Relational Uncertainty and Relational Information Processing

Questions without Answers?

This article seeks to understand how relational uncertainty coincides with people's ability to process relational information. The general premise is that individuals experiencing relational uncertainty should have difficulty deriving inferences because they lack the knowledge necessary to identify and interpret relational cues. The authors use this reasoning to deduce hypotheses about how relational uncertainty may correspond with people's perceptions of relationship talk, judgments of relational messages, and evaluations of the difficulty of interaction. They conducted a study of conversations between romantic partners (N = 120 couples). As predicted, relational uncertainty was negatively associated with people's perceptions of relationship talk after controlling for the perceptions of third-party observers. Relational uncertainty was negatively associated with the extremity of people's judgments about relational messages. Furthermore, relational uncertainty was positively associated with people's perceptions of the difficulty of interaction. They conclude by discussing how these findings illuminate the connection between relational uncertainty and relational information processing.

Keywords: relational uncertainty; message processing; relationship talk; relational messages; courtship

For almost three decades, scholars of interpersonal communication have recognized that uncertainty affects how people formulate messages. A variety of theories have highlighted how uncertainty shapes the messages people produce within interpersonal situations (Babrow, 2001; Berger & Calabrese, 1975; Brashers, 2001; Sunnafrank, 1986). Similarly, empirical research has
emphasized how uncertainty corresponds with characteristics of messages, including question asking (Berger & Kellermann, 1983; Douglas, 1991; McKinney & Donaghy, 1993), linguistic diversity (Sherblom & Van Rheenen, 1984), requests for feedback (Kramer, 1993), self-disclosure (Prisbell & Andersen, 1980), and the intimacy of topics people discuss (Afifi & Burgoon, 1998; Gudykunst, 1985). In sum, scholars have devoted substantial attention to illuminating how uncertainty influences message production within conversation (for review, see Berger, 1997).

Relatively little is known, in contrast, about how uncertainty affects message processing. Despite Berger’s (1997, p. 230) brief observation that “uncertainty about a conversation partner’s goals should undermine the ability of the message producers to understand them,” the field of interpersonal communication lacks an understanding of how individuals interpret messages under conditions of uncertainty (e.g., Berger, 2002). In fact, we are not aware of any research that has examined how uncertainty influences people’s ability to make sense of conversation.² Our goal is to address this oversight by examining the ramifications of uncertainty for message processing.

Whereas Berger (1997) contends that uncertainty may have a debilitating effect on message processing in general, our article focuses on understanding how ambiguity influences romantic partners’ ability to draw relational inferences in particular. Given the considerable prominence of uncertainty within intimate associations (Afifi & Burgoon, 1998; Knobloch & Solomon, 2002b) and the substantial consequences of managing those questions (Emmers & Canary, 1996; Planalp, Rutherford, & Honeycutt, 1988), courtship is a particularly informative setting for investigating how ambiguity shapes people’s ability to make sense of messages about their relationship.

Our article begins by explicating the two germane constructs: relational uncertainty and relational information processing. Next, it draws on this foundation to advance predictions about how relational uncertainty may correspond with people’s ability to engage in relational information processing. After reporting an empirical study of conversations between romantic partners, it concludes by discussing how the findings shed light on the role of relational uncertainty in deriving relational inferences.

The Nature of Relational Uncertainty

Uncertainty is a fundamental byproduct of people’s quest to achieve interpersonal understanding (Berger & Calabrese, 1975). More formally, uncertainty constitutes an inability to anticipate and explain behavior. In other words, uncertainty is a lack of confidence about how interpersonal interaction will proceed (Berger & Bradac, 1982; Berger & Calabrese, 1975; Berger &
Relational uncertainty emerges from self, partner, and relationship sources (Berger & Bradac, 1982). Whereas self uncertainty encompasses people's questions about their own participation in the relationship (e.g., how certain am I about my view of this relationship?), partner uncertainty involves people's doubts about their partner's involvement in the relationship (e.g., how certain am I about my partner's view of this relationship?). Finally, relationship uncertainty constitutes people's questions about the relationship apart from either self or partner doubts (e.g., how certain am I about the current status of this relationship?). Because relationship uncertainty concerns the dyad itself, it exists at a higher level of abstraction than either self or partner uncertainty (Berger & Bradac, 1982). Thus, we characterize relational uncertainty as an umbrella construct that stems from self-focused, partner-focused, and relationship-focused doubts within intimate associations.

Individuals may be uncertain about an infinite range of topics within close relationships; however, we find merit in concentrating on the doubts that are particularly relevant to negotiating involvement (Knobloch & Solomon, 1999, 2002a). Our research suggests that self and partner uncertainty address three content areas: (a) people's desire for the relationship, (b) their evaluation of its worth, and (c) their goals for its development. Similarly, our findings imply that relationship uncertainty involves four content areas: (a) norms for appropriate behavior within the relationship, (b) mutuality of feelings between partners, (c) the definition of the relationship, and (d) the future of the association (Knobloch & Solomon, 1999). In sum, relational uncertainty is a relatively precise form of ambiguity because it entails the questions that are specifically tied to dyadic involvement.

An Explication of Relational Information Processing

Despite mounting evidence that relational uncertainty influences message production (Afifi & Burgoon, 1998; Afifi & Reichert, 1996; Knobloch & Carpenter-Theune, 2004), scholars have yet to consider how doubts about romantic involvement affect relational information processing. We believe this
disparity is especially important to remedy because relational information processing is such a vital aspect of interpersonal communication. The communication discipline has long embraced the assumption that people glean information about relationships from interaction (Watzlawick, Beavin, & Jackson, 1967). Numerous efforts identify the dimensions along which individuals make sense of their associations (Burgoon & Hale, 1984; Dillard, Solomon, & Palmer, 1999). Likewise, a variety of theoretical models describe the processes by which people generate and store judgments about relationships (e.g., expectancy violations theory, Burgoon & Hale, 1988; discrepancy arousal theory, Cappella & Greene, 1982; relational framing theory, Dillard, Solomon, & Samp, 1996; a functional perspective on nonverbal messages, Patterson, 1983; relational schema theory, Planalp, 1985). Although these perspectives have important differences, they converge on two core assumptions: (a) interaction supplies people with information to draw inferences about relationships, and (b) individuals enter conversations with expectations, schemas, or frames that help them comprehend social cues. In the following paragraphs, we elaborate on these twin facets of relational information processing.

Scholars have traditionally distinguished the cues available within interaction in terms of relational versus content messages. Relational messages refer to the often subtle or implicit meanings that define the nature of the relationship between communicators (Bateson, 1972; Burgoon & Hale, 1984; Watzlawick et al., 1967). Conversely, content messages are defined as the denotative meaning of the words. Of course, content messages also encompass statements that explicitly encode information about relationship definitions (e.g., “I want to marry you.”). Thus, relational and content messages offer two modes for conveying cues relevant to relational information processing.

Whether in the form of relational or content messages, many social behaviors are ambiguous or polysemic (Watzlawick et al., 1967). Dillard et al. (1996) argued that verbal and nonverbal involvement cues influence people’s perceptions of the intensity of relational messages, but those cues do not help individuals distinguish dominating versus affiliative exchanges. Even a message as explicit as a profession of love has different connotations depending on the relational context (family members or romantic partners), the relational history (a new romance or an established partnership), and aspects of the situation (during a romantic dinner or as a prelude to separation). Thus, a central challenge of relational information processing is translating ambiguous signals into conclusions about the state of a relationship (e.g., Planalp, 1987; Surra & Bohman, 1991).
Because of the ambiguity of social behavior, relational inferences arise from the intersection of social knowledge and cues gleaned from conversation (Smith, 1995). Individuals possess organized stores of information about human interaction (Planalp, 1985; Planalp & Rivers, 1996), and they use those expectations to extract meaning from messages (Dillard et al., 1996). People’s knowledge facilitates sense-making by providing mechanisms for explaining behavior (Planalp & Rivers, 1996), by narrowing the array of cues that are relevant to information processing (Dillard et al., 1996), and by informing predictions about what might happen next within interaction (Honeycutt, Cantrill, & Greene, 1989; Honeycutt, Cantrill, Kelly, & Lambkin, 1998). Although scholars refer to these expectations using a variety of labels, including schemas (Planalp & Rivers, 1996), memory structures (Honeycutt et al., 1998), mental models (Miller & Read, 1991), and frames (Dillard et al., 1996), the literature converges on the claim that relational information processing is informed by cognitive structures that operate in a top-down fashion.

To clarify how cognitive structures and interaction cues work in tandem to support relational inferences, consider the process by which people comprehend letters, words, and sentences in written form (e.g., van Dijk & Kintsch, 1983). Certainly the marks on a page are essential inputs into discourse processing. At the same time, however, the top-down application of syntactic and semantic rules facilitates people’s ability to recognize letters and words. As readers progress through a text, they formulate a mental model of the discourse, which not only directs their attention to relevant interpretations of a passage but also suppresses alternative meanings. Thus, people rely on both existing knowledge and developing expectations to decode written discourse. In an analogous fashion, relational information processing occurs when individuals observe cues within interaction, and they interpret those cues through the lens of their existing knowledge. Now, with our explication of relational information processing in place, we turn our attention to how relational uncertainty may influence people’s ability to make sense of social cues.

The Effects of Relational Uncertainty on Relational Information Processing

Our claim that relational inferences depend on top-down processing leads us to expect that relational uncertainty hinders people’s capacity to draw such inferences. Relational uncertainty may hamper individuals’ attempts to identify appropriate schemas for making sense of conversation (e.g., Planalp,
1985; Planalp & Rivers, 1996), disrupt their expectations about what constitutes prototypical behavior within interaction (e.g., Honeycutt et al., 1998), impede their ability to develop coherent models of social situations (e.g., Miller & Read, 1991), and obstruct their capacity to frame interaction in terms of dominance-submissiveness or affiliation-disaffiliation (e.g., Dillard et al., 1996; Solomon, Dillard, & Anderson, 2002). Scholars use many terms to describe this process, but we expect that the underlying principle is the same: Relational uncertainty may diminish people’s ability to understand conversation.

Our overarching logic implies that relational uncertainty may have a debilitating effect on relational information processing in general. But what are the specific effects of relational uncertainty? We suggest three outcomes that mirror the relational inference process we described previously. First, we propose that relational uncertainty hampers people’s ability to recognize cues conveying relational information. In turn, we expect that relational uncertainty compromises efforts to draw relational inferences. As a final consequence, we predict that relational uncertainty makes interaction with a partner generally more difficult. We address these outcomes in the following subsections.

Perceptions of Relationship Talk

A first step in drawing relational inferences is to identify messages that convey relevant information. We define relationship talk as those content messages that reference the state of the relationship between partners (Acitelli, 1988; Baxter, 1987; Baxter & Bullis, 1986). Relationship talk is useful on a variety of levels: It provides opportunities for individuals to establish dyadic definitions (Baxter, 1987; Baxter & Wilmot, 1985), to negotiate relationship development (Baxter & Bullis, 1986; Bullis, Clark, & Sline, 1993), and to address critical relationship events (Emmers & Canary, 1996; Planalp & Honeycutt, 1985; Planalp et al., 1988). At the same time, relationship talk can threaten the face of interactants (Baxter & Wilmot, 1985) and jeopardize the status of the relationship (e.g., Afifi & Burgoon, 1998; Knobloch & Carpenter-Theune, 2004). For these reasons, relationship talk varies in prominence and explicitness within conversation.

Both theoretical perspectives and empirical research suggest that people’s knowledge helps them to identify cues about their relationship. Expectancy violations theory (Burgoon & Hale, 1988) assumes that people’s expectations influence the behaviors they attend to within interaction. Likewise, Planalp (1985, 1987) argues that relational schemas direct attention to social cues within interpersonal exchanges. In a test of this general premise, Smith
(1995) found that people primed to believe that a videotaped interaction was between married partners versus new acquaintances noted different nonverbal behaviors when reconstructing that interaction. Similarly, Higgins and Rholes (1978) demonstrated that individuals have better recall for information about another person when those details are consistent with their evaluative impression of the target. Taken together, this work implies that people’s expectations facilitate their ability to perceive relationship cues.

If relational knowledge guides attention during interaction, what happens under conditions of relational uncertainty? To the extent that relational uncertainty disrupts the knowledge base that shapes perception during interaction, we propose that individuals who are uncertain about the nature of their relationship may be unable to recognize relationship talk when it occurs. More specifically, because relational uncertainty may preclude a clear reference point for marking relationship talk, we expect that it is negatively associated with people’s perceptions of the amount of relationship talk that occurs in conversation.

Our general reasoning suggests that relational uncertainty may hamper people’s ability to discern relationship talk within interaction. In other words, one source of variation in people’s perceptions of relationship talk may be relational uncertainty. Of course, another source of variation is the sheer amount of relationship talk that individuals enact. Although conversations vary in the extent to which people discuss the nature of their relationship (Acitelli, 1988), our perspective highlights the impact of relational uncertainty on people’s ability to recognize relationship talk regardless of the content of the conversation. Hence, we build this covariate into a hypothesis about the association between relational uncertainty and people’s perceptions of relationship talk:

**Hypothesis 1:** Controlling for the degree to which people discuss their relationship, relational uncertainty is negatively associated with the amount of relationship talk they perceive in conversation with a romantic partner.

**Strength of Relational Inferences**

As people process relational information, they make a variety of judgments about their relationship with a partner. The substance of relational message judgments can be broadly classified along dimensions of dominance-submissiveness or affiliation-disaffiliation (Dillard et al., 1996). Within the constellation of concepts comprising affiliation-disaffiliation, intimacy is a theme particularly relevant to communication within close relationships (Burgoon...
& Hale, 1984). Relational messages related to intimacy can be further distinguished into three more nuanced categories: (a) the immediacy/affection dimension encompasses attraction and liking; (b) the similarity/depth dimension involves the familiarity, commonality, and shared experience of relationship partners; and (c) the receptivity/trust dimension references attentiveness and dependability (Burgoon & Hale, 1984, 1987).

Because social cues are ambiguous, people rely on existing knowledge to facilitate relational judgments. Dillard et al. (1996) proposed that individuals frame relational cues in terms of either dominance-submissiveness or affiliation-disaffiliation to derive meaning from otherwise ambiguous signals (see also Leary, 1957; Osgood, Suci, & Tannenbaum, 1957). Consistent with this reasoning, Dillard et al. (1999) found that the intensity of relationally neutral involvement cues is positively correlated with judgments of dominance when a dominance-submissiveness frame is relevant, but it is positively correlated with evaluations of affiliation when affiliation-disaffiliation is the salient frame. Similarly, Smith (1995) reported that the inferences people draw from nonverbal displays in a videotaped interaction are influenced by their beliefs about the relationship between the participants. More generally, Higgins and Rholes (1978) concluded that people use the impressions they have of a person to infer the implications of information they have received.

As this work makes clear, relational knowledge helps people in their efforts to derive relational inferences. Again we query: What happens under conditions of relational uncertainty? If pre-existing assumptions about the relationship activate relational frames (Tusing, Dillard, & Morrill, 2001) and shape relational judgments (Smith, 1995), then doubts about involvement should impede comprehension. More specifically, we expect that individuals experiencing relational uncertainty may have difficulty making judgments about the intimacy conveyed by relational messages; hence, they should reach more tentative conclusions. Operationally, our reasoning suggests that people experiencing relational uncertainty should endorse midrange responses to scale items assessing their perceptions of relational messages. In other words, individuals who lack a clear interpretive frame may have difficulty judging whether their partner’s relational messages are high or low in immediacy/affection, similarity/depth, or receptivity/trust. Hence, we deduce a second hypothesis:

Hypothesis 2: Relational uncertainty is negatively associated with the extremity of people’s relational judgments about intimacy communicated by a romantic partner.
Difficulty of Interaction

We offer a final prediction about people’s perceptions of conversation that follows from the hypotheses we have articulated thus far. Namely, if relational uncertainty makes it hard to recognize talk with relational implications (Hypothesis 1), and it undermines relational judgments (Hypothesis 2), then relational uncertainty may also make conversations with partners more difficult. Individuals who are unsure about the status of their relationship are likely to struggle in the absence of well-defined expectations for behavior (Knobloch & Solomon, 2002a), and, in turn, should find conversation to be relatively demanding, intricate, and laborious. Thus, we expect that relational uncertainty amplifies the difficulty of conversation. We submit a final hypothesis that emerges from this reasoning:

Hypothesis 3: Relational uncertainty is positively associated with people’s perception of the difficulty of interaction with a romantic partner.

Method

To examine our logic about relational uncertainty, we conducted a study of conversations between partners in dating relationships. We began by collecting pretest data to select conversation topics to use in the main study. Then, as part of the primary investigation, we solicited partners’ reports of relational uncertainty, videotaped them in interaction, and assessed their perceptions of the conversation. We describe this study in more detail in the following sections.3

Pretest of Conversation Topics

We implemented a pretest to identify conversation topics that are relationally important, realistic, and easy to enact. More specifically, we asked 53 undergraduate students to rate conversation topics along these three dimensions. Respondents individually completed a questionnaire in groups of 5 to 10 people, devoted approximately 20 minutes to the task, and received extra course credit for participation.

The pretest questionnaire instructed participants to select the person with whom they had their most established romantic or potentially romantic relationship; all participants were able to identify a romantic or potentially romantic relationship to report on. The questionnaire asked respondents to imagine discussing seven conversation topics with that partner (see Appendix A). We adapted the majority of topics from Goldsmith and Baxter’s (1996)
We also included the surprising event topic given both its relevance to relational uncertainty (Knobloch & Solomon, 2002b, 2003b) and its potential to furnish people with an opportunity to discuss their relationship. The questionnaire presented the conversation topics in random order.

Respondents indicated on a 6-point Likert-type scale (1 = disagree and 6 = agree) the extent to which they agreed with 12 statements addressing the relational importance, realism, and ease of the conversation topics. Four items, adapted from Afifi and Metts (1998), comprised a measure of relational importance: (a) This conversation would be an important event within my relationship, (b) this conversation would make me think about my relationship, (c) this conversation would be a minor event within my relationship, and (d) this conversation would be a major occurrence within my relationship. We reverse scored the third item and averaged the responses (α = .86). Four items measured realism: (a) This conversation would be realistic in my relationship, (b) this conversation would be typical in my relationship, (c) this kind of conversation happens often in my relationship, and (d) this kind of conversation would be unnatural in my relationship. After reverse scoring the fourth item, we averaged the responses (α = .90). Four items evaluated the ease of the interaction task: (a) I would feel uncomfortable being asked to have this conversation, (b) I would be able to be myself in this conversation, (c) I would not be able to express myself fully in this conversation, and (d) I would find it easy to have this conversation with my partner. We reverse scored the first and third items before computing an average (α = .76).

Because relational uncertainty may be most relevant to conversations that are consequential to romantic partners (e.g., Afifi & Burgoon, 1998), we used pretest ratings of relational importance as a first criterion for selecting conversation topics. Findings indicated that positive talk, negative talk, and surprising event talk received the highest ratings for relational importance (see Table 1), and all three topics demonstrated sufficient levels of realism and ease. For a warm-up conversation topic, we selected informal talk because it possessed the highest degrees of realism and ease. Subsidiary analyses indicated that the relational importance, realism, and ease of the four selected topics did not significantly differ as a function of the intimacy of participants’ relationships.

Sample

We solicited dating couples for the main study by making announcements in communication courses at a large midwestern university. Relational uncer-
We are interested in relationships that have some degree of romantic interest or potential. If you are currently involved in a dating relationship, then you should bring your partner with you to the study. If you are not in a formal dating relationship, you should bring someone you are casually dating, someone you are beginning to see, or someone you are just romantically interested in.

Those participants who were enrolled in communication courses earned extra course credit for completing the study.

The final sample contained 120 couples (120 males and 120 females) in which at least one person reported being romantically interested in his or her partner; this sample excluded two married couples and two couples in which neither participant indicated romantic interest in his or her partner. Although participants ranged in age from 17 to 30 years old, approximately 93% of respondents fall between the ages of 18 and 22 ($M = 20.55$, $SD = 1.54$, $MD = 20$). Most participants ($n = 201$; 84%) indicated that they were dating their partner exclusively; a slightly smaller number ($n = 183$; 76%) reported that their partner was dating them exclusively. The average length of romantic interest was approximately 11 months (range = 1 week to 6 years, $SD = 12.29$ months, $MD = 7$ months). All of the relationships were heterosexual in orientation.

Table 1: Pretest Descriptive Statistics for Conversation Topics

<table>
<thead>
<tr>
<th></th>
<th>Relational Importance</th>
<th>Realism</th>
<th>Ease</th>
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<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>Superficial talk</td>
<td>2.75</td>
<td>1.34</td>
<td>5.23</td>
</tr>
<tr>
<td>Informal talk</td>
<td>3.49</td>
<td>1.28</td>
<td>5.59</td>
</tr>
<tr>
<td>Positive talk</td>
<td>4.50</td>
<td>1.07</td>
<td>5.13</td>
</tr>
<tr>
<td>Negative talk</td>
<td>4.30</td>
<td>1.09</td>
<td>3.89</td>
</tr>
<tr>
<td>Formal and goal-directed talk</td>
<td>3.96</td>
<td>1.20</td>
<td>4.47</td>
</tr>
<tr>
<td>Informal and goal-directed talk</td>
<td>3.71</td>
<td>1.11</td>
<td>5.06</td>
</tr>
<tr>
<td>Surprising event talk</td>
<td>4.88</td>
<td>0.90</td>
<td>3.76</td>
</tr>
</tbody>
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Note: $N = 53$. Judgments were made on a 6-point Likert-type scale (1 = disagree and 6 = agree). $a$. Selected for use in the main study.


**Procedures**

Data collection proceeded in four steps. First, partners were separated to complete a questionnaire that included measures of relational uncertainty. Second, couples participated in a 5-minute warm-up conversation to become familiar with the audiotaping and videotaping equipment. Couples were given instruction cards describing informal talk (see Appendix A) and then engaged in the videotaped interaction. After the conversation was done, partners individually completed a short follow-up questionnaire.

In the third phase of the study, couples were assigned to positive talk, negative talk, or surprising event talk for the second conversation. In an effort to evenly distribute couples' intimacy levels across the topics, this assignment was based on participants’ _chance of marriage_ score. The measure, which was located in the first questionnaire, was a single item that read: “At the current time, what is the likelihood that you will marry your partner?” (Lloyd, Cate, & Henton, 1984). Participants used a scale containing 5% increments to indicate a score between 0% and 100% (\(M = 46.95\%, SD = 34.31\%, MD = 50\%\)). We employed the lowest reported percentage to assign couples to a conversation topic.

The fourth phase of the study followed the procedures used for the warm-up conversation. Specifically, participants received instruction cards that described their assigned conversation topic (see Appendix A; positive talk: \(n = 40\) couples; negative talk: \(n = 41\) couples; surprising event talk: \(n = 39\) couples). Couples engaged in a 10-minute videotaped conversation on their topic; then, partners were separated to complete a follow-up questionnaire measuring their perceptions of the conversation. On average, the full set of procedures took 65 minutes to complete.

**Measures of the Independent and Dependent Variables**

_Relational uncertainty._ We used measures of self, partner, and relationship uncertainty that we developed in previous work (Knobloch & Solomon, 1999). The first questionnaire asked participants to indicate their response to statements preceded by the stem “How certain are you about . . . ?” Participants used a 6-point Likert-type scale to record their response (1 = _completely or almost completely uncertain_, 2 = _mostly uncertain_, 3 = _slightly more uncertain than certain_, 4 = _slightly more certain than uncertain_, 5 = _mostly certain_, 6 = _completely or almost completely certain_). As a first step in creating measures of relational uncertainty, we reverse scored the responses to all of the items. We then used confirmatory factor analysis (Hunter & Gerbing, 1982) to evaluate the unidimensionality of items assigned to subscales (as per Knobloch &
Solomon, 1999), and we averaged items to calculate the corresponding subscales. Finally, as per previous research (Knobloch & Solomon, 2002b; Knobloch, Solomon, & Cruz, 2001), we averaged the subscales to create composite measures of self, partner, and relationship uncertainty.

The measure of self uncertainty contained 14 of the original 19 items. They included the following: (a) how much you like your partner, (b) how ready you are to get involved with your partner, and (c) your goals for the future of this relationship ($M = 2.19, SD = 1.07, \alpha = .94$). Partner uncertainty also involved 14 of the original 19 items. Examples included (a) how much your partner wants to pursue this relationship, (b) how important this relationship is to your partner, and (c) where your partner wants this relationship to go ($M = 2.59, SD = 1.31, \alpha = .97$). The measure of relationship uncertainty contained 15 of the original 16 items. They included (a) the norms for this relationship, (b) the definition of this relationship, (c) whether you and your partner feel the same way about each other, and (d) the future of the relationship ($M = 2.56, SD = 1.14, \alpha = .92$).

**Perceived relationship talk.** To assess how much relationship talk partners perceived during their second conversation, we asked them to respond to descriptors (1 = disagree and 6 = agree) introduced by the stem “This interaction was . . . .” Confirmatory factor analysis revealed that four of the original five items formed a unidimensional scale: (a) focused on our relationship, (b) not concentrated on the nature of our relationship, (c) focused on the nature of the relationship between us, and (d) concentrated on our relationship. After reverse scoring the second item, we averaged the responses ($M = 3.81, SD = 1.56, \alpha = .93$).

**Extremity of relational judgments.** We included Burgoon and Hale’s (1987, pp. 37-38) scales in the follow-up questionnaire to the second conversation. Participants used a Likert-type scale (1 = strongly disagree and 7 = strongly agree) to record their responses to statements describing their partner’s behavior. Confirmatory factor analysis indicated that five of the original nine items formed a unidimensional measure of immediacy/affection: (a) My partner was intensely involved in the conversation, (b) my partner communicated coldness rather than warmth, (c) my partner was interested in talking to me, (d) my partner showed enthusiasm while talking with me, and (e) my partner acted bored. We reverse scored the second and fifth items before averaging responses ($M = 5.60, SD = 0.95, MD = 5.67, \alpha = .81$). Three of the original five items comprised a unidimensional scale for similarity/depth: (a) My partner acted like we were good friends, (b) my partner seemed to desire further communication, and (c) my partner made me feel that he or she was very similar.
to me ($M = 5.52, SD = 1.10, MD = 5.67, \alpha = .55$). Three of the original six items comprised a unidimensional solution for *receptivity/trust*: (a) My partner was very honest in communicating with me, (b) my partner was willing to listen to me, and (c) my partner was sincere ($M = 6.13, SD = 0.90, MD = 6.33, \alpha = .78$).

We created extremity judgments for each scale by calculating the absolute value of the difference between a respondent’s score and the midpoint of the scale (4). This procedure generated measures of the extremity of immediacy/affection ($M = 1.68, SD = 0.80, MD = 1.67$), the extremity of similarity/depth ($M = 1.66, SD = 0.87, MD = 1.67$), and the extremity of receptivity/trust ($M = 2.17, SD = 0.82, MD = 2.33$) that individuals perceived in the conversation.

**Difficulty of interaction.** Participants reported their perceptions of the difficulty of the conversation by recording their agreement (1 = disagree and 6 = agree) with adjectives introduced by a stem that read “This interaction was…” The three original items formed a unidimensional scale according to confirmatory factor analytic results: (a) frustrating, (b) satisfying, and (c) pleasant. After reverse scoring the final two items, we averaged the responses to create one score for each participant ($M = 2.50, SD = 1.22, \alpha = .80$).

**Measures of Covariates**

As we noted in our rationale for Hypothesis 1, testing our logic about the association between relational uncertainty and people’s perceptions of relationship talk requires us to control for variation in the amount of relationship talk they enact. But what is the best strategy for assessing the content of conversation? The answer is certainly not straightforward. One option is to rely on the perceptions of the participants themselves, but that strategy runs counter to our argument that insiders’ judgments are colored by their experience of relational uncertainty. A second option is to use the perceptions of third-party observers. Uninformed outsiders are not privy to the inside information that may signal nuances in relationship talk, but their perceptions should not be subject to biases stemming from relational uncertainty. Thus, we asked third-party observers to code the prominence and explicitness of relationship talk in conversation, and we sought to enhance the objectivity of their judgments by employing concrete decision rules. We used coders’ decisions as baseline estimates of the degree to which partners discussed their relationships. We describe these covariates in the following paragraphs.

**Coded relationship talk.** We used coding procedures to measure the prominence of relationship talk that third-party observers recognized in the
conversation. Two trained judges, working independently, watched the videotape of the second conversation while reading a transcript of the interaction. Judges indicated the speaking turns in which couples referred to their relationship in some way. To maximize variance in explicitness, we instructed judges to include speaking turns that contained both implicit and explicit references to the relationship. Judges responded to the following prompt: “Did this speaking turn reference the relationship between participants?” After coding 15 couples independently, judges met to discuss the coding task, and then they repeated the process until the coding was complete.

To facilitate the inclusivity of the operationalization, disagreements between judges were resolved by selecting the decision made by the judge who recorded the most speaking turns of relationship talk for the sample. Across the 18,040 total speaking turns, judges achieved a $\kappa$ reliability of .72. Judges attributed at least one speaking turn of relationship talk to 108 of the 120 couples (90%) included in the sample (range = 0 to 210 speaking turns, $M = 43.13$ speaking turns, $SD = 39.85$ speaking turns). Appendix B includes excerpts from positive talk, Appendix C includes excerpts from negative talk, and Appendix D includes excerpts from surprising event talk.

We created a proportion for each conversation by dividing the number of speaking turns of coded relationship talk by the total number of turns in the conversation (range = 0.00 to 1.00, $M = 0.30$, $SD = 0.28$). We used this proportion in our tests of Hypothesis 1 to covary the relative prominence of relationship talk noted by outside observers.

Coded explicitness of relationship talk. We also used coding procedures to operationalize the explicitness of relationship talk perceived by third-party observers. The first step was to unitize the speaking turns of coded relationship talk into acts. To this end, a trained judge followed three decision rules for unitizing: (a) classify speaking turns into acts when the speaking floor changes by either turn-taking or disruption, (b) divide speaking turns into acts when a participant communicates about two distinct topics within the same speaking turn, and (c) combine two speaking turns into one act when a participant is interrupted but continues speaking until he or she has uttered a complete thought (adapted from Sillars, Pike, Jones, & Murphy, 1984; Sillars, Pike, Jones, & Redmon, 1983). We assessed reliability by asking a second trained judge to unitize the sequences for 30% of the couples who engaged in coded relationship talk ($n = 32$ couples); judges agreed on 95% of the boundaries of the 1,242 total acts they identified (Guetzkow’s $U = .02$).

In the second phase of coding explicitness, three trained judges rated the explicitness of each act of coded relationship talk. Judges responded to the following statement using a 5-point Likert-type scale: “This act explicitly
referenced the relationship” (1 = disagree strongly and 5 = agree strongly). Judges independently rated 20 couples, discussed their rating strategy, and repeated the cycle until the task was complete. We calculated an explicitness score for each conversation in two steps. First, we averaged judges’ ratings for each act of coded relationship talk (α = .88). Then, we averaged the scores for the acts of coded relationship talk within each conversation (M = 2.83, SD = 0.41).

Appendices B, C, and D illustrate variation in explicitness for coded relationship talk. Acts received high scores for explicitness when speakers directly addressed the nature of the relationship. Examples include “You know what’s positive about our relationship? We are so straightforward with each other” (see Appendix B) and “I took [the card] out and I read it, and it made me realize that you love me, and that I love you, too” (see Appendix D). In contrast, acts received low scores for explicitness when speakers indirectly referenced the relationship, used hedges, or made bids to change the topic. An example is “Not really. I don’t know. Does it bother you when I study, like, a lot during the week? Does that, like, bother you? I don’t think that bothers you, does it?” (see Appendix C).

Results

We analyzed our data in two phases. First, we conducted between-subjects descriptive analyses to shed light on characteristics of the topics and the measures. Then, we employed hierarchical regression to test our hypotheses while addressing the statistical dependence in the data. We used an α level of .05 for all statistical tests, so the power to detect a medium effect (r = .30; Cohen, Cohen, West, & Aiken, 2003) was .99 for between-subjects analyses and .92 for split-sample analyses. We evaluated our hypothesized associations in the substantive analyses using one-tailed tests; we employed two-tailed tests for all other analyses.

Descriptive Analyses

In a first descriptive analysis, we conducted “analysis of variance” to evaluate differences in our measures as a function of the conversation topics (see Table 2). Findings showed no differences in relational uncertainty or the extremity of relational judgments by topic condition. As we anticipated, results showed more perceived relationship talk and coded relationship talk in the surprising event conversation than in the positive or negative conversations. Moreover, coded explicitness of relationship talk and difficulty of interaction were greater in negative talk than positive talk. These results suggest that the
conversations varied in important ways across topics. To evaluate how relational uncertainty corresponds with message perceptions beyond this variation, we covaried conversation topic in our substantive analyses.

A second descriptive analysis evaluated the bivariate correlations among our conversation measures (see Table 3). Not surprisingly, within the set of operationalizations of relationship talk, perceived relationship talk was positively associated with both coded relationship talk and coded explicitness of relationship talk. As we might expect, all of the measures of the extremity of relational judgments evidenced positive overlap. The correlations between the sets of conversation variables were also consistent with what we might anticipate: Perceived relationship talk was positively correlated with the extremity of relational judgments, but difficulty of interaction was negatively correlated with the extremity of relational judgments. Difficulty of interaction was also positively associated with coded relationship talk and coded explicitness of relationship talk.
We computed bivariate correlations between relational uncertainty and the conversation variables in a third descriptive analysis (see Table 4), and these results provided preliminary evidence in favor of our hypotheses. Consistent with Hypothesis 1, findings indicated that relational uncertainty was negatively associated with people’s perceptions of relationship talk. Relational uncertainty was uncorrelated with coded relationship talk and coded explicitness of relationship talk except that partner uncertainty was negatively associated with coded relationship talk. As predicted by Hypothesis 2, relational uncertainty was negatively associated with the extremity of relational judgments. Finally, as anticipated by Hypothesis 3, relational uncertainty was positively associated with perceptions of difficulty.

**Substantive Analyses**

Up to this point, we have conducted between-subjects descriptive analyses to gain initial insight into the associations among our measures. Within our substantive analyses, however, we addressed the statistical dependence that occurs when observations from both partners are included in a data set (e.g., Kenny & Cook, 1999). Whereas our independent variables target an individual’s perceptions of relational uncertainty, our dependent variables stem from conversations in which both partners participated. Hence, we circumvented the statistical dependence in our data by splitting the observations into two groups based on respondent’s sex and conducting separate analyses for males and females.

**Hypothesis 1.** Hypothesis 1 expected that relational uncertainty is negatively associated with people’s perceptions of relationship talk after controlling for the prominence or explicitness of relationship talk that coders judged
to be present in the conversation. We employed hierarchical regression to test this hypothesis. In separate analyses for males and females, we first regressed an individual’s perception of relationship talk onto two variables dummy coded to represent the three conversation topics. Then, we included one of the coded relationship talk measures. Next, we investigated Hypothesis 1 by adding the individual’s report of self, partner, or relationship uncertainty on the third step.9

Table 5 contains the results of the analyses in which coded relationship talk was used as the covariate. As per the descriptive analyses, findings indicated differences in perceived relationship talk as a function of participants’ topic assignment. Not surprisingly, results of the second step demonstrated a substantial positive correlation between perceived relationship talk and coded relationship talk. On the third step of the model, findings for males revealed that perceived relationship talk was negatively associated with self uncertainty and relationship uncertainty; moreover, a negative association between perceived relationship talk and partner uncertainty approached statistical significance. For females, perceived relationship talk was negatively associated with self uncertainty and partner uncertainty, and relationship uncertainty showed a similar negative association that approached statistical significance. In sum, results indicated evidence in favor of Hypothesis 1 when we covaried coded relationship talk.10

Table 6 reports the tests controlling for the coded explicitness of relationship talk. On the first step of the model, differences attributable to topic assignment were apparent. Results of the second step indicated positive overlap between the relationship talk females perceived and the coded explicitness of relationship talk. On the third step, we documented mixed

<table>
<thead>
<tr>
<th>V1: Perceived relationship talk</th>
<th>Self</th>
<th>Partner</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2: Coded relationship talk</td>
<td>-.17*</td>
<td>-.21**</td>
<td>-.14*</td>
</tr>
<tr>
<td>V3: Explicitness of relationship talk</td>
<td>-.04</td>
<td>-.14*</td>
<td>-.02</td>
</tr>
<tr>
<td>V4: Extremity of immediacy/affection</td>
<td>-.02</td>
<td>-.01</td>
<td>.01</td>
</tr>
<tr>
<td>V5: Extremity of similarity/depth</td>
<td>-.21**</td>
<td>-.22**</td>
<td>-.27***</td>
</tr>
<tr>
<td>V6: Extremity of receptivity/trust</td>
<td>-.27***</td>
<td>-.24***</td>
<td>-.31***</td>
</tr>
<tr>
<td>V7: Difficulty of interaction</td>
<td>-.32***</td>
<td>-.25***</td>
<td>-.33***</td>
</tr>
</tbody>
</table>

Note: N = 240.

*p < .05. **p < .01. ***p < .001.
results in conjunction with Hypothesis 1. Perceived relationship talk was
negatively associated with relational uncertainty across all of the analyses
for males, but it was negatively correlated only with partner uncertainty for
females. Hence, we concluded that Hypothesis 1 was supported only for males
when we controlled for the coded explicitness of relationship talk.

Hypothesis 2. The logic underlying our second hypothesis suggests that
people may struggle to gauge the intimacy conveyed by a partner’s relational
messages under conditions of relational uncertainty. If individuals have diffi-
culty evaluating whether a partner’s relational messages are low or high in
intimacy, then we should see a negative correlation between relational uncer-
tainty and the extremity of their judgments about relational messages. To
test Hypothesis 2, we again employed hierarchical regression and conducted
separate analyses for males and females. We regressed the extremity of an
individual’s relational judgments onto two variables dummy coded to repre-
sent the three topics. Then, we added the individual’s perception of self, part-
ner, or relationship uncertainty. Support for Hypothesis 2 would be generated
by a negative association between the extremity judgments and relational
uncertainty on the second step.

Findings are included in Table 7. For males, a negative association
between the extremity of relational judgments and relational uncer-
tainty was apparent across all of the analyses. For females, a similar negative
correlation was evident with just two exceptions, both of which involved
immediacy/affection. Specifically, the negative association between the
extremity of immediacy/affection and self uncertainty did not reach statisti-
cal significance, and the negative association between the extremity of
immediacy/affection and relationship uncertainty only approached statisti-
cal significance. With these caveats, we concluded that our findings offered
reasonable support for Hypothesis 2.

Because the means for people’s judgments of relational messages about
intimacy were well above the midpoint of the 7-point response scale, we con-
ducted subsidiary analyses to determine whether the effects for Hypothesis 2
were driven by a linear association between relational uncertainty and rela-
tional judgments. We repeated the hierarchical regression analyses, but in
place of the extremity variable, we substituted participants’ raw score
for immediacy/affection, similarity/depth, or receptivity/trust. Findings
indicated negative correlations between relational uncertainty and
relational judgments for 15 of the 18 analyses, but the effects for the
directional variable were smaller than the effects for the extremity variable
in 13 of those cases. The two exceptions were the association between self
uncertainty and immediacy/affection for males (extremity variable $\beta = -0.38$,
$p < .001$; raw score $\beta = -0.42, p < .001$) and the association between partner
uncertainty and immediacy/affection for females (extremity variable $\beta =

Table 6
The Regression of Perceived Relationship Talk Onto the Coded Explicitness of Rela-
tionship Talk and Relational Uncertainty

<table>
<thead>
<tr>
<th></th>
<th>Analysis for Males</th>
<th>Analysis for Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2$ set of covariates</td>
<td>.05</td>
<td>.10**</td>
</tr>
<tr>
<td>Dummy code 1 $\beta$</td>
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<tr>
<td>Dummy code 2 $\beta$</td>
<td>-.24*</td>
<td>-.25*</td>
</tr>
<tr>
<td>$R^2$ explicitness of relationship talk</td>
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<td>.04*</td>
</tr>
<tr>
<td>Explicitness of relationship talk $\beta$</td>
<td>.14</td>
<td>.20*</td>
</tr>
</tbody>
</table>

Note: $N = 108$. Dummy Code 1 was coded such that positive talk = 1, negative talk = 0, and surpris-
ing event talk = 0. Dummy Code 2 was coded such that positive talk = 0, negative talk = 1, and sur-
prising event talk = 0. Tests of the hypothesized associations were one-tailed.

*p < .05. **p < .01.
### Table 7
The Regression of Extremity of Relational Judgments or Difficulty of Interaction Onto Relational Uncertainty

<table>
<thead>
<tr>
<th></th>
<th>Analysis for Males</th>
<th>Analysis for Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremity of immediacy/affection</td>
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</tr>
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<tr>
<td></td>
<td>-.43***</td>
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<td></td>
<td>-.16*</td>
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<td>Analysis for Males</td>
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<td></td>
<td>-.18*</td>
<td>-.22**</td>
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<tr>
<td>Extremity of receptivity/trust</td>
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<td>-.09</td>
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<tr>
<td>$R^2$ relational uncertainty</td>
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<tr>
<td>Relation uncertainty $\beta$</td>
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<td></td>
<td>-.41***</td>
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<tr>
<td>Analysis for Males</td>
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<td>Difficulty of interaction</td>
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<td>.24**</td>
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<td>.33**</td>
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</tbody>
</table>

Note: N = 120. Dummy Code 1 was coded such that positive talk = 1, negative talk = 0, and surprising event talk = 0. Dummy Code 2 was coded such that positive talk = 0, negative talk = 1, and surprising event talk = 0. Tests of the hypothesized associations were one-tailed.

a. $p = .07$.

* $p < .05$. ** $p < .01$. *** $p < .001$. 

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-.16, \( p < .05 \); raw score \( \beta = -.17, p < .05 \). Because relational uncertainty typically shared a larger negative correlation with the extremity of relational judgments, we interpreted these results as compatible with Hypothesis 2.

**Hypothesis 3.** We also used hierarchical regression to test Hypothesis 3. First, in separate analyses for males and females, we regressed a participant’s report of the difficulty of interaction onto two variables dummy coded to represent the three topics. Next, we entered one of the measures of relational uncertainty.

Results of these analyses, which are reported in Table 7, demonstrated that a statistically significant amount of variance in difficulty of interaction was explained by the covariates on the first step of the model for females. On the second step, all of the analyses revealed a positive association between difficulty of interaction and relational uncertainty. Hence, these findings are consistent with Hypothesis 3.\(^{11}\)

**Discussion**

Our premise in this article was that relational uncertainty hampers people's capacity to draw inferences about their relationships. In particular, we hypothesized that relational uncertainty diminishes people’s ability to recognize relationship talk (Hypothesis 1) and their capacity to make firm judgments about relational messages (Hypothesis 2). We also argued that relational uncertainty increases people’s perceptions of the difficulty of interaction (Hypothesis 3). In the following sections, we discuss the link between relational uncertainty and relational information processing revealed by our findings, address the general implications of our results, and identify limitations of our work and directions for future research.

**Relational Uncertainty and Relational Information Processing**

An initial task in relational information processing is detecting messages focused on the nature of the relationship. Accordingly, we began by examining how relational uncertainty corresponds with people's ability to recognize relationship talk. We documented strong evidence of a negative bivariate association between relational uncertainty and people’s perceptions of relationship talk; we also found modest evidence of a negative correlation after we controlled for the prominence or explicitness of relationship talk that independent judges observed. Notably, our findings do not imply that people grappling with relational uncertainty are disinterested in acquiring information about their relationship. Relational uncertainty may prompt vigilant
attention to information, especially when individuals perceive minimal risk in reducing their ambiguity (Knobloch & Solomon, 2002a); our results suggest only that people experiencing relational uncertainty do not perceive what they consider to be relationship talk. We also note two other caveats about the results of our substantive analyses. First, the size of the overall effect was quite small. Second, the correlation was more robust for males than females when the coded explicitness of relationship talk was covaried. Nevertheless, the pattern of findings is consistent with our assumption that relational uncertainty diminishes people’s capacity to perceive relationship talk.

Although our focus was on relational information processing in particular, our findings are compatible with claims about the process of perception in general. Most communication texts conceptualize perception as a three-step sequence that involves selecting sensory data from the environment, organizing those signals in meaningful ways, and embellishing the cues to facilitate comprehension (e.g., DeVito, 2000; Tubbs & Moss, 2000; Verderber & Verderber, 1998). Moreover, scholars typically assume that attention in the initial stage of perception is guided by both features of the situation and people’s expectations, needs, or goals. Our results offer concrete evidence of these processes by providing an example of how people’s existing knowledge (or lack of knowledge) about the interaction context may color how they perceive messages.

Because one source of variation in people’s perceptions of relationship talk should be the amount they engage in, we accounted for the prominence and explicitness of relationship talk apparent to third-party observers. Although we emphasized validity in our dependent variable by asking participants to provide their general impressions of relationship talk, and we privileged precision in our covariates by asking coders to make judgments of relationship talk on a turn-by-turn basis, our data provide some insight into the correspondence between insider and outsider perspectives on communication. Of course, some of the discrepancy between our participants and our coders may stem from our measurement decisions, but a second explanation for the discrepancy follows from our reasoning about relational uncertainty. Whereas insiders’ judgments should be informed by shared history yet tempered by relational uncertainty, outsiders’ judgments should be guided only by cultural norms (e.g., Hampson, Beavers, & Hulgus, 1989; Noller & Roberts, 2002). Consistent with this logic, we uncovered evidence that relational uncertainty corresponds with insiders’ perceptions but not outsiders’ perceptions. We found that relational uncertainty was negatively correlated with participants’ perceptions of relationship talk (Hypothesis 1), but it was uncorrelated with the prominence and explicitness of relationship talk per-
ceived by third-party coders (see Table 4). In other words, relational uncertainty coincides with how partners themselves view messages but not how outside observers view those same messages.

Whereas a first step in relational information processing is identifying relevant cues in the environment, a second task is interpreting those cues in light of existing knowledge. Accordingly, we also examined if relational uncertainty coincides with people’s ability to draw inferences from relational messages about intimacy. We found that relational uncertainty was negatively associated with the extremity of people’s perceptions of intimacy conveyed by a partner’s relational messages (Hypothesis 2). In other words, individuals experiencing relational uncertainty endorsed judgments of immediacy/affection, similarity/depth, and receptivity/trust that lingered around the midpoint of those scales.

Prior research has linked relational judgments to a variety of factors, including intimacy (Hale et al., 1989), nonverbal cues (Burgoon, 1991), channels of communication (Walther & Burgoon, 1992), and expectations for future interaction (Walther, 1994). Whereas that work sheds light on the antecedents and outcomes of relational messages, we addressed a different question by examining how relational uncertainty corresponds with people’s ability to extract information from relational messages. Importantly, our findings speak not to the relational judgments that prevail when people have doubts about their relationship but to the more tentative nature of those conclusions. Thus, we nominate the strength of relational inferences as a construct to consider within future work on relational messages.

In an extension of our logic that relational uncertainty hampers people’s ability to both identify (Hypothesis 1) and interpret (Hypothesis 2) information about their relationship, we also predicted that relational uncertainty makes conversing more difficult (Hypothesis 3). Consistent with this claim, both bivariate and multivariate findings demonstrated that relational uncertainty was positively correlated with people’s perceptions of the difficulty of conversation. These results complement recent work demonstrating that relational uncertainty makes relating, in general, more difficult. For example, individuals view talking about sensitive topics as more threatening under conditions of relational uncertainty (Knobloch & Carpenter-Theune, 2004). Similarly, people appraise irritating partner behavior more negatively at heightened levels of relational uncertainty (Solomon & Knobloch, 2004). Whereas previous efforts have documented more general experiences of turbulence associated with relational uncertainty, our investigation revealed links between relationship doubts and assessments of particular interactions. Taken together, these studies highlight the variety of ways that experiencing relational uncertainty can complicate communication.
Beyond providing further evidence of the disruptions tied to relational uncertainty, our data also shed light on why people find communicating so difficult under conditions of relational uncertainty. In particular, our findings imply that people may struggle because they lack the ability both to identify relevant information (Hypothesis 1) and to draw relational inferences (Hypothesis 2). Again, we use the analogy of comprehending written text to illustrate our point (e.g., van Dijk & Kintsch, 1983). A reader confronted with a hastily scrawled handwritten note faces the immediate problem of deciphering key words. Moreover, to the extent that the meaning of essential nouns and verbs is obscured, so is the semantic context that would otherwise facilitate comprehension. For both of these reasons, poor penmanship renders a reader’s task difficult. In a parallel fashion, we suggest that the challenges of recognizing relationship talk and making relational judgments work together to make conversation more difficult for people experiencing relational uncertainty.

General Implications

Our discussion thus far has focused on the implications of our findings individually; in addition, we see four more general issues worth noting. First, we are intrigued by the implication that the “rich get richer” when processing messages under conditions of relational uncertainty. Quite ironically, individuals who most need clarification about the nature of their relationship are least likely to recognize relationship talk, and those who are already confident in the status of their relationship are best able to recognize relationship talk (Hypothesis 1). Similarly, individuals who most need insight into the definition of their relationship find relational messages about intimacy least informative, and those who are already certain about relationship dynamics derive the most information from relational messages about intimacy (Hypothesis 2). We suspect that partners experiencing relational uncertainty may find it hard to circumvent this cycle.

At the same time, we encourage caution about conceptualizing relational uncertainty as detrimental to interpersonal relating. Previous work has tended to emphasize how relational uncertainty can diminish dyadic well-being (Knobloch et al., 2001; Planalp & Honeycutt, 1985; Planalp et al., 1988), but relational uncertainty may be functional in a variety of ways. For example, our results show that relational uncertainty precludes individuals from judging the presence or absence of intimacy in a partner’s relational messages (Hypothesis 2). In other words, relational uncertainty may protect
people from making extreme judgments about the viability of the relationship before they possess sufficient information. And relational uncertainty can add excitement, romance, and drama to romantic relationships (Berger & Bradac, 1982; Livingston, 1980). Indeed, the process of successfully managing relational uncertainty may provide partners with opportunities to enhance togetherness, rekindle affection, and crystallize feelings of exclusivity (Knobloch & Solomon, 2002a). Thus, although our results portray relational uncertainty as adversarial to relational information processing in particular, we recognize that relational uncertainty may be functional for interpersonal relating in general.

We also wonder about the mechanism that links relational uncertainty to relational information processing. Of course, our data do not permit us to identify the process at work here, but one explanation is that relational uncertainty may prevent partners from making definitive decisions about how to frame an interaction. This explanation coheres with arguments offered by Solomon et al. (2002), who found that anxiety about interpersonal attachments was positively correlated with the salience of both dominance-submissiveness and affiliation-disaffiliation as frames for interpreting interaction. Solomon et al. (2002) reasoned that individuals with attachment anxiety may be indecisive about how to frame an episode, and this indecisiveness, in turn, may impede their ability to make sense of conversation. Likewise, we speculate that relational uncertainty may hinder people’s ability to activate a frame for interpreting conversation. More generally, we see explorations of the mechanism that ties relational uncertainty to message processing deficits as an important direction for future research.

Finally, we are left with questions about the direction of the pathway linking relational uncertainty and relational information processing. If the two do indeed share a causal connection, which way does the influence flow? Although we have cast relational uncertainty as the independent variable in this investigation, we recognize that bidirectional patterns of influence may be at work here. We think it plausible not only that relational uncertainty impedes people’s ability to glean relational information, but also that people’s inability to extract relational information may amplify relational uncertainty. Similarly, we expect not only that relational uncertainty makes it difficult for individuals to participate in conversation, but also that difficult conversations may spark questions about involvement (e.g., Siegert & Stamp, 1994). Unfortunately, we are not able to disentangle the direction of influence from our data, but we suspect that the pathway between relational uncertainty and relational information processing may be reciprocal in nature.
**Limitations and Directions for Future Research**

Like any study, our investigation contains weaknesses that restrict the generalizability of our findings. One such limitation involves the homogeneous sample we examined. Because the majority of the participants in our study were Caucasian students of traditional college age, we are not able to determine if our results extend beyond this cohort. Thus, we encourage future work that evaluates whether our findings translate to more heterogeneous populations. And given the prominence of ambiguity in interactions between communicators from different cultural groups (Gudykunst, 1995), we are particularly interested in research that examines conversations between partners in cross-cultural relationships.

We also call for work examining the link between relational uncertainty and message processing in more established romantic relationships. Relational uncertainty can crop up at any time (Emmers & Canary, 1996; Planalp et al., 1988; Turner, 1990), and questions about involvement may be especially intense during times of transition (Baxter & Bullis, 1986; Knobloch & Solomon, 2002b). Accordingly, we wonder if relational uncertainty makes message processing particularly difficult when partners are adjusting to married life (e.g., Noller & Feeney, 2002), transitioning to parenthood (e.g., Crohan, 1996; Shapiro, Gottman, & Carrere, 2000), confronting a serious illness (e.g., Beach & Good, 2004; Brashears, Neidig, & Goldsmith, 2004), or grappling with an empty nest (e.g., Heidemann, Suhomlinova, & O’Rand, 1998). Because people’s ability to negotiate these transitions has important consequences for dyadic well-being (Aldous, 1996), we encourage researchers to evaluate our ideas across the life span of romantic relationships.

Finally, we note that our focus on relational uncertainty and relational information processing is only one example of how ambiguity may affect message processing. Uncertainty is salient in contexts as diverse as computer-mediated communication (Ramirez, Walther, Burgooon, & Sunnafrank, 2002), health communication (Brashears et al., 2002), intercultural communication (Baldwin & Hunt, 2002; Gudykunst, 1995), and organizational communication (Morrison, 2002). In our view, the absence of knowledge in these settings should compromise people’s ability both to observe relevant cues and to attach meaning to those signals. Of course, our claim on this point remains speculative until the association between uncertainty and message processing can be evaluated within a variety of communication contexts.
Conclusion

We began this article by arguing that the field of interpersonal communication would benefit from a better understanding of how relational uncertainty corresponds with people's ability to process messages about their relationships. Accordingly, we advanced hypotheses about people's capacity to identify (Hypothesis 1) and interpret (Hypothesis 2) information about relationships, as well as their perceptions of the difficulty of communicating (Hypothesis 3). Our results were generally consistent with our premise that relational uncertainty interferes with people's ability to make sense of conversation. Given the centrality of this topic to the domain of interpersonal communication, we hope that our findings will spark continued interest in the role of relational uncertainty within message processing.

Appendix A

Conversation Topics Examined in the Pretest

Superficial Talk

We would like you and your partner to have an informal conversation. You may talk about any relatively unimportant topic you like. For example, you could engage in small talk, chat about sports, or discuss current events. Just spend some time having a casual conversation.

Informal Talk

At this time, we would like you and your partner to have an informal conversation about anything you like. You might spend this time gossiping, joking around, catching up, recapping the day's events, or getting to know each other better. Your goal is simply to have an informal conversation.

Positive Talk

We would like you and your partner to have a conversation that is positive in tone. You may focus on any relatively unimportant topic that you like. You may want to reminisce about a shared activity, make up after a disagreement, express affection, or talk about the nature of your relationship. Your goal is to discuss a pleasant topic of conversation.

Negative Talk

We would like you and your partner to have a conversation that addresses a negative topic. You might want to spend this time talking about an area of conflict, engaging in an in-depth conversation about a serious issue, talking about a problem, breaking
bad news, or complaining. Your goal is simply to engage in conversation about some negative issue.

**Formal and Goal-Directed Talk**

At this time, we would like you and your partner to have a formal conversation to accomplish a particular goal. You may want to persuade one person to do something. Or you may want to spend your time making a decision together. Other examples include talking about class, telling one person how to act, or questioning one person about some topic. Just spend your time accomplishing some goal in a formal conversation.

**Informal and Goal-Directed Talk**

Now, we would like you and your partner to have an informal conversation to accomplish a particular goal. You may want to spend your time making plans. Or you may have a conversation in which one of you asks a favor. Another option would be to request a date. Please talk informally to address some goal.

**Surprising Event Talk**

At this time, we would like you and your partner to talk about a recent and unexpected event that caused you to be more or less certain about some aspect of your relationship. You may want to talk about a surprising event that caused you to be more sure about the nature of your relationship. Perhaps you want to talk about an unexpected behavior that made you question some aspect of your relationship. The recent event that you discuss may be either positive or negative in nature, but it should have changed the level of certainty you had about your relationship.

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**Appendix B**

**Examples of Positive Talk**

**Interval Not Categorized as Relationship Talk**

Couple #35

Female: How's everyone at home?
F: Oh, she did?
M: Yup.
F: Who'd she go with? Oh, she asked a boy, right?
M: Yeah. She said it was fun, I guess.
F: Well, that's good. Has she ever gone before?
M: Heck no.

**Interval Categorized as Relationship Talk**

Couple #49

Male: You know what's positive about our relationship? We are so straightforward with each other.
Female: Mm-hm.
M: Yes, I'm straightforward with you.
F: Okay, okay. What else?
M: What's the one thing you like about— that's what I like about our relationship. What do you like about our relationship?
F: Trust. That's most important to me.
M: You trust me?
F: Yes, I trust you with everything. As you make a smile at me like I shouldn't trust you. That's a nice little grin.

Appendix C

Examples of Negative Talk
Interval Not Categorized as Relationship Talk
Couple #9

Female: I know something serious we can discuss—
Male: No, so as I was saying—
F: You going back to school.
M: Me going back to school? Don't even start with that. That's wrong. I'm working on getting my butt back there. I'm all mad at [the university].
F: Why?
M: Just, like, some of the admissions policies. You know, they're starting to charge for my student loans.

Interval Categorized as Relationship Talk
Couple #37

Female: We don't really have any areas of conflict.
Male: Not really. I don't know. Does it bother you when I study, like, a lot during the week? Does that, like, bother you? I don't think that bothers you, does it?
F: It's not that big of a deal.
M: Yeah.
F: It's not an area of conflict.
M: Right. So, I mean—
F: I can go out without you, it's fine. I'm a big girl.
M: I know. During the week. Let's see. I have no complaints right now.
F: I know. I'm perfect.
M: Oh. You think?

Appendix D

Examples of Surprising Event Talk
Interval Not Categorized as Relationship Talk
Couple #32
Female: The ticket.
Male: Not exactly.
F: It wasn’t surprising? I don’t think it was so surprising.
M: No, I wasn’t surprised, because I was negligently speeding, and saw the dude, got pulled over. I wasn’t surprised at all.
F: Oh.
M: Not unexpected.
F: Except for that all the people around you were speeding too.
M: Why do you bring that up like that? I’m not—I’m not trying to justify it in my mind that I wasn’t going as fast as the others were, like, I was going with the flow of traffic as you learned in driver’s education.

Interval Categorized as Relationship Talk
Couple #8

Female: Honey, you’re a pretty predictable boyfriend. I don’t know. There are little things, but it’s not like—
Male: I found the card you gave me in my backpack the other day.
F: Oh, boy.
M: I took it out and I read it, and it made me realize that you love me, and that I love you, too.
F: You just realized it?
M: Well, I mean it exemplified it even more. That was kind of a nice surprise.
F: Yeah.
M: I was just sitting in class and looking through my backpack, and there it was.

Notes

1. Leanne K. Knobloch is an assistant professor in the Department of Speech Communication at the University of Illinois, and Denise Haunani Solomon is a professor in the Department of Communication Arts and Sciences at the Pennsylvania State University. This research is a portion of the first author’s dissertation conducted under the direction of the second author. It was supported by a University of Wisconsin McCarty Dissertation Award granted to the first author, and a University of Wisconsin Vilas Associate Award to the second author. The authors thank Carolynne Bernard, Dan Brueggeman, Anita Collins, Patricia Costello, Amanda Dobervich, Kate Emmerich, Stephanie Lundberg, Melissa Mueller, Yoonsoo Nam, Jamie Olson, Annie Richert, Nicolle Sallow, Alyssa Trussoni, and Sarah Wang for their assistance with data collection and coding. Address correspondence to Leanne K. Knobloch (Department of Speech Communication, University of Illinois, 244 Lincoln Hall, 702 S. Wright St., Urbana, IL 61801; telephone: 217-333-8913; fax: 217-244-1598; e-mail: knobl@uiuc.edu).

2. Of course, people do not always want to make sense of conversation. Individuals may prefer to maintain ambiguity when the alternative is certainty about an unpleasant outcome (Babrow, 2001; Brashers, 2001). Examining people’s motivations to reduce or retain uncertainty is beyond the scope of our project; instead, we focus on people’s ability to process messages under conditions of uncertainty.
3. Knobloch and Solomon (2003a, 2005) also consider variables from this data set. The analyses reported here are unique, but Knobloch and Solomon (2003a) describe more substantive analyses of the two variables used as covariates in this article (i.e., the measures of coded relationship talk).

4. Bivariate correlations revealed substantial overlap between self and partner uncertainty \( (r = .72, p < .001) \), between self and relationship uncertainty \( (r = .77, p < .001) \), and between partner and relationship uncertainty \( (r = .84, p < .001) \). Hence, we avoided multicollinearity in the tests of our hypotheses by examining self, partner, and relationship uncertainty in separate regression analyses.

5. Although the reliability level of the scale measuring similarity/depth is quite low, comparable \( \alpha \) statistics have emerged in previous work. For example, Hale, Lundy, and Mongeau (1989) reported an \( \alpha \) of .58, and Buller (1984; as cited in Burgoon & Hale, 1987) reported an \( \alpha \) of .70.

6. Variables calculated as proportions typically require an arcsine transformation to stretch the tails of the distribution (Cohen, Cohen, West, & Aiken, 2003). In contrast, our coded relationship talk variable tended to cluster around the low end of the scale, and a square root transformation is usually helpful for adjusting a positive skew. Neither transformation presented a viable solution in this case: An arcsine transformation would have exacerbated the positive skew, and a square root transformation would have exacerbated the nonuniformity of intervals across the proportion’s scale (Cohen & Cohen, 1983). Accordingly, we did not apply either the arcsine transformation or the square root transformation.

7. Because unitizing caused some speaking turns of coded relationship talk to be divided into acts, judges employed a “not applicable” category for acts that did not reference the relationship (e.g., acts that shifted the topic of conversation away from the relationship). Judges agreed that seven acts within larger speaking turns did not constitute relationship talk. In those seven instances, we counted the adjacent acts as two distinct speaking turns. We then adjusted participants’ score for coded relationship talk by adding one additional speaking turn to the denominator of the proportion.

8. A variety of strategies are available for accommodating statistical dependence. One method is to consider the couple as the unit of analysis and average partners’ scores for each variable. Because our hypotheses focus on the unique perceptions of individuals, however, we were hesitant to consolidate scores across partners. A second option is to treat the individual as the unit of analysis and control for effects attributable to couple differences. We decided against this strategy because it would covary the same variation that our hypotheses predict.

We ultimately chose a third alternative that allowed us to consider the individual as the unit of analysis and still retain variation between couples. Specifically, we accommodated the statistical dependence by conducting separate analyses for males and females. Although this strategy increased the number of statistical tests we performed and decreased the power of those tests, we employed it to generate the cleanest picture of the role of relational uncertainty within message processing.

Of course, we examined our measures for sex differences before adopting the split-sample method. Results of independent samples \( t \) tests indicated no statistically significant differences between males and females in this data set.

9. We also tested for an interaction effect on the fourth step by including a term computed as the product of the coded relationship talk measure and relational uncertainty. No statistically significant interaction effects were evident.

10. We measured coded relationship talk as the proportion of speaking turns of coded relationship talk divided by the total number of speaking turns in the conversation. Accordingly, our method examines observers’ judgments of the relative prominence of relationship talk within interaction. A slightly different strategy is to evaluate how observers’ judgments of the sheer amount of relationship talk functions as a
covariate. We pursued this strategy by controlling for the number of speaking turns of coded relationship talk in our tests of Hypothesis 1. Results were similar across the two covariates.

11. Because intimacy is a distal force shaping people’s experience of relational uncertainty (Knobloch & Solomon, 2002b; Solomon & Knobloch, 2001) and their communication about relationship issues (Knobloch & Carpenter-Theune, 2004; Planalp & Benson, 1992; Planalp & Garvin-Doxas, 1994), we also examined the role of intimacy in Hypothesis 1, Hypothesis 2, and Hypothesis 3. Specifically, we conducted a pair of analyses to evaluate whether intimacy amplifies or attenuates the association between relational uncertainty and relational information processing. We employed two proxy indicators of intimacy (i.e., relationship length and chance of marriage) that we reported in the method section to describe our sample.

First, we included intimacy as an additional covariate in the tests of our hypotheses. More specifically, we evaluated our predictions by first controlling for relationship length or chance of marriage. Across six sets of tests (Hypothesis 1, Hypothesis 2, and Hypothesis 3 for both males and females), relational uncertainty continued to be a statistically significant predictor of the dependent variable in the majority of cases. We did find two exceptions to this rule: (a) Relational uncertainty no longer explained additional variance in females’ perceptions of relationship talk when we covaried coded relationship talk and either relationship length or chance of marriage, and (b) relational uncertainty no longer explained additional variance in the extremity of females’ perceptions of relational messages when we covaried chance of marriage. Our interpretation of these results is merely tentative because of the exploratory nature of our tests, but we wonder if intimacy plays a bigger role in relational information processing for females than males.

Second, we evaluated intimacy as a mediator or moderator of the associations that relational uncertainty shares with relational information processing. To that end, we compared the effect sizes for intimacy and relational uncertainty in the regression analyses. Across the six sets of tests, the effect size for relational uncertainty was consistently larger than the effect size for either relationship length or chance of marriage. Also across the six sets of tests, we did not find evidence of an interaction between relational uncertainty and either relationship length or chance of marriage. We interpreted these results to suggest that intimacy neither mediates nor moderates the associations between relational uncertainty and people’s perceptions of relationship talk, the extremity of their relational judgments, or their perceptions of the difficulty of interaction.

References


**Leanne K. Knobloch** (Ph.D., University of Wisconsin–Madison) is an assistant professor in the Department of Speech Communication at the University of Illinois. Her research addresses how communication shapes and reflects people’s understandings of close relationships, particularly with respect to relationship development, relational uncertainty, and interdependence.

**Denise Haunani Solomon** (Ph.D., Northwestern University) is a professor in the Department of Communication Arts and Sciences at the Pennsylvania State University. Her research focuses on relationship negotiation, especially as it relates to communication about challenging facets of interpersonal involvement. Specific issues include how individuals manage power dynamics in romantic relationships and work relationships and how people's perceptions of intimacy are associated with their communication behavior ranging from uncertainty producing to psychologically abusive.