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The content of relational uncertainty within marriage

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──────────── ABSTRACT ────────────

Two studies were conducted to examine relational uncertainty within marriage. Study 1 gathered open-ended data from 85 individuals to identify issues spouses are unsure about. Findings indicated 12 content areas, including uncertainty about children, communication, career issues, finances, health, commitment, extended family, sex, retirement, religious beliefs, leisure time, and household chores (*RQ1*). Only the commitment theme paralleled the doubts salient in dating relationships (*RQ2*). Study 2 surveyed 125 couples to develop self-report measures of the themes. Hierarchical linear modeling results revealed negative associations between relational uncertainty and marital quality (*RQ3*, *RQ5*). The self source (*RQ4*) and the communication and sex themes (*RQ6*) were the strongest predictors of marital quality. These findings illuminate the nuances of relational uncertainty within marriage.

KEY WORDS: commitment • communication • marital quality • marriage • relational uncertainty

More than three decades has elapsed since Uncertainty Reduction Theory (URT) first theorized that uncertainty shapes people's behavior within initial interaction (Berger & Calabrese, 1975). In that time, scholars have documented evidence that uncertainty predicts communication in the formative stages of relationships. Uncertainty in an initial encounter predicts the amount of communication that occurs between strangers (Gudykunst, 1985).

Uncertainty in the workplace predicts how employees seek information from their colleagues (Kramer, 2004). Uncertainty about a dating relationship predicts how willing individuals are to talk with their partner about sensitive issues (Afifi & Burgoon, 1998; Knobloch & Carpenter-Theune, 2004). These findings support URT's premise that uncertainty corresponds with how people navigate the early stages of relationship development.

Perhaps because URT so convincingly established the prominence of uncertainty among strangers, subsequent research has privileged relationships of relatively short duration (Knobloch, 2007a). Only one study, for example, has examined uncertainty within marriage: Turner (1990) reported that 80% of the participants in her study had experienced an event that caused them to question some aspect of their marriage. The focus on relationships in formative stages has left a gap in knowledge about how uncertainty corresponds with marital well-being. But if URT is correct that uncertainty plays a role in all interaction (e.g., Berger & Gudykunst, 1991), then uncertainty should predict the health of marriages as well.

Two tasks must be accomplished before scholars can evaluate the link between uncertainty and marital quality. One is to identify the issues of uncertainty that are salient among spouses. A second is to create measures of uncertainty that capture spouses' experiences. Accordingly, my goals in this paper are (i) to identify the themes of uncertainty within marriage, (ii) to create self-report measures of those themes, and (iii) to evaluate the association between uncertainty and marital quality. Accomplishing these goals will pave the way for theory development by explicating and operationalizing uncertainty within marriage.

I begin by reviewing the literature. Next, I report the method and results of two studies designed to address my goals. I conclude by discussing how the findings advance the current understanding of uncertainty within marriage.

Tailoring the relational uncertainty construct to marriage

Scholarly conceptualizations of uncertainty have evolved over the history of the construct. URT first emphasized the importance of uncertainty in face-to-face communication between strangers (Berger & Calabrese, 1975). URT argued that people meeting for the first time experience ambiguity about their own thoughts and feelings as well as their partner's thoughts and feelings. The theory suggested that uncertainty about a partner's personality, attitudes, and lifestyle are particularly salient within initial interaction. URT sparked an expansive literature that underscored the prevalence of uncertainty within the early stages of relationship progression (for reviews, see Berger & Gudykunst, 1991; Bradac, 2001).

Although URT was originally formulated to explain uncertainty in initial interaction (Berger & Calabrese, 1975), the theory was applied to established relationships shortly after its inception (Berger & Bradac, 1982; Parks & Adelman, 1983). Empirical findings compatible with the theoretical extension demonstrated that people grapple with questions about a partner's

opinions, values, and feelings in both dating relationships and friendships (Parks & Adelman, 1983; Planalp, Rutherford, & Honeycutt, 1988). This work showed that uncertainty is relevant to ongoing relationships.

The measure of uncertainty employed in these first investigations of established relationships was Clatterbuck's (1979) CLUES scale. The items ask people about their ability to predict an acquaintance's characteristics (e.g., "How well do you think you know the person?", "How accurate do you think you are at predicting the person's attitudes?", "How well do you think you can predict the person's feelings and emotions?"). By relying on the CLUES scale, early work on uncertainty within ongoing relationships inherited URT's focus on questions about partners. Although emphasizing partner predictability was sensible for URT because ambiguity about a partner's attributes is central to initial interaction (Berger & Gudykunst, 1991), the first studies of uncertainty within established relationships overlooked ambiguity arising from other sources (Knobloch & Solomon, 2002a).

As scholars began to recognize that uncertainty within close relationships entails more than just questions about partners (Afifi & Burgoon, 1998; Afifi & Reichert, 1996), they called for a reconceptualization of uncertainty that moved beyond the foundation laid by URT (Knobloch & Solomon, 1999). To that end, Knobloch and Solomon (1999, 2002a) worked to customize the uncertainty construct to the domain of close relationships. They defined *relational uncertainty* as the degree of confidence people have in their perceptions of involvement within interpersonal relationships. The construct encompasses all of the questions individuals have about participating in a close relationship (Knobloch & Solomon, 1999, 2002a).

Relational uncertainty stems from three overlapping but distinct sources (Berger & Bradac, 1982; Knobloch & Solomon, 1999); these sources are relevant across relationship contexts (Knobloch, 2007a). *Self uncertainty* includes the questions people have about their own involvement in a relationship (e.g., "How certain am I about how important this relationship is to me?"). *Partner uncertainty* refers to the ambiguity individuals experience about their partner's involvement in a relationship (e.g., "How certain am I about how important this relationship is to my partner?"). *Relationship uncertainty* entails the doubts people have about the relationship itself, apart from self or partner issues (e.g., "How certain am I about the definition of this relationship?"). Whereas self and partner uncertainty encompass questions about individuals, relationship uncertainty focuses on the dyad as a whole.

A related task was to identify the issues people are uncertain about. Scholars began in the context of dating relationships, where relational uncertainty is especially salient because partners need to ascertain their long-term compatibility (e.g., Baxter & Wilmot, 1985; Siegert & Stamp, 1994). Knobloch and Solomon (1999) collected qualitative and quantitative data to delineate themes and self-report measures of relational uncertainty within dating relationships. Their results indicated that self and partner uncertainty include three content areas: (i) people's *desire* for the relationship ("How certain am I about how much I want to pursue this relationship?"), (ii) their

evaluation of its value ("How certain am I about my partner's view of this relationship?"), and (iii) their *goals* for its development ("How certain am I about whether or not I want this relationship to last?"). Relationship uncertainty contains four content areas, including questions about (i) *norms for behavior* ("How certain am I about what we can and cannot say to each other in this relationship?"), (ii) *mutuality of feelings* ("How certain am I about whether or not we feel the same way about each other?"), (iii) the *definition* of the relationship ("How certain am I about the state of the relationship at this time?"), and (iv) the *future* of the relationship ("How certain am I about whether or not we will stay together?").

Armed with this conceptualization, scholars proceeded to document the cognitive, emotional, and behavioral outcomes of relational uncertainty within dating relationships. Individuals experiencing relational uncertainty appraise irritating partner behavior to be more severe (Solomon & Knobloch, 2004; Theiss & Solomon, 2006), evaluate unexpected events to be more threatening (Knobloch & Solomon, 2002b), and perceive friends and family members to be less supportive of their dating relationship (Knobloch & Donovan-Kicken, 2006). They also feel more negative emotion (Knobloch, Miller, & Carpenter, 2007; Knobloch, Solomon, & Cruz, 2001). With respect to behavior, dating partners grappling with relational uncertainty engage in more topic avoidance (Knobloch & Carpenter-Theune, 2004), are less willing to confront their partner about surprising episodes (Knobloch & Solomon, 2002b), and produce less effective date request messages (Knobloch, 2006). This work demonstrated that relational uncertainty corresponds with people's cognitions, emotions, and behaviors within dating relationships.

The content of relational uncertainty in marriage is less clear. As previously noted, one investigation has examined spouses' experiences of ambiguity. Turner (1990) asked 46 married couples to describe a surprising event in their marriage. She identified eight categories of unexpected episodes: (i) out-of-character behavior from a spouse, (ii) unexpected thoughtfulness from a spouse, (iii) reactions to a pregnancy, (iv) a change in the family situation, (v) disrespectful behavior from a spouse, (vi) a shift in the definition of the relationship, (vii) discovery of a spouse's deception, and (viii) competing relationships. More broadly, Turner's study revealed that relational uncertainty is present in marriage.

Obtaining further insight requires identifying the issues spouses are uncertain about. Although self, partner, and relationship *sources* of ambiguity should be relevant to all dyadic contexts (Berger & Bradac, 1982; Knobloch, 2007a), the *content* of relational uncertainty embedded within the sources may or may not be specific to the domain. One possibility is that the content in marriage is redundant with the content in dating relationships. If the substance of doubt is similar across romantic contexts, then a conceptualization of relational uncertainty tailored to marriage would be superfluous. Moreover, Knobloch and Solomon's (1999) measure of relational uncertainty would be appropriate for both populations.

An alternative possibility is that spouses grapple with doubts particular to marriage. Just as the content of relational uncertainty differs in acquaintance

versus dating relationships (Knobloch & Solomon, 2002a), the themes of relational uncertainty may diverge in dating relationships versus marriage (cf., Afifi & Metts, 1998; Turner, 1990). If so, then customizing the construct to the domain of marriage would make three contributions to the literature. First, it would shed light on the nuances of relational uncertainty that are salient in long-term relationships. Second, it would provide a foundation for investigating the link between relational uncertainty and marital quality. Most generally, it would pave the way for knowledge to accrue in a systematic fashion.

Data about unexpected events supports both possibilities. Investigations of surprising episodes in friendships and dating relationships (Planalp & Honeycutt, 1985; Planalp et al., 1988) versus marriage (Turner, 1990) have identified a few events that span both contexts (change in behavior, competing relationships, deception). In addition, those investigations have documented a few incidents more relevant to friendships and dating relationships (loss of contact, divergent expectations for closeness) versus marriage (responses to pregnancy, changes in the family). *RQ1* and *RQ2* inquire about the themes of relational uncertainty salient to spouses:

- *RQ1*: What is the content of relational uncertainty within marriage?
- *RQ2*: What are the similarities and differences between the content of relational uncertainty within marriage versus dating relationships?

Relational uncertainty and marital quality

Marital quality is the health, well-being, and stability of a marriage (e.g., Fletcher, Simpson, & Thomas, 2000; Prager & Roberts, 2004). Six constructs are prominent in theorizing about how people evaluate the quality of their relationships (Fletcher et al., 2000). *Satisfaction* is contentment with a relationship (Hendrick & Hendrick, 1997). *Commitment* is the motivation to maintain a relationship into the future (Rusbult, 1983). *Intimacy* involves feelings of closeness, connectedness, and bondedness to a partner (Sternberg, 1986). *Trust* is confidence that a partner will help accomplish goals (Rempel, Ross, & Holmes, 2001). *Passion* is physical attraction to a partner (Sternberg, 1986; Vohs & Baumeister, 2004). *Love* entails affection for a partner (Rubin, 1973; Sternberg, 1987). This list contains a theoretically-derived and empirically-validated set of constructs that are prominent in previous research (Fletcher et al.). Accordingly, I attend to all six variables to gain a nuanced view of marital quality.

Theories suggest divergent claims about the nature of the association between relational uncertainty and marital quality. Of course, URT is the framework that speaks to this issue most explicitly. URT implies that uncertainty may diminish marital quality because communicating with a partner is more difficult (Berger & Bradac, 1982; Berger & Calabrese, 1975). In contrast, more recent approaches imply that ambiguity may enhance marital quality by providing an aura of excitement, mystery, and romance (Knobloch

& Solomon, 2002a). For example, Livingston's (1980) cognitive theory of uncertainty argues that ambiguity provides couples with opportunities to reaffirm their investment in the relationship. Relational dialectics theory proposes that uncertainty enlivens stagnating partnerships (Baxter & Montgomery, 1996). Uncertainty management theory posits that ambiguity is useful for preserving hope in stressful circumstances (Brashers, 2001). Both predicted outcome value theory (Sunnafrank, 1986) and problematic integration theory (Babrow, 2001) imply that uncertainty is a neutrally valenced construct that people evaluate as pleasant or unpleasant depending on the situation. Hence, theories offer conflicting views of how relational uncertainty may predict marital quality.

Empirical evidence is contradictory as well. Some work suggests that relational uncertainty may be dissatisfying within romantic associations. Dating partners experiencing relational uncertainty evaluate their relationship critically (Knobloch, 2007b), experience negative emotion (Afifi & Reichert, 1996; Knobloch et al., 2007), and have difficulty communicating openly (Afifi & Burgoon, 1998; Knobloch & Carpenter-Theune, 2004) and effectively (Knobloch, 2006; Knobloch & Solomon, 2005). Moreover, spouses who grow ambivalent about their relationship during the first two years of marriage are more likely to divorce (Huston, Caughlin, Houts, Smith, & George, 2001). These findings imply that relational uncertainty may be detrimental to the well-being of romantic relationships.

Other studies imply that relational uncertainty may be valuable to romantic relationships. For example, individuals often mention boredom as a reason for terminating a dating relationship (Baxter, 1986; Cody, 1982) or seeking a divorce (Gigy & Kelly, 1992). Indeed, people's premarital anxieties include concerns about monotony, stagnation, and entrapment (Zimmer, 1986). Married couples who spend time alone together engaging in exciting or novel activities report greater satisfaction with their marriage (Reissman, Aron, & Bergen, 1993). Similarly, spouses who experience positively-valenced violations of their expectations are more satisfied (Kelley & Burgoon, 1991). These results hint that relational uncertainty may enhance the well-being of romantic relationships.

Scholars have yet to examine the link between relational uncertainty and marital quality directly, but conceptual logic suggests that both negative and positive associations are plausible. Whereas dating partners may expect to experience some ambiguity as they decide whether to make a long-term commitment (e.g., Baxter & Bullis, 1986; Baxter & Wilmot, 1985), spouses may be ill-equipped to grapple with doubts about their relationship because such questions are not part of their schema for marriage (e.g., Holmberg, Orbuch, & Veroff, 2004). Moreover, marriage furnishes personal, moral, and structural barriers to dissolution that may make relational uncertainty particularly anxiety-provoking for spouses who would lose resources if the partnership ended (e.g., Johnson, Caughlin, & Huston, 1999). On the other hand, spouses may welcome ambiguity as an opportunity to spice up their daily routines, to stimulate renewed interest in their partnership, and to reiterate their commitment to each other (e.g., Baxter & Montgomery,

1996; Livingston, 1980). *RQ3* asks about the tenor of relational uncertainty in marriage:

- RQ3: How are self, partner, and relationship sources of relational uncertainty associated with marital quality?

A lingering question is the source of relational uncertainty that is the strongest predictor of marital quality. On one hand, self uncertainty may be the most powerful predictor because it indexes people's own confidence in the marriage (e.g., Rusbult, Kumashiro, Coolsen, & Kirchner, 2004). Alternatively, partner uncertainty may be the most potent predictor because it encompasses people's perceptions of their spouse's investment in the marriage (e.g., Solomon, Knobloch, & Fitzpatrick, 2004). Of course, relationship uncertainty may be the most robust predictor because it has implications for the long-term viability of the marriage (e.g., Fowers, Lyons, Montel, & Shaked, 2001). *RQ4* examines the issue:

- *RQ4*: Which source of relational uncertainty is the strongest predictor of marital quality?

This paper has emphasized the importance of adapting the relational uncertainty construct to the domain of marriage. Whereas *RQ3* and *RQ4* highlight self, partner, and relationship sources of doubt that should be salient across dyadic contexts, they do not consider the themes of relational uncertainty that are particularly relevant to marriage. Work is needed to document the interplay between relational uncertainty and marital quality using the themes of ambiguity that are prominent in marriage. Accordingly, parallel research questions attend to the issues of ambiguity that are germane to marriage:

- *RQ5*: How are the themes of relational uncertainty associated with marital quality?
- *RQ6*: Which theme of relational uncertainty is the strongest predictor of marital quality?

In sum, three objectives motivate this paper. One is to delineate the content of relational uncertainty within marriage (*RQ1*) and compare it to the content of relational uncertainty within dating relationships (*RQ2*). A second is to craft reliable and valid self-report instruments to operationalize those themes. A third and overarching objective is to document the link between relational uncertainty and marital quality (*RQ3*, *RQ4*, *RQ5*, *RQ6*). Study 1 sought to accomplish the first goal; Study 2 worked to achieve the other two.

Study 1

Method
Participants were 85 married individuals (36 males, 49 females) who completed a self-administered questionnaire about their experiences of

relational uncertainty in marriage. Respondents ranged in age from 20 to 80 years old (M = 47.88 years, SD = 14.12 years, Mdn = 50 years). Participants were married for an average of 22 years (*range* = less than 1 year to more than 59 years, SD = 14.77 years, Mdn = 23 years). Approximately 79% of the respondents had children; 82% of the participants were involved in their first marriage.

The questionnaire asked participants to identify issues of relational uncertainty in an open-ended way. The following instructions were provided:

> It's normal for spouses to have questions about their marriage. Spouses can experience uncertainty about *their own* thoughts, feelings, and behaviors in marriage. They can have questions about *their partner's* thoughts, feelings, and behaviors in marriage. They can be unsure about the *nature of the relationship itself*.

> Our goal on this page is to identify the issues spouses are uncertain about. Please *list* and *briefly describe* issues of uncertainty you have experienced in your marriage.

The rest of the page contained 10 numbered, blank lines. In total, 77 of 85 participants (91%) listed at least one issue of relational uncertainty (N = 366 issues, M = 4.31 issues, SD = 2.83 issues).

Results

A content analysis was conducted in six steps (following Krippendorff, 2004; Neuendorf, 2002). First, participants' responses were transcribed verbatim from the questionnaires. The responses were retained in the units participants employed to convey their thoughts. Second, 12 themes were inductively derived from the data (as per Neuendorf, pp. 102–104). A third step was to create a coding manual describing the themes. Fourth, two independent judges who were blind to the goals of the study were trained to code the responses. Judges worked alone to code each response into one of 13 mutually exclusive and exhaustive categories (the 12 categories of themes plus a miscellaneous category). Next, Cohen's (1960) κ was computed for each category to evaluate the reliability of the judgments. Finally, disagreements between judges were resolved through discussion.

Table 1 contains exemplars and κ values for the themes of relational uncertainty. The themes were (i) *having and raising children* (14.21%), (ii) *communication* (13.93%), (iii) *career issues* (10.39%), (iv) *finances* (9.84%), (v) *health and illness* (9.84%), (vi) *commitment* (9.29%), (vii) *in-laws and extended family* (4.92%), (viii) *sex* (4.64%), (ix) *retirement* (4.37%), (x) *religious beliefs* (3.28%), (xi) *leisure time* (3.01%), and (xii) *household chores* (2.46%). A final *miscellaneous* category (xiii) contained comments about where to live, if the spouses got married too young, whether the couple should travel less, how to break out of the stereotypes of marriage, etc. (9.82%). Collectively, these themes offer insight into *RQ1*.

TABLE 1
The content of relational uncertainty identified in Study 1

1. *Having and raising children* ($n = 52, 14.21\%, \kappa = .93$)

   "Will children change the way she feels about me?"
   "Our first child was adopted, and that brought uncertainty into our lives."
   "Will our kids make it without us?"

2. *Communication* ($n = 51, 13.93\%, \kappa = .94$)

   "Communication is an area of our marriage that suffers greatly."
   "Sometimes there is uncertainty about how much appreciation is expressed."
   "We have had many misunderstandings about things we've both said."

3. *Career issues* ($n = 38, 10.39\%, \kappa = .80$)

   "I have felt uncertain about my husband's ability to settle down professionally. He has switched jobs many times and is somewhat of a dreamer."
   "Job security – change is difficult."
   "I am uncertain about where our future jobs will take us."

4. *Finances* ($n = 36, 9.84\%, \kappa = .91$)

   "Are we ever going to have enough money to afford a house?"
   "Always uncertainties about money."
   "Uncertainty regarding whether we can pay our monthly bills."

5. *Health and illness* ($n = 36, 9.84\%, \kappa = .86$)

   "Our commitment during sickness and health."
   "Will my spouse care for me if I should face an illness?"
   "We wonder how long we have before something devastating happens."

6. *Commitment* ($n = 34, 9.29\%, \kappa = .74$)

   "I wonder how much I can trust my spouse."
   "How can we make sure our love continues to grow and not reach a plateau?"
   "I don't want to be tied down but would never end the marriage. My feelings are ambiguous."

7. *In-laws and extended family* ($n = 18, 4.92\%, \kappa = .83$)

   "Interference with opinions from in-laws."
   "Family issues – who or what should come first compared to families' beliefs and ideas."
   "Is my spouse more loyal to me or more loyal to her siblings?"

8. *Sex* ($n = 17, 4.64\%, \kappa = .89$)

   "Sex – concern that it will end sometime in the future. This happens as we age."
   "I have felt uncertain about if I have been pretty enough for him – if I meet his needs and my needs sexually."
   "Sometimes, after a fantastic afternoon session, she can't understand how I could possibly want more sex at night."

TABLE 1
Continued

9. *Retirement* (*n* = 16, 4.37%, κ = .78)

"How our retirement planning will work out."
"Our youngest child will be leaving for college in the fall. We will have an empty nest. I wonder how we'll be able to relate and entertain each other without others living here. Will we be enough for each other?"
"Hoping to provide a stable retirement environment."

10. *Religious beliefs* (*n* = 12, 3.28%, κ = .87)

"Deciding which church to be involved in."
"Religious differences – mixing two traditions is definitely more challenging, especially at holidays."
"Determining God's spiritual direction for us as a family."

11. *Leisure time* (*n* = 11, 3.01%, κ = .75)

"What does my husband think about when he's out with his single friends?"
"Neither of us is very good at organizing leisure time activities, so we don't mix with other couples often – but it's mostly okay."
"Uncertain about how my spouse feels about my freedom."

12. *Household chores* (*n* = 9, 2.46%, κ = .84)

"Chores – one or the other always thinks they are doing more."
"Our relationship has developed to the point where my usefulness is filling the checkbook, making dinner, and cleaning house while my wife is off doing her own thing."
"Differences in caring about our home."

13. *Miscellaneous* (*n* = 36, 9.82%, κ = .75)

"How do I convince him that I didn't, as he puts it, "settle" on him?"
"Connectivity."
"Whether we should live closer to other family or not."

N = 366 issues reported in Study 1.

Discussion

The findings of Study 1 imply that the questions people have about marriage are different than the questions salient in dating relationships (*RQ2*). One distinctive feature involves the sources of relational uncertainty. Although self, partner, and relationship sources of ambiguity are applicable to all types of associations (Berger & Bradac, 1982), the relationship source may be especially prominent in marriage. This claim stems from how individuals framed their responses (see Table 1). They tended to portray their un-certainty in terms of dyadic-level issues ("How many children should we have?", "How much space do we need from our extended families?") rather than individual-level issues ("Do I have the financial security to retire?", "Is my spouse willing to spend his free time doing activities I enjoy?").

Accordingly, the epicenter of ambiguity within marriage may be the relationship more than self or partner predictability concerns.

A second difference is that doubts about marriage, unlike doubts about dating relationships, may originate from outside the dyad. Whereas ambiguity in dating relationships may focus on internal doubts about the compatibility of partners (e.g., questions about a person's desire to pursue the relationship, his or her evaluation of the relationship's value, the mutuality of commitment between partners; Knobloch & Solomon, 1999), ambiguity in marriage may be more structured around external forces that could alter the status quo (e.g., questions about children, careers, finances, extended family). Of the 12 themes identified in Study 1, only the commitment theme is conceptually redundant with the content of relational uncertainty prominent in dating relationships. The other 11 content areas denote issues outside the dyad that could change the status of the marriage. Perhaps relational uncertainty in dating relationships reflects people's motivation to discern the future viability of the partnership (Knobloch & Solomon, 1999), but relational uncertainty in marriage reflects people's motivation to discern how external forces could affect the marriage.

Study 2

Method

Sample. Participants were 125 married couples living in a small city in the Midwestern United States who received $40 for participating in the study. Three advertising strategies were employed to recruit the couples: (i) flyers posted in community centers, churches, shopping areas, university buildings, and pedestrian malls; (ii) advertisements included in e-mail newsletters distributed to university employees; and (iii) pamphlets participants passed along to others. The recruitment materials contained the following text:

> We're looking for volunteers to complete a study about communication in marriage. Participation involves (a) completing questionnaires, and (b) participating in two videotaped conversations with your spouse. All married couples (18 years of age or older) are eligible to participate.

Participants ranged in age from 21 to 74 years old (M = 34.45 years, SD = 9.72 years, Mdn = 32 years). The racial composition of the sample was 74% Caucasian (n = 184), 12% Asian (n = 31), 4% black or African-American (n = 11), 2% Hispanic or Latino/a (n = 5), 1% American Indian or Alaskan Native (n = 3), 0.4% Native Hawaiian or Pacific Islander (n = 1), and 6% other (n = 15).

On average, spouses were married for 7.43 years (*range* = less than 1 year to more than 31 years, SD = 7.04 years, Mdn = 5 years). Most participants were involved in their first marriage (n = 223, 90%), and approximately half of the sample had children (n = 131, 52%).

Procedure. Data collection sessions took place in a laboratory on a university campus. First, couples individually completed measures of demographic variables and marital quality. Next, they responded to items assessing relational uncertainty. Finally, as part of a separate investigation, they engaged in two videotaped conversations (see Knobloch, Miller, Bond, & Mannone, 2007).

Measures. Confirmatory factor analysis (CFA) was used to evaluate the unidimensionality of the measures. CFA procedures require that items meet the criteria of face validity, internal consistency, and external consistency before being formed into factors (Anderson & Gerbing, 1988; Hunter & Gerbing, 1982). *Face validity* exists when items convey a precise and shared meaning. *Internal consistency* occurs when items in a factor share strong positive correlations. *External consistency* exists when items are correlated similarly with items from an external factor. External consistency was evaluated by including an eight-item measure of interference from partners (Knobloch & Solomon, 2004; Solomon & Knobloch, 2001) in the CFA models.

Three goodness-of-fit indices gauged the fit of the CFA models. The χ^2/df ratio adjusts the χ^2 statistic for sample size (Kline, 1998). The *CFI* calculates the ratio of the noncentrality parameter estimate of the hypothesized model to the noncentrality parameter estimate of a baseline model (Bentler, 1990). The *RMSEA* accounts for errors of approximation in the population (Browne & Cudeck, 1993). Criteria for model fit were set at $\chi^2/df < 3.00$, *CFI* $> .90$, and *RMSEA* $< .10$ (as per Browne & Cudeck; Kline).

Marital quality. The Perceived Relationship Quality Components Inventory (PRQC; Fletcher et al., 2000) measured marital quality. Individuals used a 7-point scale (1 = *not at all*, 7 = *extremely*) to indicate their response to items assessing their marriage. Three items evaluated each of the six components of marital quality: (i) *satisfaction* ("How satisfied are you with your marriage?", "How content are you with your marriage?", "How happy are you with your marriage?"), (ii) *commitment* ("How committed are you to your marriage?", "How dedicated are you to your marriage?", "How devoted are you to your marriage?"), (iii) *intimacy* ("How intimate is your marriage?", "How close is your marriage?", "How connected are you to your spouse?"), (iv) *trust* ("How much do you trust your spouse?", "How much can you count on your spouse?", "How dependable is your spouse?"), (v) *passion* ("How passionate is your marriage?", "How much passion is in your marriage?", "How sexually intense is your marriage?"), and (vi) *love* ("How much do you love your spouse?", "How much do you adore your spouse?", "How much do you cherish your spouse?").

CFA models verified the unidimensionality of the items assessing satisfaction ($\chi^2/df = 1.89$, *CFI* = .98, *RMSEA* =.06), commitment ($\chi^2/df = 1.96$, *CFI* = .97, *RMSEA* = .07), intimacy ($\chi^2/df = 2.19$, *CFI* = .96, *RMSEA* = .07), trust ($\chi^2/df = 1.92$, *CFI* = .97, *RMSEA* = .06), passion ($\chi^2/df = 1.87$, *CFI* = .98, *RMSEA* = .06), and love ($\chi^2/df = 2.09$, *CFI* = .97, *RMSEA* = .07).

Accordingly, variables were computed as the average of items measuring satisfaction (M = 6.17, SD = 0.97, α = .94), commitment (M = 6.72, SD = 0.54, α = .92), intimacy (M = 6.21, SD = 0.88, α = .80), trust (M = 6.45, SD = 0.74, α = .81), passion (M = 5.31, SD = 1.28, α = .94), and love (M = 6.51, SD = 0.71, α = .84). The scales shared positive zero-order correlations ranging from .32 to .83, all p <.001.

Sources of relational uncertainty. Self, partner, and relationship uncertainty were operationalized using condensed versions of the scales Knobloch and Solomon (1999) developed in the context of dating relationships. Participants employed a 6-point scale (1 = *completely or almost completely uncertain*, 6 = *completely or almost completely certain*) to indicate their response to items completing the stem "How certain are you about …?" All items were reverse-scored to index relational *un*certainty.

   Self uncertainty contained four items: (i) how you feel about your marriage, (ii) your view of your marriage, (iii) how important your marriage is to you, and (iv) your goals for the future of your marriage (M = 1.40, SD = 0.54, α = .84). *Partner uncertainty* also included four items: (i) how your spouse feels about your marriage, (ii) your spouse's view of your marriage, (iii) how important your marriage is to your spouse, and (iv) your spouse's goals for the future of your marriage (M = 1.51, SD = 0.69, α = .90). Similarly, *relationship uncertainty* encompassed four items: (i) how you can or cannot behave around your spouse, (ii) the current status of your marriage, (iii) the definition of your marriage, and (iv) the future of your marriage (M = 1.48, SD = 0.62, α = .85). CFA results verified the unidimensionality of the scales measuring self uncertainty (χ^2/df = 1.99, *CFI* = .97, *RMSEA* = .06), partner uncertainty (χ^2/df = 1.39, *CFI* = .99, *RMSEA* = .04), and relationship uncertainty (χ^2/df = 1.86, *CFI* = .97, *RMSEA* = .06). They were positively correlated (see Table 3).[1]

Content of relational uncertainty. To measure the content of relational uncertainty within marriage, 33 items were written incorporating the language used by participants in Study 1 (see Table 2). Three items assessed each of 11 content areas (the commitment theme was excluded because it is redundant with self, partner, and relationship uncertainty). The items measuring the 11 content areas were interspersed within the set.

   Participants recorded their response to items prefaced by the stem "How certain are you about …?" (1 = *completely or almost completely uncertain*, 6 = *completely or almost completely certain*). Items were reverse-scored such that higher scores corresponded with greater ambiguity.

Results

Evaluating the first-order factor structure. CFA procedures were used to evaluate the unidimensionality of the new measures. Results indicated that the model fit the data for each theme of relational uncertainty (see Table 2 for the goodness-of-fit statistics). Consequently, scales were computed by

TABLE 2
Items measuring the content of relational uncertainty in Study 2

1. *Having and Raising Children* ($M = 1.85, SD = 0.86, \alpha = .88$)

   1. If you and your spouse feel the same way about having and raising children?
   2. If and how you and your spouse should raise children?
   3. If you and your spouse share the same views on raising children?

$$\chi^2 / df = 1.94, CFI = .97, RMSEA = .07$$

2. *Communication* ($M = 2.03, SD = 0.83, \alpha = .93$)

   1. How to communicate well with your spouse?
   2. How to best communicate with your spouse?
   3. How to communicate effectively with your spouse?

$$\chi^2 / df = 1.88, CFI = .98, RMSEA = .06$$

3. *Career Issues* ($M = 2.00, SD = 0.86, \alpha = .91$)

   1. How you and your spouse should make career decisions?
   2. How you and your spouse should pursue career goals?
   3. How you and your spouse should make career choices?

$$\chi^2 / df = 2.17, CFI = .97, RMSEA = .07$$

4. *Finances* ($M = 2.16, SD = 0.89, \alpha = .82$)

   1. How to spend the money you and your spouse have?
   2. The financial situation within your marriage?
   3. How to manage the money you and your spouse have?

$$\chi^2 / df = 2.07, CFI = .97, RMSEA = .07$$

5. *Health and Illness* ($M = 2.15, SD = 0.96, \alpha = .84$)

   1. How to cope with illness to you or your spouse?
   2. How to deal with health problems in your marriage?
   3. How to handle illness to one or both of you?

$$\chi^2 / df = 2.19, CFI = .97, RMSEA = .07$$

6. *In-Laws and Extended Family* ($M = 2.08, SD = 0.87, \alpha = .82$)

   1. How to get along with in-laws and extended family?
   2. How much time you and your spouse should spend with extended family?
   3. How well you and your spouse are able to get along with extended family?

$$\chi^2 / df = 1.91, CFI = .97, RMSEA = .06$$

7. *Sex* ($M = 2.24, SD = 0.95, \alpha = .86$)

   1. How much physical intimacy you should have with your spouse?
   2. How often you and your spouse should have sex?
   3. How to have a satisfying sexual relationship?

$$\chi^2 / df = 1.92, CFI = .97, RMSEA = .06$$

TABLE 2
Continued

8. *Retirement (M = 2.86, SD = 1.33, α = .94)*

 1. How you and your spouse should spend your retirement years?
 2. How your marriage should be during retirement?
 3. What lifestyle you and your spouse should have during retirement?

$\chi^2 / df = 2.18, CFI = .97, RMSEA = .07$

9. *Religious Beliefs (M = 1.71, SD = 0.83, α = .76)*

 1. If you and your spouse share the same religious beliefs?
 2. If you and your spouse share the same outlook on life?
 3. If you and your spouse agree on your religious beliefs?

$\chi^2 / df = 2.20, CFI = .96, RMSEA = .07$

10. *Leisure Time (M = 2.21, SD = 0.81, α = .86)*

 1. How you and your spouse should spend free time?
 2. How to spend your time together?
 3. How you and your spouse should spend your leisure time?

$\chi^2 / df = 2.49, CFI = .95, RMSEA = .08$

11. *Household Chores (M = 2.15, SD = 0.88, α = .93)*

 1. How you and your spouse should divide up household tasks?
 2. How you and your spouse should share housework?
 3. How you and your spouse should divide up household chores?

$\chi^2 / df = 2.17, CFI = .97, RMSEA = .07$

N = 250 participants in Study 2.

averaging participants' responses to the individual items (see Table 2 for the means, standard deviations, and reliability statistics). All of the variables were positively skewed (i.e., the means fell below the midpoint of the 6-point response scale). In total, 10 of the 11 scales possessed an α reliability value greater than .80. The exception was the scale targeting religious beliefs (α = .76).

Evaluating the second-order factor structure. Bivariate correlations revealed that the 11 scales were positively correlated at the zero-order level (see Table 3). These correlations ranged from .22 to .60, all $p < .001$. Accordingly, a next step was examining the factor structure of the scales at the second-order level. A second-order CFA model was constructed by assigning the 33 items to their scales, and in turn, assigning the 11 scales to a single second-order factor. Findings revealed that the scales were unidimensional at the second-order level, $\chi^2/df = 1.73, CFI = .92, RMSEA = .06$ (see Figure 1 for the factor loadings). The reliability of a composite index was satisfactory (*M* = 2.13, *SD* = 0.60, α = 0.87).

TABLE 3
Bivariate correlations among the measures of relational uncertainty in Study 2

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14
V1: Self	–													
V2: Partner	.69	–												
V3: Relationship	.82	.76	–											
V4: Children	.40	.44	.47	–										
V5: Communication	.54	.51	.63	.56	–									
V6: Career issues	.47	.49	.50	.42	.41	–								
V7: Finances	.55	.51	.53	.32	.47	.51	–							
V8: Health and illness	.24	.31	.30	.34	.40	.44	.31	–						
V9: Extended family	.24	.26	.24	.33	.26	.33	.32	.22	–					
V10: Sex	.50	.48	.53	.31	.45	.39	.46	.39	.25	–				
V11: Retirement	.36	.40	.33	.31	.27	.37	.27	.41	.28	.35	–			
V12: Religion	.33	.41	.36	.44	.42	.28	.31	.30	.29	.29	.27	–		
V13: Leisure time	.52	.54	.61	.41	.60	.59	.56	.42	.33	.53	.46	.35	–	
V14: Household chores	.39	.46	.47	.34	.48	.46	.49	.36	.35	.43	.29	.29	.59	–

Note. N = 250 participants in Study 2. All correlations are statistically significant at *p* < .001.

FIGURE 1
Standardized path coefficients for the second-order CFA model
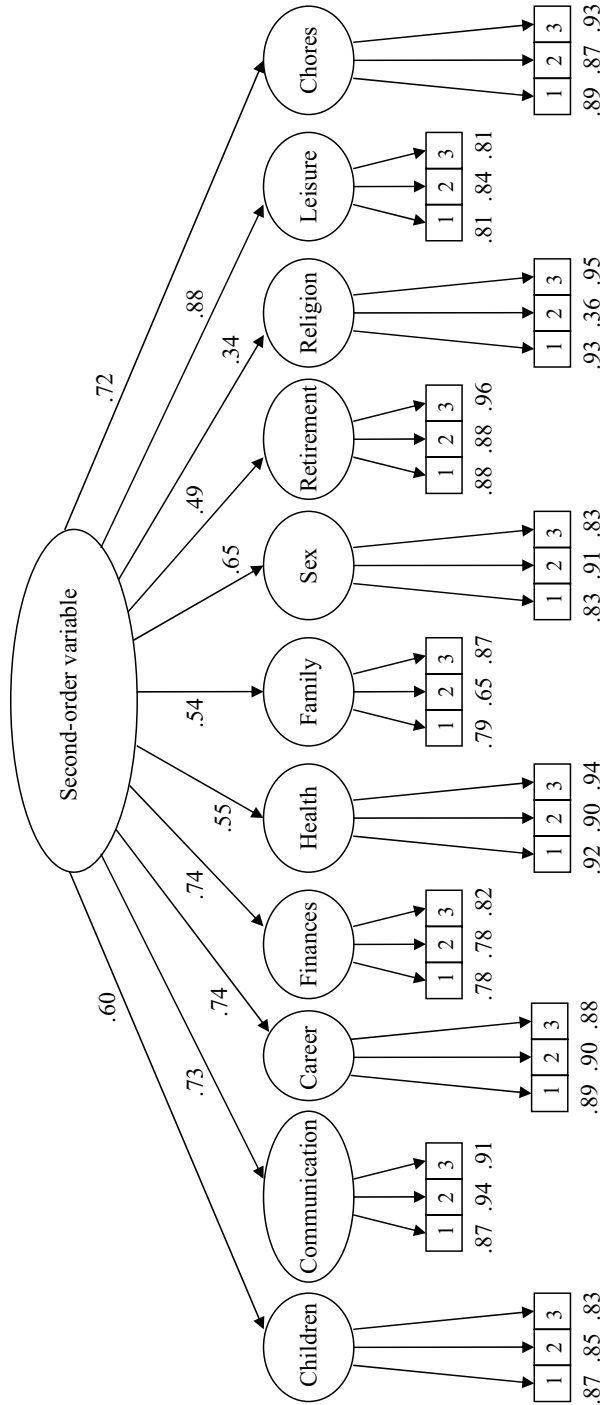
Note. $\chi^2 / df = 1.73$, *CFI* = .92, *RMSEA* = .06 All paths are statistically significant at *p* < .001. An 8-item measure of interference from partners was included in the model to evaluate external consistency. The item numbers correspond with Table 2.

Examining *RQ3*, *RQ4*, *RQ5*, and *RQ6*. Hierarchical linear modeling (HLM) was employed to evaluate *RQ3*, *RQ4*, *RQ5*, and *RQ6*. HLM is a data analytic strategy that accommodates statistical dependence among observations (Raudenbush & Bryk, 2002). In this case, statistical dependence was present in the data because individuals were nested within couples.

Two-level hierarchical models were constructed to predict each component of marital quality. Each model included a pair of covariates: (i) a variable dummy-coded to represent respondent's sex (0 = husbands, 1 = wives), and (ii) a variable dummy-coded to represent first-marriage versus remarriage status (0 = first marriage, 1 = remarriage). The models contained the covariates and relational uncertainty as level 1 predictors; they included couple membership as a level 2 predictor. The models were evaluated using restricted maximum likelihood estimation.

RQ3 asked how self, partner, and relationship uncertainty are associated with marital quality. To examine *RQ3*, HLM analyses were conducted in which respondent's sex, remarriage status, and one source of relational uncertainty predicted one component of marital quality. Results indicated that self, partner, and relationship uncertainty shared negative associations with the dependent variable across the 18 tests. The slopes ranged from –.23 to –1.30, all $p < .001$.

RQ4 inquired about the source of relational uncertainty that is the strongest predictor of marital quality. *RQ4* was examined using HLM analyses in which respondent's sex, remarriage status, and all three sources of relational uncertainty predicted one component of marital quality (see Table 4). With respect to the covariates, husbands reported more trust and love than wives. Self uncertainty and relationship uncertainty were negatively associated with satisfaction, commitment, intimacy, trust, and love. Self and partner uncertainty were negatively associated with passion. These findings suggest that self uncertainty, in particular, shares a strong negative association with marital quality.

RQ5 asked how the themes of relational uncertainty correspond with marital quality. To shed light on *RQ5*, HLM models were constructed in which respondent's sex, remarriage status, and one uncertainty issue predicted one component of marital quality. Findings demonstrated that the

TABLE 4
Marital quality predicted by the sources of relational uncertainty

	Satisfaction	Commitment	Intimacy	Trust	Passion	Love
Respondent's sex	–.08	.06	–.03	–.22**	–.13	–.13*
Remarriage status	–.18	–.02	.00	–.11	.08	–.20
Self uncertainty	–.69***	–.37***	–.56***	–.46***	–.68***	–.59***
Partner uncertainty	–.02	.11	–.08	–.03	–.43**	.12
Relationship uncertainty	–.66***	–.27**	–.42**	–.36**	–.09	–.33**

Note. N = 250 scores (2 individuals nested within 125 couples). Cell entries are slopes. Respondent's sex was dummy-coded such that 0 = husbands and 1 = wives. Remarriage status was dummy-coded such that 0 = first marriage and 1 = remarriage.
* $p < .05$; ** $p < .01$; *** $p < .001$.

independent variables shared statistically significant negative associations with the components of marital quality in 65 of 66 tests. The slopes ranged from $-.06, p < .05,$ to $-.89, p < .001.$ The exception was that uncertainty about health and illness was uncorrelated with commitment (slope $= -.04, ns$).

RQ6 inquired about the theme that is the strongest predictor of marital quality. *RQ6* was examined by conducting HLM analyses in which the covariates and the 11 themes of relational uncertainty predicted each component of marital quality. Results showed that husbands reported more trust and love than wives (see Table 5). Uncertainty about communication predicted five of the six components of marital quality (satisfaction, commitment, intimacy, trust, and love). Uncertainty about sex predicted four of the six dependent variables (satisfaction, intimacy, passion, and love). Notably, uncertainty about health and illness was positively, rather than negatively, associated with satisfaction. These findings imply that uncertainty about communication and sex are the strongest predictors of marital quality.[2]

Discussion

One contribution of Study 2 is developing self-report instruments to measure the content of relational uncertainty within marriage. Although participants reported very low levels of doubt, the 33 items demonstrated desirable measurement properties. For example, CFA findings indicated that the scales were unidimensional at the first-order and second-order levels. The measures also were reliable (all α values $\geq .76$). Moreover, the scales showed evidence of validity by correlating positively with the self, partner, and relationship sources of uncertainty ($r = .24$ to $.63$, all $p < .001$; see Table 3). These results suggest that the new measures may be suitable for operationalizing the themes of relational uncertainty within marriage.

TABLE 5
Marital quality predicted by the content of relational uncertainty

	Satisfaction	Commitment	Intimacy	Trust	Passion	Love
Respondent's sex	−.09	.06	−.02	−.20*	−.17	−.16*
Remarriage status	−.18	−.03	−.04	−.06	−.01	−.17
Children	−.07	−.10*	.03	−.07	.00	.01
Communication	−.27**	−.15**	−.36***	−.18*	−.05	−.28***
Career issues	−.06	.04	.08	−.01	−.04	−.08
Finances	−.24**	.00	−.10	−.13*	−.17	−.04
Health and illness	.14*	.06	.07	.08	.06	.03
Extended family	.09	.00	.00	.00	.09	.04
Sex	−.25***	−.06	−.39***	−.10	−.85***	−.18**
Retirement	−.07	−.02	−.05	.00	−.04	−.05
Religion	−.06	−.03	−.02	−.05	−.03	.04
Leisure time	−.07	.03	−.02	−.02	.00	−.01
Household chores	.02	−.07	−.01	−.01	.08	.01

Note. $N = 250$ scores (2 individuals nested within 125 couples). Cell entries are slopes. Respondent's sex was dummy-coded such that 0 = husbands and 1 = wives. Remarriage status was dummy-coded such that 0 = first marriage and 1 = remarriage.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Study 2 also advances the literature by documenting the link between relational uncertainty and marital quality. HLM results indicated that the self, partner, and relationship sources of doubt were negatively associated with marital quality (*RQ3*), and self uncertainty was the strongest predictor (*RQ4*). The 11 content areas were negatively correlated with marital quality (*RQ5*), and doubts about communication and sex emerged as the most potent predictors (*RQ6*). These findings hint that relational uncertainty may be problematic in marriage.

General Discussion

The study of relational uncertainty began in the context of acquaintance (Berger & Bradac, 1982), and it quickly branched out to consider other relationships in formative stages (e.g., Afifi & Burgoon, 1998; Planalp et al., 1988). The purpose of this project was to examine the substance of relational uncertainty within the more established dyadic context of marriage. Study 1 identified the issues of relational uncertainty salient to spouses (*RQ1*) and compared those issues to the ones salient to dating partners (*RQ2*). Study 2 developed self-report measures of the themes and evaluated the link between relational uncertainty and marital quality (*RQ3*, *RQ4*, *RQ5*, *RQ6*). The following subsections examine the implications of the data for understanding relational uncertainty within marriage.

Explicating the content of relational uncertainty in marriage
Study 1 solicited open-ended responses to identify the issues spouses are uncertain about. Findings revealed 12 content areas, which included uncertainty about (i) having and raising children, (ii) communication, (iii) career issues, (iv) finances, (v) health and illness, (vi) commitment, (vii) in-laws and extended family, (viii) sex, (ix) retirement, (x) religious beliefs, (xi) leisure time, and (xii) household chores (*RQ1*). Only one of the themes, uncertainty about commitment, parallels a content area apparent in dating relationships (*RQ2*). With that exception, the data imply that spouses may grapple with different kinds of questions than dating partners.

The results of Study 1 afford an opportunity to compare the portrayal of relational uncertainty in dating relationships versus marriage (*RQ2*). Whereas the content of ambiguity within dating relationships may be fairly evenly divided among self, partner, and relationship sources (e.g., Knobloch & Solomon, 1999), much of the content of ambiguity within marriage may emanate from the relationship source. Spouses tended to couch their doubts in dyadic terms ("How should we spend our leisure time?") rather than individual terms ("Why won't she spend more of her leisure time with me?"). A related divergence involves the underlying premise of relational uncertainty. Whereas dating partners may be on a quest to clarify whether their relationship warrants a long-term commitment (Baxter, 1987; Baxter & Wilmot, 1984), spouses seemed more concerned about external influences on their marriage (e.g., uncertainty about having children, encountering

financial difficulties, interacting with extended family members). These differences underscore the importance of explicating relational uncertainty in ways that are tailored to the dyadic domain under investigation.

The content areas resemble topics identified in previous investigations of marriage. For example, Zietlow and Sillars (1988) asked spouses to rate the relevance of eight conflict topics to their marriage. The problematic issues, in order of importance, were (i) a spouse's irritability, (ii) lack of communication, (iii) financial concerns, (iv) criticism of a spouse's choices, (v) disagreement about leisure time activities, (vi) problems with housing, and (vii) conflict over household chores. In a similar vein, Erbert (2000) solicited spouses' reports of conflict issues. The topics ordered by frequency were (i) criticism, (ii) finances, (iii) household chores, (iv) children, (v) employment, (vi) time, (vii) communication, (viii) in-laws, (ix) holidays, (x) sex, (xi) vacations, (xii) crisis, (xiii) stress, (xiv) special occasions, and (xv) other third parties. The parallels suggest that the themes of relational uncertainty may cohere with concerns intrinsic to marriage.

An unresolved question is how cohabitating relationships, domestic partnerships, and civil unions fit into the mix (e.g., Kurdek, 2006; Otis, Rostosky, Riggle, & Hamrin, 2006; Peplau & Fingerhut, 2007). On one hand, individuals who have committed to living with their partner may grapple with questions similar to people who have committed to marriage or civil union. On the other hand, heterosexual or homosexual couples who have moved in together without a formal commitment may grapple with doubts more akin to dating partners (e.g., Cohan & Kleinbaum, 2002; Stanley, Rhoades, & Markman, 2006). Research on this issue would be useful for disentangling whether qualities of dyads (e.g., relationship length, degree of commitment, sexual orientation) or types of partnerships (e.g., dating, co-habitating, marriage, domestic partnership, civil union) shape the themes of relational uncertainty people experience (e.g., Kurdek, 2005, 2006).

Measuring the content areas

A second agenda item was to create reliable and valid measures of the themes of relational uncertainty. To that end, participants in Study 2 completed 33 items containing phrases that participants in Study 1 used to describe their experiences. CFA results demonstrated that the measures possessed a clean factor structure; the scales were unidimensional on both the first-order level and the second-order level. Hence, scholars have two options for using the measures: they can retain the 11 themes as separate variables to document gradations in doubt, or they can calculate a composite index for the sake of parsimony. The former strategy was advantageous in Study 2 for gauging nuances in the link between relational uncertainty and marital quality, but the latter strategy may prove useful for scholars seeking to examine relational uncertainty in concert with a constellation of other variables.

Because Study 2 included abridged versions of the relational uncertainty measures Knobloch and Solomon (1999) crafted in the domain of dating relationships, the results permit a comparison of the two operationalization

approaches. Whereas Knobloch and Solomon's scales provide general infor-
mation about self, partner, and relationship sources of doubt, the new scales
solicit data on specific issues spouses may be unsure about. Both instruments
were unidimensional according to CFA results, both displayed acceptable
levels of reliability, and both corresponded with marital quality in similar
ways. One advantage of the new scales is that they retrieved slightly higher
means and standard deviations; Knobloch and Solomon's scales displayed
more pronounced floor effects.

One drawback of employing measures that are idiosyncratic to the domain
under investigation is that comparison between studies is difficult. On the
other hand, utilizing measures that are not tailored to the relationship
context may perpetuate an incomplete view of the construct. Because Study
2 confirmed that both measurement approaches have utility in the domain
of marriage, scholars possess three methodological options. They can employ
Knobloch and Solomon's (1999) measures to gain global insight into rela-
tional uncertainty, they can utilize the new instruments to obtain more
specialized data, or they can use the two operationalizations in tandem for
the most comprehensive view.

An example of a question that could be answered using the customized
measures is how spouses cope with changes across the lifespan of marriage.[3]
Several of the new scales consider turning points in relationship develop-
ment (e.g., having children, making career choices, being diagnosed with an
illness, embarking on retirement). Accordingly, the specialized scales may
provide a tool for examining how relational uncertainty intersects with
such turning points. Does ambiguity about having and raising children, for
example, shape how spouses behave when they welcome an unexpected
pregnancy, grapple with fertility problems, experience a miscarriage, or
finalize a long-awaited adoption (e.g., Golish & Powell, 2003)? Or does un-
certainty about retirement determine how spouses adjust to a post-career
lifestyle (e.g., Davey & Szinovacz, 2004)? The scales also may be useful for
investigating non-normative transitions. Indeed, family life cycle theorists
argue that spouses who encounter an out-of-sequence change in their life
circumstances may have particular difficulty coping with the change (Aldous,
1996; McHenry & Price, 2005). The new measures may be beneficial to
scholars analyzing relational uncertainty in conjunction with both norma-
tive and non-normative turning points.

Documenting the association between relational uncertainty and marital quality

A third, and most primary, task was to investigate the association between
relational uncertainty and marital quality. The sources (*RQ3*) and themes
(*RQ5*) of relational uncertainty were negatively associated with marital
quality in 83 of 84 tests when considered in isolation. When the sources of
relational uncertainty were examined together, self uncertainty emerged
as the most potent predictor (*RQ4*). This finding corroborates the logic of
the investment model, which implies that people who are ambivalent about
committing to a relationship are less inclined to engage in pro-relationship

behavior (Rusbult et al., 2004). The tests of *RQ4* also revealed divergence between partner and relationship sources of doubt. Whereas partner uncertainty was negatively correlated with passion, relationship uncertainty was negatively correlated with the other five indicators of marital quality. This result suggests that questions about a partner's investment in a marriage, rather than questions about the status of the marriage itself, may be especially damaging to sexual closeness.

When the themes were evaluated as a set, uncertainty about communication and sex materialized as the strongest predictors (*RQ6*). These results underscore the reasoning of URT, which argues that ambiguity and communication share a close connection (Berger & Bradac, 1982; Berger & Calabrese, 1975). They also bolster theorizing that sexual compatibility is a key component of marital well-being (Christopher & Sprecher, 2000; Harvey, Wenzel, & Sprecher, 2004). More pragmatically, the results for *RQ6* imply that spouses may be able to enhance the quality of their marriage by dispelling ambiguity about communication and sex.

The findings of Study 2, examined as a whole, both resolve and raise questions about the link between relational uncertainty and marital quality. URT suggests that relational uncertainty may be harmful to dyadic health (Berger, 1987; Berger & Calabrese, 1975), but other theories propose that relational uncertainty may boost marital quality (Baxter & Montgomery, 1996; Livingston, 1980). On one hand, the data imply that relational uncertainty may be challenging for spouses. On the other hand, uncertainty about health and illness was *positively* associated with satisfaction when the other themes were covaried. This finding must be interpreted cautiously because it was idiosyncratic in the set (see Table 5), but it hints that spouses may prefer skepticism about possible illness to conviction about actual illness (e.g., Bradac, 2001; Brashers, 2001). Indeed, complete certainty about a negative outcome may be detrimental to marital quality in its own way (e.g., Baxter & Montgomery, 1996; Livingston, 1980). The data also do not preclude the possibility that pleasant surprises, such as unexpected thoughtfulness, acts of devotion, and gestures of inclusion (e.g., Afifi & Metts, 1998; Turner, 1990), may enhance dyadic well-being. These possibilities await future study.

Limitations and directions for future research

One limitation of this investigation is that any conclusions drawn from Study 2 are bounded by the themes of relational uncertainty mentioned by participants in Study 1. Although the 85 individuals who completed Study 1 were relatively heterogeneous in both age (*range* = 20 to 80 years old, *M* = 47.88 years, *SD* = 14.12 years) and number of years married (*range* = less than 1 year to more than 59 years, *M* = 22.00 years, *SD* = 14.77 years), they were relatively homogeneous in both parental status (79% had children) and remarriage status (82% were involved in their first marriage). A different sample of participants in Study 1 may have identified themes not included in Study 2. Accordingly, the themes of relational uncertainty that surfaced in Study 1 (and the measures crafted in Study 2) do not constitute a definitive list of questions spouses experience about marriage.

A related weakness is the uniform socioeconomic composition of both samples. Participants were individuals living in the Midwestern United States; most were Caucasian and middle class. The findings may not generalize to people of other backgrounds. For example, the self source of relational uncertainty (*RQ4*) and the communication and sex themes of relational uncertainty (*RQ6*) may not emerge as the strongest predictors of marital quality among couples of different race, culture, and class cohorts. Future work should investigate whether the association between relational uncertainty and marital quality translates to other populations, particularly because evidence suggests cultural differences in people's experience of uncertainty (Gudykunst, 1995; Vishwanath, 2003).

A third limitation is the skewed distributions of relational uncertainty and marital quality that were apparent in Study 2. Participants reported very low levels of relational uncertainty and very high levels of marital quality. The truncated ranges of these variables may have obscured the true magnitude of their association. More broadly, the lack of variation in relational uncertainty suggests the need to recruit participants who are actively grappling with doubts about their marriage. Possibilities include targeting spouses who hail from dissimilar backgrounds, who are separated by geographic distance, or who are facing major life transitions.

Conclusion

The primary objective of this paper was to document how relational uncertainty corresponds with marital quality. Before addressing that issue, however, two prerequisite tasks required completion. First, Study 1 identified the content of relational uncertainty within marriage (*RQ1*, *RQ2*). Those results advanced the literature by explicating the relational uncertainty construct in a way that is tailored to the domain of marriage. Then, Study 2 developed self-report measures of the themes and presented evidence of their reliability and validity. Substantive findings from Study 2 revealed negative associations between relational uncertainty and marital quality (*RQ3*, *RQ5*). The self source of relational uncertainty was the most powerful predictor of marital quality (*RQ4*), and the communication and sex themes of relational uncertainty were the most potent predictors of marital quality (*RQ6*). These results lay the groundwork for additional theorizing about relational uncertainty within marriage.

NOTES

1. Additional CFA analyses evaluated whether the 12 items measuring self, partner, and relationship uncertainty formed a unidimensional factor at the second-order level. Results of three tests indicated that the second-order factor structure did not meet the *CFI* criterion for model fit. More specifically, the model did not fit the data when three separate scales were used to gauge external consistency: (i) Solomon and Knobloch's (2001) eight-item measure of influence from a partner (χ^2 / df = 2.83, *CFI* = .87, *RMSEA* = .09), (ii) Knobloch and

Solomon's (2004) eight-item measure of facilitation from a partner (χ^2 / df = 2.79, *CFI* = .88, *RMSEA* = .09), and (iii) Rubin's (1970) nine-item measure of love for a partner (χ^2 / df = 2.83, *CFI* = .85, *RMSEA* = .09). These findings are consistent with all eight previous studies that have examined a second-order factor structure (for review, see Knobloch, 2007a). Hence, the three sources of relational uncertainty were retained as separate variables rather than collapsed into one factor.

2. Subsidiary HLM analyses were conducted to examine the associations that relational uncertainty shared with the presence and number of children. Participants with children reported less relational uncertainty about children (slope = –.26, *p* < .05), health and illness (slope = –.32, *p* < .05), and religion (slope = –.24, *p* < .05). Number of children was negatively associated with relational uncertainty about children (slope = –.15, *p* <.001), health and illness (slope = –.14, *p* < .05), retirement (slope = –.19, *p* < .05), and religion (slope = –.14, *p* < .05).

3. To evaluate whether the content of relational uncertainty varied by number of years married, post-hoc HLM analyses tested the association between relational uncertainty and marriage length. Results indicated that length of marriage was negatively associated with doubts about religion (slope = –.02, *p* < .05). Length of marriage did not predict any of the other themes of relational uncertainty.

REFERENCES

Afifi, W. A., & Burgoon, J. K. (1998). "We never talk about that": A comparison of cross-sex friendships and dating relationships on uncertainty and topic avoidance. *Personal Relationships*, *5*, 255–272.

Afifi, W. A., & Metts, S. (1998). Characteristics and consequences of expectation violations in close relationships. *Journal of Social and Personal Relationships*, *15*, 365–393.

Afifi, W. A., & Reichert, T. (1996). Understanding the role of uncertainty in jealousy experience and expression. *Communication Reports*, *9*, 93–103.

Aldous, J. (1996). *Family careers: Rethinking the developmental perspective*. Thousand Oaks, CA: SAGE.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411–423.

Babrow, A. S. (2001). Uncertainty, value, communication, and problematic integration. *Journal of Communication*, *51*, 553–573.

Baxter, L. A. (1986). Gender differences in the heterosexual relationship rules embedded in break-up accounts. *Journal of Social and Personal Relationships*, *3*, 289–306.

Baxter, L. A. (1987). Cognition and communication in the relationship process. In R. Barnett, P. McGhee, & D. Clarke (Eds.), *Accounting for relationships* (pp. 192–212). London: Methuen.

Baxter, L. A., & Bullis, C. (1986). Turning points in developing romantic relationships. *Human Communication Research*, *12*, 469–493.

Baxter, L. A., & Montgomery, B. M. (1996). *Relating: Dialogues and dialectics*. New York: Guilford.

Baxter, L. A., & Wilmot, W. W. (1984). "Secret tests": Strategies for acquiring information about the state of the relationship. *Human Communication Research*, *11*, 171–201.

Baxter, L. A., & Wilmot, W. W. (1985). Taboo topics in close relationships. *Journal of Social and Personal Relationships*, *2*, 253–269.

Bentler, P. M. (1990). Comparative fit indexes in structural equation models. *Psychological Bulletin*, *107*, 238–246.

Berger, C. R. (1987). Communicating under uncertainty. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal processes* (pp. 39–62). Newbury Park, CA: SAGE.

Berger, C. R., & Bradac, J. J. (1982). *Language and social knowledge: Uncertainty in interpersonal relationships*. London: Edward Arnold.

Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. *Human Communication Research*, *1*, 99–112.

Berger, C. R., & Gudykunst, W. B. (1991). Uncertainty and communication. In B. Dervin & M. J. Voight (Eds.), *Progress in communication sciences* (Vol. 10, pp. 21–66). Norwood, NJ: Ablex.

Bradac, J. J. (2001). Theory comparison: Uncertainty reduction, problematic integration, uncertainty management, and other curious constructs. *Journal of Communication*, *51*, 456–476.

Brashers, D. E. (2001). Communication and uncertainty management. *Journal of Communication*, *51*, 477–497.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: SAGE.

Christopher, F. S., & Sprecher, S. (2000). Sexuality in marriage, dating, and other relationships: A decade review. *Journal of Marriage and the Family*, *62*, 999–1017.

Clatterbuck, G. W. (1979). Attributional confidence and uncertainty in initial interaction. *Human Communication Research*, *5*, 147–157.

Cody, M. J. (1982). A typology of disengagement strategies and an examination of the role intimacy, reactions to inequity and relational problems play in strategy selection. *Communication Monographs*, *49*, 148–170.

Cohan, C. L., & Kleinbaum, S. (2002). Toward a greater understanding of the cohabitation effect: Premarital cohabitation and marital communication. *Journal of Marriage and Family*, *64*, 180–192.

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, *20*, 37–46.

Davey, A., & Szinovacz, M. E. (2004). Dimensions of marital quality and retirement. *Journal of Family Issues*, *25*, 431–464.

Erbert, L. A. (2000). Conflict and dialectics: Perceptions of dialectical contradictions in marital conflict. *Journal of Social and Personal Relationships*, *17*, 638–659.

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin*, *26*, 340–354.

Fowers, B. J., Lyons, E., Montel, K. H., & Shaked, N. (2001). Positive illusions about marriage among married and single individuals. *Journal of Family Psychology*, *15*, 95–109.

Gigy, L., & Kelly, J. B. (1992). Reasons for divorce: Perspectives on divorcing men and women. *Journal of Divorce and Remarriage*, *18*, 169–187.

Golish, T. D., & Powell, K. A. (2003). 'Ambiguous loss': Managing the dialectics of grief associated with premature birth. *Journal of Social and Personal Relationships*, *20*, 309–334.

Gudykunst, W. B. (1985). The influence of similarity, type of relationship, and self-monitoring on uncertainty reduction processes. *Communication Monographs*, *52*, 203–217.

Gudykunst, W. B. (1995). Anxiety/uncertainty management (AUM) theory: Current status. In R. L. Wiseman (Ed.), *Intercultural communication theory* (pp. 8–58). Thousand Oaks, CA: SAGE.

Harvey, J. H., Wenzel, A., & Sprecher, S. (Eds.). (2004). *The handbook of sexuality in close relationships*. Mahwah, NJ: Lawrence Erlbaum Associates.

Hendrick, S. S., & Hendrick, C. (1997). Love and satisfaction. In R. J. Sternberg & M. Hojjat (Eds.), *Satisfaction in close relationships* (pp. 56–78). New York: Guilford.

Holmberg, D., Orbuch, T. L., & Veroff, J. (2004). *Thrice-told tales: Married couples tell their stories*. Mahwah, NJ: Lawrence Erlbaum Associates.

Hunter, J. E., & Gerbing, D. W. (1982). Unidimensional measurement, second order factor analysis, and causal models. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 4, pp. 267–320). Greenwich, CT: JAI Press.

Huston, T. L., Caughlin, J. P., Houts, R. M., Smith, S. E., & George, L. J. (2001). The connubial crucible: Newlywed years as predictors of marital delight, distress, and divorce. *Journal of Personality and Social Psychology*, *80*, 237–252.

Johnson, M. P., Caughlin, J. P., & Huston, T. L. (1999). The tripartite nature of marital commitment: Personal, moral, and structural reasons to stay married. *Journal of Marriage and the Family*, *61*, 160–177.

Kelley, D., & Burgoon, J. K. (1991). Understanding marital satisfaction and couple types as functions of relational expectations. *Human Communication Research*, *18*, 40–69.

Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford.

Knobloch, L. K. (2006). Relational uncertainty and message production within courtship: Features of date request messages. *Human Communication Research*, *32*, 244–273.

Knobloch, L. K. (2007a). The dark side of relational uncertainty: Obstacle or opportunity? In B. H. Spitzberg & W. R. Cupach (Eds.), *The dark side of interpersonal communication* (2nd ed., pp. 31–59). Mahwah, NJ: Lawrence Erlbaum Associates.

Knobloch, L. K. (2007b). Perceptions of turmoil within courtship: Associations with intimacy, relational uncertainty, and interference from partners. *Journal of Social and Personal Relationships*, *24*, 363–384.

Knobloch, L. K., & Carpenter-Theune, K. E. (2004). Topic avoidance in developing romantic relationships: Associations with intimacy and relational uncertainty. *Communication Research*, *31*, 173–205.

Knobloch, L. K., & Donovan-Kicken, E. (2006). Perceived involvement of network members in courtships: A test of the relational turbulence model. *Personal Relationships*, *13*, 281–302.

Knobloch, L. K., Miller, L. E., Bond, B. J., & Mannone, S. E. (2007). Relational uncertainty and message processing in marriage. *Communication Monographs*, *74*, 154–180.

Knobloch, L. K., Miller, L. E., & Carpenter, K. E. (2007). Using the relational turbulence model to understand negative emotion within courtship. *Personal Relationships*, *14*, 91–112.

Knobloch, L. K., & Solomon, D. H. (1999). Measuring the sources and content of relational uncertainty. *Communication Studies*, *50*, 261–278.

Knobloch, L. K., & Solomon, D. H. (2002a). Information seeking beyond initial interaction: Negotiating relational uncertainty within close relationships. *Human Communication Research*, *28*, 243–257.

Knobloch, L. K., & Solomon, D. H. (2002b). Intimacy and the magnitude and experience of episodic relational uncertainty within romantic relationships. *Personal Relationships*, *9*, 457–478.

Knobloch, L. K., & Solomon, D. H. (2004). Interference and facilitation from partners in the development of interdependence within romantic relationships. *Personal Relationships*, *11*, 115–130.

Knobloch, L. K., & Solomon, D. H. (2005). Relational uncertainty and relational information processing: Questions without answers? *Communication Research*, *32*, 349–388.

Knobloch, L. K., Solomon, D. H, & Cruz, M. G. (2001). The role of relationship development and attachment in the experience of romantic jealousy. *Personal Relationships*, *8*, 205–224.

Kramer, M. W. (2004). *Managing uncertainty in organizational communication*. Mahwah, NJ: Lawrence Erlbaum Associates.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed.). Thousand Oaks, CA: SAGE.

Kurdek, L. A. (2005). What do we know about gay and lesbian couples? *Current Directions in Psychological Science*, *14*, 251–254.

Kurdek, L. A. (2006). Differences between partners from heterosexual, gay, and lesbian cohabitating couples. *Journal of Marriage and Family*, *68*, 509–528.

Livingston, K. R. (1980). Love as a process of reducing uncertainty: Cognitive theory. In K. S. Pope (Ed.), *On love and loving* (pp. 133–151). San Francisco: Jossey-Bass.

McHenry, P. C., & Price, S. J. (2005). Families coping with change: A conceptual overview. In P. C. McHenry & S. J. Price (Eds.), *Families and change: Coping with stressful events and transitions* (3rd ed., pp. 1–24). Thousand Oaks, CA: SAGE.

Neuendorf, K. A. (2002). *The content analysis guidebook*. Thousand Oaks, CA: SAGE.

Otis, M. D., Rostosky, S. S., Riggle, E. D. B., & Hamrin, R. (2006). Stress and relationship quality in same-sex couples. *Journal of Social and Personal Relationships*, *23*, 81–99.

Parks, M. R., & Adelman, M. B. (1983). Communication networks and the development of

romantic relationships: An expansion of uncertainty reduction theory. *Human Communication Research*, *10*, 55–79.

Peplau, L. A., & Fingerhut, A. W. (2007). The close relationships of lesbians and gay men. *Annual Review of Psychology*, *58*, 405–424.

Planalp, S., & Honeycutt, J. M. (1985). Events that increase uncertainty in personal relationships. *Human Communication Research*, *11*, 593–604.

Planalp, S., Rutherford, D. K., & Honeycutt, J. M. (1988). Events that increase uncertainty in personal relationships II: Replication and extension. *Human Communication Research*, *14*, 516–547.

Prager, K. J., & Roberts, L. J. (2004). Deep intimate connection: Self and intimacy in couple relationships. In D. J. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 43–60). Mahwah, NJ: Lawrence Erlbaum Associates.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: SAGE.

Reissman, C., Aron, A., & Bergen, M. R. (1993). Shared activities and marital satisfaction: Causal direction and self-expansion versus boredom. *Journal of Social and Personal Relationships*, *10*, 243–254.

Rempel, J. K., Ross, M., & Holmes, J. G. (2001). Trust and communicated attributions in close relationships. *Journal of Personality and Social Psychology*, *81*, 57–64.

Rubin, Z. (1970). Measurement of romantic love. *Journal of Personality and Social Psychology*, *16*, 265–273.

Rubin, Z. (1973). *Liking and loving: An invitation to social psychology*. New York: Holt, Rinehart and Winston.

Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology*, *45*, 101–117.

Rusbult, C. E., Kumashiro, M., Coolsen, M. K., & Kirchner, J. L. (2004). Interdependence, closeness, and relationships. In D. J. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 137–161). Mahwah, NJ: Lawrence Erlbaum Association.

Siegert, J,. R., & Stamp, G. H. (1994). "Our first big fight" as a milestone in the development of close relationships. *Communication Monographs*, *61*, 345–360.

Solomon, D. H., & Knobloch, L. K. (2001). Relationship uncertainty, partner interference, and intimacy within dating relationships. *Journal of Social and Personal Relationships*, *18*, 804–820.

Solomon, D. H., & Knobloch, L. K. (2004). A model of relational turbulence: The role of intimacy, relational uncertainty, and interference from partners in appraisals of irritations. *Journal of Social and Personal Relationships*, *21*, 795–816.

Solomon, D. H., Knobloch, L. K., & Fitzpatrick, M. A. (2004). Relational power, marital schema, and decisions to withhold complaints: An investigation of the chilling effect on confrontation in marriage. *Communication Studies*, *55*, 146–167.

Stanley, S. M., Rhoades, G. K., & Markman, H. J. (2006). Sliding versus deciding: Inertia and the premarital cohabitation effect. *Family Relations*, *55*, 499–509.

Sternberg, R. J. (1986). A triangular theory of love. *Psychological Review*, *93*, 119–135.

Sternberg, R. J. (1987). Liking versus loving: A comparative evaluation of theories. *Psychological Bulletin*, *102*, 331–345.

Sunnafrank, M. (1986). Predicted outcome value during initial interactions: A reformulation of uncertainty reduction theory. *Human Communication Research*, *13*, 3–33.

Theiss, J. A., & Solomon, D. H. (2006). A relational turbulence model of communication about irritations in romantic relationships. *Communication Research*, *33*, 391–418.

Turner, L. H. (1990). The relationship between communication and marital uncertainty: Is "her" marriage different from "his" marriage? *Women's Studies in Communication*, *13*, 57–83.

Vishwanath, A. (2003). Comparing online information effects: A cross-cultural comparison of online information and uncertainty avoidance. *Communication Research*, *30*, 579–598.

Vohs, K. D., & Baumeister, R. F. (2004). Sexual passion, intimacy, and gender. In D. J. Mashek

& A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 189–199). Mahwah, NJ: Lawrence Erlbaum Associates.

Zietlow, P. H., & Sillars, A. L. (1988). Life-stage differences in communication during marital conflicts. *Journal of Social and Personal Relationships*, *5*, 223–245.

Zimmer, T. A. (1986). Premarital anxieties. *Journal of Social and Personal Relationships*, *3*, 149–159.