within the respective studies.

specific attention to ensure future marital research continues to remain timely, reasoned, and impactful.

What's in a name? A lasting marriage requires each spouse to persevere through the inevitable strife and strain their union encounters. Some couples weather these 'storms' better than others, and marital researchers have, quite understandably, sought to identify and quantify such factors that make a marriage robust. In the current research, such factors were largely classified as "protective processes."

However, if conceptual confusion is indeed "the enemy of scientific progress" (Fincham & Rogge, 2010, p. 227), then the study of this domain of marital research faces a formidable foe. While various pieces have defined and clarified stress terminology relative to marriage (Randall & Bodenmann, 2009; Story & Bradbury, 2004), little integration appears with respect to these protective processes. A brief scan of the literature reveals a broad range of nomenclature – "self-regulatory transformative processes" (Fincham et al., 2007), "relationship maintenance" (Stafford & Canary, 1991) , "couple resilience" (Conger et al., 1999), "protective processes" (Patterson, 2002), "dyadic coping" (Bodenmann et al., 2006), and "accommodation processes" (Rusbult et al., 1991) – that all seemingly aim to address the same topic. Though differing in subtleties and specific foci, all of these constructs unite in attempting to explain how couples establish and maintain a healthy, stable, and satisfying relationship, particularly when faced with partner transgressions, external stress, and other adverse circumstances.

Measurement impediments further complicate matters associated with research on these processes. For instance, as Amato (2007) observes, truly gauging levels of commitment can occur only when individuals are dissatisfied with their marriage and have few structural factors preventing their leaving. Just as bravery can only be truly assessed when a threat is present,

spousal commitment cannot be actually gauged until the marriage is put to the test. In a similar fashion, individuals can report being forgiving (not holding grudges, seeking revenge), but until they are directly faced with a partner transgression and their subsequent reaction identified, reports of forgiveness will only reflect their imagined, presumed, or even preferred beliefs about how forgiving they are. With measurement of relationship maintenance, recent analyses have identified prominent flaws in two of the most frequently utilized measures of relationship maintenance, including problems related to item-construction and conceptual misspecification (Stafford, 2011). Lastly, accurate measurement of spousal support appears to be rather nuanced, requiring proper differentiation between support ability versus adequacy as well as support solicitation versus provision (also see Lawrence et al., 2008).

How good-looking are relationship development models? Secondly, theoretical models of relationship development will likely require refined expansion for incorporating such protective effects. Models of marriage in context commonly depict pathways (or mechanisms) of influence (e.g., Karney & Bradbury, 1995; Randall & Bodenmann, 2009), and a more complete account of relationship models would seemingly need to document both mechanisms of influence *and* contingency factors that accelerate or diminish the linkages proposed. The expanded Vulnerability-Stress-Adaptation model (Figure 1.2) provides one depiction attempting to account for such phenomena. Writings by Conger and Conger (2002) and Fincham, Stanley, and Beach (2007) provide two other depictions that attempt to capture these processes.

Given how diverse moderating factors can be, classifying ‘types’ or ‘categories’ of such factors offers one potential means to aide in refining these models. For instance, one class of moderators could pertain to non-malleable characteristics of the individual, including race (e.g., LaPierre & Hill, 2013) and genetic markers (e.g., Wickrama & O'Neal, 2013). Another class of

moderators could represent experiential factors, such as having divorced partners (Markman, Rhoades, Stanley, & Peterson, 2013) or residing in a harsh neighborhood context (Funk, 2010). A final class of moderators may reflect more dynamic intra- and inter-personal behaviors and cognitions, as emphasized in the current studies and others (see Bryant et al., 2010).

Has context really been considered? Third, in the call for greater understanding of context and marriage, most discussions of 'context' have concerned stressful life contexts and situations (e.g., life stressors, financial strain, neighborhood conditions; see Rauer et al., 2008). However, limiting context solely to stressful environmental conditions may be too myopic of a focus. Taking context seriously necessitates a broader lens, particularly with respect to historical and cultural dimensions of context. Understanding this broader context in which a marriage is situated – the "macro-environment" as described by Huston (2000) – redirects the conversation to begin considering the pervasive (yet largely unrecognized) cultural norms and beliefs that shape marital expectations, norms, and functioning. For instance, results from research on central determinants of marital quality would look noticeably different if focused on sixteenth-century marriages or present-day marriages in different cultures and countries, yet how much recognition is given to this?

Two brief examples offer clear depictions of the importance and influence of socio-historical matters in relation to marriage and research on it. First, at a societal level, women's participation in paid labor has risen dramatically, from 47.4% in 1975 to 71.6% in 2009 (Bianchi, 2011). Such as shift has not only altered the landscape of the work environment, but has also had significant reverberating effects on families. Illustrative of this, writing by Hochschild (1990) on dual-earner couples formidably documented the centrality of division of household labor for marital quality (particularly among wives) in these unions. Nock (2001) also

emphasized the profound impact on marital unions had by wives' greater involvement in paid employment, including specifically in relation to household labor. Research following this shift finds household labor division to be a contentious topic in marriage (Blair & Johnson, 1992) and disagreement or feelings of unfairness over housework and child care to represent one of the most important current determinants of marital quality (Amato et al., 2007). Despite this, the degree to which basic and applied marital research has adequately and accurately incorporated the centrality of this issue remains questionable (Amato, 2007). In essence, are the constructs marital researchers study 'up to date' with the times?

A second prominent issue that appears rather infrequently in discussion of context and marriage exists at the level of culture. Writings by Cherlin (2004, 2009) and Coontz (2005) detail broad cultural shifts in Western countries that have profoundly changed how marriage is understood by spouses and society at-large. Marriage is increasingly 'individualized' whereby obligations to others are superseded by an emphasis on self-gratification and self-fulfillment. Individuals' high expectations on requirements to get married (Gibson-Davis, Edin, & McLanahan, 2005), adoption a 'soulmate' model of marriage (Wilcox & Dew, 2010), and divorcing even if levels of marital happiness and interaction are no different than averages for intact marriages (Amato & Hohmann-Marriott, 2007) provide illustrations of this shift. As both of these authors (Cherlin and Coontz) note, such an emotional, self-focused conceptualization of marriage represents a dramatic break from the rest of human history.

The ripple effect from these shifts in cultural values and beliefs shape not only actual marriages, but also research conducted on them. Such an effect appears in research through both the measures employed and outcomes of interest. For instance, an individual's personal happiness and satisfaction with his or her marriage arguably reflects the most common outcome

for marital research and programming. However, such an emphasis stems from cultural values of individualism that view marriage as a means to personal satisfaction (Amato et al., 2007, p. 251; Bishop, 2007). Further, the more individuals conceptualize their marriage as a means of self-gratification, the more they have "maximized their expectations for emotional fulfillment and self-satisfaction in marriage…(yet simultaneously) minimized their sense of obligation and commitment to spouses and children as well as to marriage as an institution" (Bishop, 2007, p. 182) Thus, by focusing measurement on emotional fulfillment and satisfaction, researchers may be perpetuating the frailties in marriage they are attempting to prevent. Hence, a robust consideration of context and marriage requires expanded attention to the historical and cultural milieu and its subsequent influence on marital quality and stability – only then will contextual factors be more completely exhausted.

Are couples being told what they already know? Lastly, when interpreting findings and subsequent implications from these (and other) studies of marriage, the conclusion that outreach efforts need to teach couples to 'talk nicely', 'do supportive things', 'say thank you' and 'be connected with others' may be too simplistic. While appealing based on their brevity and ease of dissemination, telling couples this information is, on the whole, not likely providing revolutionary content. The findings from the current study and others similar in nature may simply provide quantified, empirical support for things couples intuitively already knew. Indeed, qualitative research illustrates individuals to accurately describe various factors that characterize stable marital relationships (e.g., Curran, Utley, & Muraco, 2010; Hopkins-Williams, 2007). Though not an attempt to completely discredit such endeavors, what content is given primary emphasis and how efforts aim for its translation and retention within couples may require concerted re-examination.

In a similar fashion, instructing couples on how to perform certain behaviors may also not be as straightforwardly beneficial as once presumed. Findings of communication-focused relationship education/prevention are mixed, with some instances finding worse outcomes for participants over time (see Bradbury & Lavner, 2012), which may be particularly attributable to having established higher expectations for spouses that then fail to be performed to the standard held by one or both spouses (Bradbury, 2012). Additionally, observational studies document both husbands and wives being equally competent in their ability to provide support to each other, but not always enacting such behaviors when needed (Neff & Karney, 2005a). Simply knowing how to do something does not mean actually *wanting* to do it or having the *capacity* to do so.

Accordingly, a pressing question – perhaps *the* question – for the next generation of marital research concerns why couples struggle to do the things they already know are important. As Karney (2007) describes

> If most people understand that forgiveness, support, intimacy, and care are what marriages require to stay healthy, why are these behaviors so difficult to enact consistently? This is a question that begs for an answer, and providing that answer is arguably the problem that marital research should be designed to solve…all research on marital processes is ultimately aimed at bridging the puzzling distance between spouses' goals for their relationship and their behaviors in the particular moment. (p. 313)

Why, in essence, do spouses not do things they know they should do? For his explanation, Karney (2007; 2011b) has emphasized context (specifically stressful life events) as central to accounting for this gap between intentions and actions. However, such a position only seems partially tenable. For instance, protective relationship processes do not consistently negatively

covary with environmental stressors (see Table 3.1) and, at a broader level, the explanation of context fails to account for why even in 'non-stressful' contexts and situations spouses still struggle to perform the behaviors they intellectually acknowledge as important for marital quality. Accounting for this paradox presents a key question for future marital research to answer.

Conclusion

Across all social classes, most individuals express having a satisfying marriage to be one of the most important things in life (Karney & Bradbury, 2005). However, as indicated by stable, historically high divorce rates and declining levels of marital satisfaction (Glenn, 1991; Institute for American Values, 2009), the actualization of these aspirations are left unrealized for many individuals in America. Such a disconnect is experienced particularly among low- and middle-classes unions, for whom marital satisfaction has appreciably declined and marital instability continually risen in recent decades (Wilcox, 2010). Given the centrality of marriage to the well-being of individuals and broader communities (Wilcox et al., 2011), basic and applied marital research that can inform and assist efforts targeting the maintenance and stability of these unions is a pressing social issue.

Results from the current set of studies contribute to this effort, highlighting both the nontrivial impact that external stress can have on a marriage as well as pathways through which stress comes to shape marital unions. In addition, the current studies also identified protective processes within couples that mitigate the negative effects on marital quality associated with particular contextual stressors. The protective marital processes examined (perceived partner gratitude and couple social integration) have thus far received little previous research attention, providing researchers and practitioners new insights for improving marital quality and stability.

Irrespective of context, aspirations of a stable, satisfying marriage become more attainable to the degree that couples are able to foster a marital climate of support, commitment, and positive engagement. In sum, as illustrated by these studies, context is a non-ignorable – but not deterministic – factor for marital quality.

An ongoing – and highly-contentious – debate exists concerning the state of marriage in America (see Amato et al., 2007) and the nature of government involvement in matters pertaining to marriage (see Cherlin, 2003). Answers to questions of whether marriage is in a state of decline or greater diversity, its structure, and its place in society are arguably more ideological than empirical, being based on one's beliefs of the teleological nature of marriage. What appears irrefutable is the pronounced change that has occurred in marital patterns and conceptualizations (Amato et al., 2007; Cherlin, 2009; C. Murray, 2012), with such changes impacting spouses and children, workplaces and schools, neighborhoods and cities. Marital research that confronts the challenging issues impacting the state of marriage in America is a weighty and complex endeavor, but one whose results contribute greater insight into a relational and institutional thread central to the fabric of American society.

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APPENDIX

Table A1.
Measures utilized in studies.

Measures - Study 1

Construct	Item	Scale	Reliability
Marital Warmth (Conger, 1989)	**How often does your spouse…** Tell you (s)he loves you? Have a good laugh with you? Let you know that (s)he appreciates you? Listen carefully to your point of view? Help you do something that is important to you?	1 = Never 4 = Always 8 = Don't know 9 = No answer	.66 < α < .80 (Husbands over years 1, 2, and 3) .75 < α < .82 (Wives over years 1, 2, and 3)
Marital Hostility (Conger, 1989)	**How often does your spouse…** Insult you? Swear at you? Boss you around? Shout or yell at you because (s)he is mad at you? Criticize you? Get angry at you?	1 = Never 4 = Always 8 = Don't know 9 = No answer	.76 < α < .79 (Husbands over years 1, 2, and 3) .77 < α < .87 (Wives over years 1, 2, and 3)
Financial Strain (adapted from Conger & Elder, 1994)	**Please tell how much you agree or disagree with each statement** My spouse and I have enough money to afford the kind of home we need. My spouse and I have enough money to pay our bills. I worry that my spouse and I won't have enough money to get by. (r) We have enough money to afford the kind of clothing we need. We have enough money to afford the kind of food we need.	1 = Strongly Agree 5 = Strongly Disagree 8 = Don't know 9 = No answer	.76 < α < .85 (Husbands over years 1, 2, and 3) .80 < α < .83 (Wives over years 1, 2, and 3)

Measures – Study 1 (continued)

Construct	Item	Scale	Reliability
Perceived Neighborhood Disorder (Ross & Mirowsky, 1999)	**Please tell us how much you agree or disagree with each of the following statements** There is a lot of graffiti in my neighborhood. (r) My neighborhood is very loud or very noisy. (r) There is a lot of vandalism in my neighborhood. (r) My neighborhood looks nice. People in my neighborhood keep their yards clean. People in my neighborhood take good care of their apartments or houses. The streets in my neighborhood are well maintained. There is a lot of drug use in my neighborhood. (r) There is a lot of alcohol use in my neighborhood. (r) There is a lot of crime in my neighborhood. (r) In my neighborhood, people care about each other.	1 = Strongly Agree 5 = Strongly Disagree 8 = Don't know 9 = No answer	$.89 < \alpha < .91$ (Husbands over years 1, 2, and 3) $.90 < \alpha < .92$ (Wives over years 1, 2, and 3)

Measures - Study 2

Construct	Item	Scale	Reliability
Financial Wellness (Prawitz et al., 2006)	What do you feel is the level of your financial stress today? (r)	1 = No stress at all 10 = Overwhelming stress 11= Ref/DK/NA	α =.91
	How satisfied are you with your present financial situation?	1 = Completely Dissatisfied 10 = Completely Satisfied 11 = Ref/DK/NA	
	How do you feel about your current financial condition? (r)	1 = Feeling comfortable 10 = Overwhelmed 11 = Ref/DK/NA	
	How often does this happen to you? You want to go out to eat, go to a movie, or do something else and you don't go because you can't afford it? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	
	How frequently do you find yourself just getting by financially and living paycheck to paycheck? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	
	How often do you worry about being able to meet normal monthly living expenses? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	

(Items continued on next page)

Measures – Study 2 (continued)

Construct	Item	Scale	Reliability
Financial Wellness (continued)	How confident are you that you could find the money to pay for a financial emergency that costs about $1,000? (r)	1 = No confidence 4 = Little confidence 7 = Some confidence 10 = High confidence 11= Ref/DK/NA	
	How stressed are you about your personal finances in general?	1 = No stress at all 4 = Low stress 7 = High stress 10 = Overwhelming stress 11 = Ref/DK/NA	
Demand / Withdraw (Christensen & Heavey, 1993)	**When issues or problems arise, how likely is it that….** Your spouse tries to start a discussion while you try to avoid a discussion. You try to start a discussion while your spouse tries to avoid a discussion.	1 = Very Unlikely 9 = Very Likely 10 = Ref/DK/NA	α =.77
	During a discussion of issues or problems, how likely is it that… Your spouse pressures, nags, or demands while you withdraw, become silent, or refuse to discuss the matter further. You pressure, nag, or demand while your spouse withdraws, becomes silent, or refuses to discuss the matter further. Your spouse criticizes while you defend yourself. You criticize while your spouse defends him or herself.		
Felt Gratitude (adapted from Lambert & Fincham, 2011)	**For the next three questions, please report how frequently your spouse does the following behaviors** My spouse expresses appreciation for the things I do for him/her. My spouse lets me know that he/she values me. My spouse acknowledges me when I do something nice for him/her.	1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Always 6 = Ref/DK/NA	α =.90

Measures – Study 2 (continued)

Construct	Item	Scale	Reliability
Marital Satisfaction	All things considered, how happy are you with your marriage?	1 = Extremely unhappy 10 = Perfectly happy 11 = Ref/DK/NA	
Mutual Consensus (Busby et al., 1995)	**Most couples have disagreements in their relationship…How often you and your partner agree or disagree on each of the following topics.** Demonstrations of affection (Holding hands, hugging, kissing) Making major decisions Correct or proper behavior Career or work decisions Handling family finances Household tasks Raising children Religious matters	1 = Always disagree 2 = Almost always 3 = Frequently 4 = Occasionally 5 = Almost always 6 = Always agree 7 = Ref/DK/NA	α =.82
Relationship Cohesion (Busby et al., 1995)	**How often would you say the following events occur between you and your spouse?** Have a stimulating exchange of ideas Work together on a project Calmly discuss something	1 = Never 2 = Less than once a month 3 = Once or twice a month 4 = Once or twice a week 5 = Once a day 6 = More often than once a day 7 = Ref/DK/NA	α =.65
	Do you and your spouse engage in outside interests together?	1 = Never 2 = Rarely 3 = Occasionally 4 = Almost every day 5 = Every day 6 = Ref/DK/NA	

Measures – Study 2 (continued)

Construct	Item	Scale	Reliability
Relationship Conflict (Busby et al., 1995)	How often do you and your spouse quarrel? How often do you and your spouse "get on each other's nerves?	1 = Never 2 = Rarely 3 = Occasionally 4 = More often than not 5 = Most of the time 6 = All of the time 7 = Ref/DK/NA	α =.61
Dissolution Risk (Busby et al., 1995)	How often do you discuss or have you considered divorce, separation, or terminating your relationship? Do you ever regret that you married?	1 = Never 2 = Rarely 3 = Occasionally 4 = More often than not 5 = Most of the time 6 = All of the time 7 = Ref/DK/NA	α =.64
Dedication (Stanley & Markman, 1992)	My relationship with my spouse is more important to me than almost anything else in my life. I may not want to be with my spouse a few years from now (r) I like to think of my spouse and me more in terms of "us" and "we" than "me" and "him or her". I want this relationship to stay strong no matter what rough times we may encounter	1 = Strongly disagree 7 = Strongly agree 8 =Ref/DK/NA	α =.68

Measures - Study 3

Construct	Item	Coding/Recoding	Reliability
Financial Wellness (Prawitz et al., 2006)	What do you feel is the level of your financial stress today? (r)	1 = No stress at all 10 = Overwhelming stress 11= Ref/DK/NA	α =.91
	How satisfied are you with your present financial situation?	1 = Completely Dissatisfied 10 = Completely Satisfied 11 = Ref/DK/NA	
	How do you feel about your current financial condition? (r)	1 = Feeling comfortable 10 = Overwhelmed 11 = Ref/DK/NA	
	How often does this happen to you? You want to go out to eat, go to a movie, or do something else and you don't go because you can't afford it? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	
	How frequently do you find yourself just getting by financially and living paycheck to paycheck? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	
	How often do you worry about being able to meet normal monthly living expenses? (r)	1 = Never 4 = Rarely 7 = Sometimes 10 = All of the time 11 = Ref/DK/NA	

(Items continued on next page)

Measures – Study 3 (continued)

Construct	Item	Coding/Recoding	Reliability
Financial Wellness (continued)	How confident are you that you could find the money to pay for a financial emergency that costs about $1,000? (r)	1 = No confidence 4 = Little confidence 7 = Some confidence 10 = High confidence 11= Ref/DK/NA	
	How stressed are you about your personal finances in general?	1 = No stress at all 4 = Low stress 7 = High stress 10 = Overwhelming stress 11 = Ref/DK/NA	
Social Integration (Stanley & Markman, 2007)	Many of our friends are friends of both of us. We know people who care about us and our relationship. If we were to need help getting by or encountered a crisis, we would have friends or family to rely on. As a couple, we try to help others in need	1= Strongly disagree 7= Strongly agree 8=Ref/DK/NA	α =.70
Marital Satisfaction	All things considered, how happy are you with your marriage?	1. extremely unhappy 10. Perfectly happy 11. Ref/DK/NA	