

# Negative Jealousy-Related Emotion Rumination as Consequences of Romantic Partner, Cross-Sex Friend, and Sibling Jealousy Expression

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*Negative jealousy-related emotion and rumination are examined as consequences of a close relational partner's jealousy expression. Specifically, relationship type (i.e., sibling relationships, cross-sex friendships, and dating partners) and three of Guerrero et al.'s (1995) forms of jealousy expression (i.e., distributive communication, integrative communication, and negative affect expression) are compared according to negative jealousy-related emotion and rumination following a hypothetical partner jealousy expression situation. Siblings and dating partners reported experiencing more intense negative emotion than cross-sex friends after partner jealousy expression. Further, participants reported ruminating more after their partners used distributive communication compared with integrative communication or negative affect expression to express jealousy. Emotional intensity did not vary according to type of jealousy expression and rumination did not vary with regard to relationship type. Practical and theoretical implications for the study of negative emotion, rumination, and partner jealousy expression are discussed.*

**Keywords:** *Cross-Sex Friends; Jealousy Expression; Negative Emotion; Rumination; Siblings*

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Jealousy is viewed as an “inherently relational emotion” (Staske, 1999, p. 214). However, an individual’s reaction to a partner’s jealousy expression had escaped extensive scrutiny until recent research identified uncertainty (Bevan, 2004), emotion, and behaviors (Yoshimura, 2004) as jealousy expression consequences. Reactions to partner jealousy expression are important for two reasons: (a) scholars (e.g., Ellis & Weinstein, 1986) suggest that jealousy is negotiated in all close partnerships; and (b) understanding reactions to partner jealousy expression could increase constructive communication by reducing the competitiveness, aggressive communication, and violence that can accompany jealousy expression (Guerrero & Andersen, 1998a). Because one’s own jealousy involves emotional and cognitive components (Pfeiffer & Wong, 1989), this study considers negative jealousy-related emotion and rumination as potential consequences of partner jealousy expression in relation to relational type and jealousy expression type.

### *Relational Jealousy Experience and Expression*

The common conceptualization of jealousy as a perceived or actual threat to the exclusive nature of a romantic relationship (e.g., White & Mullen, 1989) is restrictive because it does not acknowledge nonromantic jealousy across relationships (Bevan & Samter, 2004). We thus define jealousy as “a protective reaction to a perceived threat to a valued relationship, arising from a situation in which the partner’s involvement with an activity and/or another person is contrary to the jealous person’s definition of their relationship” (Hansen, 1991, p. 213). This definition spans relational contexts and implies that the relationship is of value to the jealous person.

Three of Guerrero, Andersen, Jorgensen, Spitzberg, and Eloy’s (1995) interactive jealousy expression methods, which are efforts to either engage in or avoid direct jealousy communication with one’s partner, are relevant: (a) *integrative communication*: direct, nonaggressive expression such as disclosures and reassurances, (b) *negative affect expression*: nonverbal expression such as crying and appearing hurt, and (c) *distributive communication*: direct and aggressive expression including arguing and sarcasm. These jealousy expression types were chosen for three reasons: (1) each is partner directed; (2) each has occurred with relative frequency across various samples (Aylor & Dainton, 2001; Bevan & Lannutti, 2002), meaning that participants can likely recall or imagine similar real-life circumstances; and (3) each should elicit qualitatively different reactions. For example, integrative communication is a positive way to express jealousy whereas distributive communication is “one of the most deleterious communication strategies” (Guerrero & Andersen, 1998b, p. 179). Negative affect expression is neutral because it can be positively or negatively construed depending upon the other jealousy expression methods it accompanies (e.g., Guerrero et al., 1995).

Because relationship aspects accounted for more jealousy experience variance than did personality variables (Bringle & Buunk, 1986), they are important to understanding jealousy experience. Relationship type represents a specific relational characteristic in the present study. Specifically, dating partners (e.g., Aylor & Dainton, 2001), siblings (e.g., Mander, 1991), and cross-sex friends (e.g., Bevan & Samter,

2004) are prone to experience and to express jealousy. Because significantly more people had experienced jealousy in these three relationships than had not (Bringle, 1991), comparisons between them appear particularly relevant to the current study.

#### *Reactions to partner jealousy expression*

According to Guerrero and Andersen (1998b, p. 182), “how the partner and rival respond to the jealous individual’s communication, and how their communication affects the jealous person’s goals, decisions, and behaviors are interesting and important questions that have yet to be addressed.” Indeed, romantic jealousy models (e.g., Guerrero & Andersen, 1998b; Pfeiffer & Wong, 1989) do not detail how one might react to partner jealousy expression, instead only labeling consequences as “outcomes” or “relational consequences.” In response to Guerrero and Andersen’s (1998b) call, this study focuses upon two possible cognitive and emotional reactions to partner jealousy expression: negative jealousy-related emotion and rumination. These variables were selected for three reasons: (a) jealousy experience involves cognition and emotion (Pfeiffer & Wong, 1989); (b) these variables are reactions to situations similar to partner jealousy expression, including conflict (Birditt & Fingerman, 2003) and relational transgressions (Roloff, Soule, & Carey, 2001); and (c) there is a moderate to strong relationship between negative affect and rumination (e.g., McIntosh & Martin, 1992).

One researcher who discussed jealousy expression reactions is Staske (1999, p. 233), who found that positive discussions of jealousy between cross-sex friends can “provide a particularly useful resource in the ongoing construction of romantic relational identities and the romantic bond.” Recently, Yoshimura (2004) found a number of responses to romantic partner jealousy expression, including positive and negative emotions, cynicism, and various communicative responses. Finally, Sheets, Fredendall, and Claypool (1997) found responses to partner jealousy expression that included reassurances, ignoring or making light of partner jealousy, accenting attraction to the rival, and explaining to the partner. These findings strongly suggest that studying reactions to relational partner jealousy expression will be fruitful for understanding the negotiation of jealousy expression in close relationships. Further, extending Yoshimura’s (2004) research by examining negative jealousy-related emotion in a variety of relational contexts and in association with rumination seems warranted.

#### *Negative Jealousy-Related Emotion*

Negative jealousy-related emotion is defined as an affect-laden state that is aversive and psychologically stressful. Birditt and Fingerman (2003) reported that negative emotion could be a reaction to interpersonal tension. Thus, negative emotion might similarly arise from partner jealousy expression. Further, emotional reaction is a primary aspect of one’s own jealousy experience (Pfeiffer & Wong, 1989). Specifically, jealousy involves an “aggregate of primary emotions” (Hupka, 1984, p. 142), including anxiety, fear, insecurity, anger, sadness, envy, guilt, sexual arousal, and frustration (Bringle, 1991; White & Mullen, 1989; Zammuner & Fischer, 1995). Further, Pfeiffer

and Wong's (1989) measure of emotional jealousy includes the negative emotions of envy, anxiety, discomfort, anger, jealousy, fear, insecurity, worry, and upset.

When considering which specific emotions might comprise a negative jealousy-related emotion reaction, seven emotions seem particularly relevant: sadness, anger, frustration, guilt, fear, insecurity, and surprise. Ellsworth and Smith (1988) found that anger, sadness, fear, guilt, and surprise levels did not differ according to the cognitive appraisals of certainty (which should be used to appraise partner jealousy expression) and attentional activity. Further, anger, fear, guilt, and sadness combined with at least one other unpleasant emotion more than 25% of the time that they were experienced (Ellsworth & Smith, 1988).

In terms of relational types, research has not provided a clear-cut prediction as to whether cross-sex friends, dating partners, or siblings will experience more intense negative jealousy-related emotion in relation to partner jealousy expression. Cross-sex friends may have an intense negative emotional reaction because they are not used to direct jealousy expression (Aune & Comstock, 1991). Dating partners might possess strong negative jealousy-related emotion because a rival threatens their exclusive relationship (e.g., Ellis & Weinstein, 1986). Conversely, siblings could experience strong negative jealousy-related emotion because they may have had to deal with unresolved jealousy throughout their relationships (Ross & Milgram, 1982). As such, hypothesis one predicts:

- H1: An individual's intensity of negative jealousy-related emotion will differ according to relational context (i.e., whether one's cross-sex friend, dating partner, or sibling expresses jealousy).

In terms of jealousy expression, distributive communication and negative affect expression were both positively related to emotional jealousy (Guerrero et al., 1995). However, integrative communication shared a weak, though significant, positive relationship with emotional jealousy. Logically, these relationships can be extrapolated to understand how different types of partner jealousy expression could result in different levels of negative jealousy-related emotion. H2 thus predicts:

- H2: Partner use of distributive communication or negative affect expression result in more intense negative jealousy-related emotion than will partner use of integrative communication.

### *Rumination*

The second proposed consequence of partner jealousy expression is rumination, or mulling, about the interaction. Rumination involves "conscious thinking directed toward a given object for an extended period of time" and occurs as the result of an unpleasant situation (Gold & Wegner, 1995, p. 1246). Rumination is unintentional, is difficult to eliminate, is cognitively dominant, and is related to other cognitions, emotions, and behaviors (Martin & Tesser, 1996). Martin and Tesser (1989) proposed a theory of goal driven rumination, which assumes that thoughts and actions are goal directed and an inability to attain a goal would stimulate rumination. Such rumination will exist until the individual either reaches the frustrated goal or disengages from

it (Martin & Tesser, 1989). The theory also assumes that goals are hierarchically structured, and that individuals proceed through a relatively specific behavior sequence after an important goal is frustrated. This sequence includes repetition, problem solving, end-state thinking, negotiation, and learned helplessness.

Research has examined rumination as a correlate and consequence of negative experiences, including serial arguments (Johnson & Roloff, 1998), a major relational problem (Cloven & Roloff, 1991), and relational transgressions (Roloff et al., 2001). In addition, rumination is positively associated with negative affect (e.g., McCullough et al., 1998). In relation to the present study, Carson and Cupach (2000) note that jealousy about a rival can stimulate ruminative thoughts. Such a relationship between jealousy and rumination is consistent with the theory of goal-driven rumination because jealousy can be a frustrated goal.

Extending the above reasoning in accordance with the theory of goal-driven rumination, situations where one's partner expresses jealousy could also be an unpleasant event that threatens the relationship. In terms of relational type, because cross-sex friends often avoid jealousy expression (Aune & Comstock, 1991), when one's cross-sex friend directly expresses jealousy, it will likely be an uncomfortable event about which the individual will ruminate. In contrast, siblings and dating partners should be accustomed to jealousy expression and thus may not mull about the event to the same degree as cross-sex friends. Indeed, dating partners were more likely than friends to express jealousy (Aune & Comstock, 1991) and siblings negotiate rivalry throughout their lifespan (Bedford, 1989). Hypothesis three thus states:

H3: Expression of jealousy from an individual's cross-sex friend will result in more rumination than jealousy expression from one's sibling or dating partner.

A number of communication tactics are also related to rumination. Cloven and Roloff (1991) found that distributive communication exacerbated mulling, whereas integrative communication alleviated perceptions of problem seriousness. Further, Carson and Cupach (2000) reported that ruminating about jealousy predicted the use of distributive communication and negative affect expression, whereas jealousy rumination and integrative communication were not related. Combining these findings with the positive relationship between rumination and negative affect (McCullough et al., 1998), rumination and negative affect expression should share a relationship as strong as the association between distributive communication and rumination. As such, hypothesis four posits:

H4: An individual will ruminate more if another person expresses jealousy using distributive communication or negative affect expression compared to integrative communication.

Finally, a research question explores the possible interaction between relationship type and jealousy expression type on negative jealousy-related emotion and rumination:

RQ: Is there an interaction between relationship type and jealousy expression type on (a) negative jealousy-related emotion and (b) rumination?

## Method

### *Participants and Procedure*

Participants (total  $N = 364$ , final  $N = 352$ ) taking communication courses at a large, southern university responded to one of three versions of a questionnaire distributed through random assignment.<sup>1,2</sup> College students are an appropriate sample because cross-sex friendships are most common in young adulthood (Reeder, 2000) and researchers have called for sibling research in this age group (e.g., Dunn, 1985). The final sample was 60% female and averaged 21 years ( $SD = 3.30$ ,  $range = 18-57$ ). Participants were White (89.2%), Black/African American (6.8%), Asian (2.6%), in the other category (.9%), Native American (.3%), and Hispanic (.3%). Participants' relationships averaged almost nine years in length ( $SD = 104.53$ ,  $range = two weeks-684 months$ ). On a seven-point, Likert-type scale (1 = not at all close/satisfied, 7 = very close/satisfied), respondents were in close ( $M = 5.95$ ,  $SD = 1.01$ ) and satisfying relationships ( $M = 5.67$ ,  $SD = 1.30$ ). Further, 43.5% participants were in daily contact with their partners, 38.4% were in weekly contact, 14.5% were in monthly contact, 2.3% contacted their partners several times a year, and .9% were in contact with their partners once a year or less.<sup>3</sup>

For dating partner respondents ( $n = 114$ ), 1.8% were single and not dating, .9% were single and dating many individuals, 7.9% reported being in nonexclusive relationships, 36% were in exclusive relationships for less than one year, 46.5% were in exclusive relationships of more than one year, 7% individuals reported being engaged, and .3% did not respond. Those reporting being single and not dating or dating many individuals were excluded from the testing of the hypotheses and research question. For cross-sex friend respondents ( $n = 118$ ), 18% reported that their friends were former romantic partners, 70% said they were not former romantic partners, and 12% were unsure.<sup>4</sup> Sixty-three percent of respondents reported never engaging in sexual behavior with their friends, 8% indicated one instance of sexual behavior, 15% reported that sexual behavior had occurred two to four times, and 14% indicated that sexual behavior had happened more than five times. Sibling participants ( $n = 120$ ) averaged two siblings ( $SD = 1.14$ ,  $range = 1-6$ ), with 91% reporting on full siblings (i.e., biologically sharing both parents), 4% reporting on half siblings (i.e., biologically sharing one parent), 3% reporting on adopted siblings, and 2% reporting on stepsiblings (i.e., sharing parents through marriage). In terms of current living situation, 49% lived with their siblings when not in school, 39% did not live with their siblings, and 6% either lived with their siblings year round or indicated "other."

Students received required research credit for participating and completed the questionnaire in groups of 10 to 30 outside of or during class time. Upon giving informed consent, participants filled out the instrument (which took approximately 10 to 15 minutes), turned it in, received a written study description and were thanked and dismissed.

*Research Design*

A 3 (relational context: cross-sex friend, sibling, dating partner) X 3 (jealousy expression: distributive, integrative, negative affect expression) factorial design was employed. Participants were nested within levels of each factor. Questionnaires were randomly distributed. Instructions asked participants to consider either their closest present cross-sex friends (i.e., a member of the opposite sex to whom the participant shares a close relationship and who is not either a family member or current romantic partner), closest present dating partners (i.e., someone the participant has dated for one week or more, including dating once or twice), or siblings closest in age to them (i.e., a full brother or sister of the sibling who shares the same biological mother and father as the participant, consistent with Bedford, 1989). If participants did not have full siblings, they thought of half, step, or adopted siblings instead. If respondents received a questionnaire about a relationship in which they were not currently involved, they told the principal investigator and randomly received a different relational context survey. Thus, a two-step random assignment procedure was utilized. Switching questionnaires only occurred for approximately 10% of the sample, most often with the dating partner conditions.

Hypothetical scenarios were used to measure participants' immediate and direct responses to the event of interest and to provide control over the situations that participants consider (Knobloch & Solomon, 2002).<sup>5</sup> The sibling and cross-sex friend scenarios are adapted from Bringle (1991). The dating scenario is adapted from numerous romantic jealousy scenarios (e.g., Bevan & Samter, 2004; Hansen, 1982). The sibling scenario is unique because it is the parents' behavior that arouses the partner's jealousy instead of participants' own actions. However, each scenario is believed to represent jealousy (rather than envy) for three reasons: (a) each involves participants' interaction with a third party; (b) the sibling scenario better represents Neubauer's (1982) definition of jealousy (i.e., "resentment of love the third person receives or expects," p. 124) than his view of envy (i.e., "the awareness of superior attributes of others or an idealization of these attributes," p. 123); and (c) scholars frequently employ the terms "jealousy" and "rivalry" interchangeably (e.g., Mander, 1991).

Each scenario used identical wording to operationalize the jealousy message. Because no known researcher had utilized Guerrero et al.'s (1995) jealousy expression types in hypothetical scenarios, the authors developed the wording for each type using Guerrero and Andersen's (1998b) definitions and examples. To select the most representative positive, neutral, and negative messages, messages were written and pilot-tested for Guerrero et al.'s (1995) six interactive jealousy expression types. Pilot test results verified that the distributive, negative affect expression, and integrative jealousy expression methods best represented negative, neutral, and positive ways to express jealousy, respectively. Further, the overall scenarios were judged to be highly realistic and relatively frequent in participants' own lives.<sup>6</sup> Two manipulation checks in the main questionnaire also ensured that participants correctly identified relational context and jealousy expression method.

*Investigation Measures**Scenario realism, frequency, and likelihood of ever occurring*

Three items from Bevan (2003) each assessed situation realism (e.g., How realistic do you think this situation is?) and frequency of occurrence (e.g., How often has this situation occurred in your own relationship?) using seven-point, Likert-type scales (e.g., 1 = not at all realistic, 7 = very realistic; realism  $M = 5.12$ ,  $SD = 1.52$ ,  $\alpha = .86$ ; frequency  $M = 2.84$ ,  $SD = 1.53$ ,  $\alpha = .89$ ). Two items assessed the degree to which each scenario ever occurred in participants' own lives using a seven-point, bipolar response scale (e.g., I have encountered a situation like this at least once in my own relationship; 1 = strongly disagree, 7 = strongly agree,  $M = 4.27$ ,  $SD = 2.04$ ,  $\alpha = .90$ ). Composite items were created for the realism, frequency, and "ever occurred" variables.

*Jealousy message realism and valence*

Two semantic differential items (e.g., 1 = very difficult to imagine, 7 = very easy to imagine) assessed jealousy message realism. Six semantic differential items measured message valence (e.g., 1 = completely negative, 7 = not at all negative). Composite realism ( $M = 4.69$ ,  $SD = 1.62$ ,  $\alpha = .87$ ) and message valence variables ( $M = 3.52$ ,  $SD = 1.37$ ,  $\alpha = .94$ ) were created for data analysis.

*Negative jealousy-related emotion*

Negative jealousy-related emotion was measured using seven semantic differential items (e.g., 1 = not sad at all, 7 = very sad): sadness, anger, frustration, guilt, fear, insecurity, and surprise. An *alpha* of .71 was observed without the surprise item. Because the six-item emotion scale was reliable and a single variable has successfully operationalized emotional jealousy previously (e.g., Bevan & Lannutti, 2002), a single variable was created ( $M = 3.76$ ,  $SD = 1.07$ ).

*Rumination*

Cloven and Roloff's (1991) five-item, seven-point semantic differential scale was used to assess rumination (e.g., 1 = would not worry at all about the interaction, 7 = would worry very much about the interaction). A composite variable was computed for analysis ( $M = 4.73$ ,  $SD = 1.22$ ,  $\alpha = .88$ ). Rumination and negative jealousy-related emotion were moderately correlated ( $r = .47$ ,  $p < .001$ ).

**Results***Preliminary Analyses**Scenario realism, frequency, and likelihood of ever occurring*

Both realism level ( $t [351] = 13.88$ ,  $p < .0001$ ,  $r = .60$ ) and the "ever occurred" level ( $t [351] = 2.47$ ,  $p < .05$ ,  $r = .13$ ) for the scenarios were reported at a rate significantly higher than the 4.0 scale midpoint. A univariate ANOVA detected a significant

effect for realism ( $F [8, 343] = 2.34, p < .05, \eta^2 = .05$ ). Tukey HSD post hoc tests found that the dating partner/integrative communication situation was significantly more realistic than the cross-sex friend/negative affect expression situation. A univariate ANOVA also revealed a significant effect for the “ever occurred” variable ( $F [8, 343] = 2.42, p < .05, \eta^2 = .05$ ). Tukey HSD post hoc tests found that the sibling/distributive communication situation was significantly more likely to have occurred at least once compared with the sibling/integrative communication situation. A univariate ANOVA did not detect significant differences across experimental condition for frequency of occurrence ( $F [8, 343] = 1.49, p = .16, \eta^2 = .03$ ).<sup>7</sup>

#### *Jealousy message realism and valence*

To determine if the jealousy message realism reached an acceptable level and did not significantly differ across message type, a one-sample  $t$  test was conducted. The jealousy message realism variable was significantly more realistic than the 4.0 scale midpoint ( $t [344] = 8.03, p < .001, r = .40$ ). In addition, a univariate ANOVA with jealousy message realism as the dependent variable and experimental condition as the fixed factor revealed no significant differences ( $F [8, 336] = 1.77, p = .08, \eta^2 = .04$ ).

A univariate ANOVA was then conducted on the nine conditions to ensure that the jealousy message valence significantly differed as planned. A significant main effect was observed ( $F [8, 343] = 8.39, p < .0001, \eta^2 = .16$ ) and Tukey HSD post hoc tests revealed that the distributive conditions were significantly more negative than the integrative conditions. The negative affect expression conditions did not significantly differ in valence from one another but did not form a distinct subset from the other conditions. This unexpected “blending” of conditions was acceptable because: (a) the neutrality inherent in negative affect expression could potentially lead to differential interpretations for different individuals; and (b) univariate ANOVA and Tukey HSD post hoc analyses using jealousy message composite variables revealed the anticipated differences ( $F [2, 349] = 28.14, p < .001, \eta^2 = .14$ , distributive composite  $M = 2.96, SD = 1.11$ , negative affect expression composite  $M = 3.41, SD = 1.20$ , integrative composite  $M = 4.20, SD = 1.50$ ).

#### *Data Analysis*

Planned contrast techniques were employed to test the hypotheses. Rosenthal and Rosnow (1985) recommend planned contrasts to omnibus tests when focused predictions are put forth and their basic computation for planned comparison of means (with the unequal  $n$  per condition correction) is utilized. To determine the residual for each hypothesis test, univariate ANCOVAs (with the realism and “ever occurred” variables as covariates) were conducted for each hypothesis. The research question was tested via two univariate ANCOVAs with relationship type and jealousy expression type as the fixed factors and negative emotion and rumination as the dependent variables. In all analyses, neither of the covariates was significant. All power estimates are for medium effects.

**Table 1** Means and Standard Deviations for Relationships Between Relational Context, Jealousy Expression Type, and Negative Jealousy-related Emotion

Relational Context	Negative Jealousy-related Emotion
Sibling	3.90 <sup>b</sup> (1.02)
Cross-Sex Friend	3.40 <sup>a</sup> (1.03)
Dating Partner	4.00 <sup>b</sup> (1.06)
Jealousy Expression Type	
Integrative Communication	3.62 (1.19)
Negative Affect Expression	3.80 (.988)
Distributive Communication	3.87 (1.01)

*Note.*  $N = 348$ . Within columns, means sharing superscript letters do not significantly differ at  $p < .05$ . Means reported here for relational context and jealousy expression type are from results without the realism and “ever occurred” covariates. Higher values indicate more emotional intensity on a seven-point scale.

### *Hypothesis one*

Hypothesis one predicted that negative jealousy-related emotion intensity would vary according to relational context. Based on examination of means, contrast coefficients were assigned (siblings = -1, dating partners = -1, cross-sex friends = 2). With a residual of 1.07, the planned comparison was significant ( $F [2, 346] = 25.30$ ,  $p < .001$ ,  $r = .26$ ). Consistent with H1, siblings and dating partners reported experiencing significantly more intense emotion in response to partner jealousy expression than cross-sex friends (see Table 1).

### *Hypothesis two*

The second hypothesis proposed that partner use of distributive communication or negative affect expression would be associated with an individual's more intense level of negative jealousy-related emotion than partner use of integrative communication. Contrast coefficients were assigned (distributive = -1, negative affect expression = -1, integrative = 2). With a residual of 1.13, the planned comparison was not significant ( $F [2, 346] = 3.88$ ,  $p > .05$ ,  $r = .11$ ). The data were not consistent with hypothesis two (see Table 2).

### *Hypothesis three*

Hypothesis three predicted that cross-sex friend jealousy expression would be associated with one's increased rumination compared with sibling or dating partner jealousy expression. Contrast coefficients were assigned (siblings = -1, dating partners = -1, cross-sex friends = 2). With a residual of 1.48, the planned comparison was not significant ( $F [2, 346] = 1.14$ ,  $p > .05$ ,  $r = .06$ ). Thus, the data were not consistent with H3 (see Table 1).

### *Hypothesis four*

H4 stated that partner use of either distributive communication or negative affect expression when expressing jealousy would be related to one's greater rumination

**Table 2** Means and Standard Deviations for Relationships Between Relational Context, Jealousy Expression Type and Rumination

Relational Context	Rumination
Sibling	4.61 (1.32)
Cross-Sex Friend	4.84 (1.12)
Dating Partner	4.75 (1.19)
Jealousy Expression Type	
Integrative Communication	4.50 <sup>a</sup> (1.25)
Negative Affect Expression	4.84 <sup>b</sup> (1.24)
Distributive Communication	4.85 <sup>b</sup> (1.13)

*Note.*  $N = 348$ . Within columns, means sharing superscript letters do not significantly differ at  $p < .05$ . Means reported here for relational context and jealousy expression type are from results without the realism and “ever occurred” covariates. Higher values indicate greater rumination on a seven-point scale.

compared with partner use of integrative communication. Contrast coefficients were assigned (distributive =  $-1$ , negative affect expression =  $-1$ , integrative =  $2$ ). With a residual of 1.47, the planned comparison was significant ( $F [2, 346] = 5.93, p < .01, r = .13$ ). Consistent with H4, those whose partners expressed jealousy via distributive communication and negative affect expression reported that they would experience significantly more rumination compared with respondents whose partners used integrative communication (see Table 2).

### Research question

The research question explored the interaction between relationship type and jealousy expression type on negative jealousy-related emotion and rumination. The interaction was not significant for either negative jealousy-related emotion ( $F [4, 337] = 1.13, p = .34, \eta^2 = .10, power = .36$ ) or rumination ( $F [4, 337] = 2.30, p = .06, \eta^2 = .03, power = .67$ ). The negative jealousy-related emotion interaction means ranged from 3.29 to 4.24 and the rumination interaction means ranged from 4.42 to 5.23. The realism (emotion  $F [1, 337] = .35, p = .55, \eta^2 = .00, power = .09$ , rumination  $F [1, 337] = 1.29, p = .26, \eta^2 = .00, power = .21$ ) and “ever occurred” (emotion  $F [1, 337] = 1.67, p = .20, \eta^2 = .00, power = .25$ , rumination  $F [1, 337] = .46, p = .50, \eta^2 = .00, power = .10$ ) covariates were not significant.

### Discussion

Rumination and negative jealousy-related emotion were both consequences of partner jealousy expression and differed in amount and intensity according to relational context or jealousy expression type. These findings can thus be combined with Bevan (2004, 2006) and Yoshimura (2004) in providing a preliminary picture of an individual's emotions, cognitions, and behaviors after a close relational partner communicates jealousy. In addition, they contribute to theoretical knowledge regarding emotion and rumination in close partnerships. Findings and implications are discussed below.

*Negative Jealousy-related Emotion*

Consistent with Yoshimura's (2004) findings, participants reported experiencing moderate negative jealousy-related emotion as a consequence of partner jealousy expression. Moreover, when participants' siblings and dating partners hypothetically expressed jealousy, more intense negative emotion was reported compared with cross-sex friend jealousy expression (H1). These findings are consistent with Dunn and McGuire's (1992) finding that children experience more anger toward their siblings than toward their other peer relationships. Further, individuals may experience a negative emotional reaction to dating partner jealousy expression because such expression implies that the individual is dishonest or deceiving (Ellis & Weinstein, 1986). Although Gaines et al. (1998) noted that friendships involve moderate-to-high levels of emotional intimacy, little is known about specific negative emotional reactions to jealousy in cross-sex friendships. Clearly, the relationship between relational context and jealousy expression deserve further attention in research on emotional reactions in close relationships.

For H2, we detected no differences in an individual's reported negative jealousy-related emotional intensity based on partner jealousy expression type. Although Guerrero and Afifi (1999) found that jealousy-related emotion intensity predicted distributive communication, this relationship does not seem to extend to one's negative emotional reaction to partner jealousy expression. Because avoidance is a prevalent jealousy expression strategy, perhaps any direct partner jealousy expression results in one's experience of negative emotion. An alternate explanation involves Ellsworth and Smith's (1988) finding regarding negative emotion and human agency appraisal (i.e., whether self or other was responsible or in control). Specifically, other-agency situations were associated with more anger and less guilt than self-agency situations. Perhaps participants appraised the current jealousy situation in terms of human agency. Thus, conceptualizing negative emotion unidimensionally may not account for the differential emotional experiences that might exist. Overall, future research should examine negative emotion as both a unidimensional and multidimensional concept. However, H2's low power levels could also explain the null findings.

In general, our findings highlight the importance of relationship type in negative emotion intensity in response to partner jealousy expression. This knowledge allows individuals who seek to prevent partners' negative emotional reactions as they express jealousy to tailor their messages to their specific relationship type. Such information also illustrates the complex nature of jealousy expression in different types of relationships. Future research should attempt to delve into specific emotional reactions to partner jealousy expression, including both negative and positive emotions (consistent with Fitness & Fletcher, 1993).

*Rumination*

Rumination was a fairly strong consequence to partner jealousy expression; the mean was significantly higher than the 4.0 scale midpoint ( $t [350] = 11.27, p < .001$ ,

$r = .52$ ). As such, our results broaden Carson and Cupach's (2000) argument that jealousy within romantic relationships is a frustrated goal that stimulates rumination in the goal-driven theory of rumination. Despite the relative strength of rumination as a partner jealousy expression consequence, H3 found that relationship type did not lead to differing amounts of rumination in response to partner jealousy expression. Counter to the belief that direct partner jealousy expression would create rumination between cross-sex friends because it was unexpected (Aune & Comstock, 1991), individuals across relational types reported moderate-to-high amounts of rumination after jealousy was expressed. The direct nature of the jealousy expression might have been a more important consideration for participants than the type of relationship. Further, H3's low power levels might account for the null findings.

Overall, H3's results are of value because most rumination research either focuses upon one relationship (e.g., Johnson & Roloff, 1998) or does not examine relationships (e.g., Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999). Thus, little is known about the effect of relationship type on rumination. Whether the nonsignificant relationship detected for H3 extends to other situations that involve rumination such as relational transgressions (Roloff et al., 2001) and conflict (Cloven & Roloff, 1991) is unknown and should be addressed in the future.

As predicted, H4 found that, when a partner used distributive communication or negative affect expression to express jealousy, the participant would report ruminating more compared with a partner's use of integrative communication. Thus, how one's partner expresses jealousy does seem to play a role in how much an individual ruminates about the event. The influence that communicative quality has on rumination is consistent with Cloven and Roloff's (1991) research about roommates in conflict situations. Our rumination findings suggest that communication, rather than relationship type, plays a more significant role in how much an individual ruminates after a partner expresses jealousy. Further, H4's results support the relationship between distributive communication and rumination (e.g., Carson & Cupach, 2000; Cloven & Roloff, 1991).

In sum, the rumination findings replicate and extend the important link between jealousy and rumination established by Carson and Cupach's (2000) study. Future research should examine jealousy expression and other rumination variables, including controllability of negative emotions (e.g., Nolen-Hoeksema & Jackson, 2001), perceived resolvability of the issue (e.g., Johnson & Roloff, 1998), or perception of problem seriousness (e.g., Cloven & Roloff, 1991).

### *Limitations and Conclusions*

A number of limitations are present in the current study. First, this research did not examine both relational partners or evaluate interaction sequences and patterns. Thus, a truly realistic depiction of one individual's reaction to partner jealousy expression was not assessed, limiting the study's external validity. Similarly, the use of hypothetical scenarios can reduce external validity. However, the current scenarios were significantly more realistic than the scale midpoint and participants stated that

similar situations had occurred in their own relationships at a rate significantly higher than the scale midpoint. In addition, numerous benefits to hypothetical jealousy scenarios exist (e.g., Bringle & Buunk, 1986) and responses to scenarios do correspond to similar real-life events (Applegate 1980a, b). Overall, however, these findings are only meaningful and generalizable to the extent that the scenarios and participant responses accurately represent actual cognitions, emotions, and behaviors (Knobloch & Solomon, 2002).

A second limitation involves the specific scenario language. The cross-sex friend scenario specifies that the participant voluntarily spends time with a new cross-sex friend, whereas the dating partner scenario indicates that the respondent must spend time with a potential dating partner because of school or work. Thus, differences in the extent to which these two relationships are voluntary may exist and could represent an alternate explanation for our findings. Finally, whereas the cross-sex friend and dating partner situations both characterized the participant as the jealous target whose action lead to the partner becoming jealous, the sibling scenario shifted this view to one where the parents' behavior instead causes the jealousy. These differing perspectives may also have affected our present results, though the similarities between the three situation's jealousy manipulations were clearly detailed in the method section.

In conclusion, rumination and negative jealousy-related emotion each arose in response to a close partner's hypothetical jealousy expression. Rumination findings indicate that jealousy expression serves as an antecedent of rumination in addition to a correlate. Negative jealousy-related emotion also occurred after a partner expressed jealousy and varied by relational type. Future research should explore how these and other reactions to partner jealousy expression are managed and communicated by the relational partner. In other words, the current project's findings must be extended to include not just individuals' cognitive and emotional reactions but also the way in which they communicate this reaction.

## Notes

- [1] These data are part of a larger study conducted by the first author.
- [2] Of the original sample ( $N = 364$ ), six people incorrectly answered the relational context manipulation check item. Further, five individuals reported being either homosexual or bisexual and one respondent reported on a bisexual partner. Only heterosexual individuals and those with heterosexual partners were retained because there were not a sufficient number of bisexual and homosexual individuals to use as a comparison group.
- [3] A multivariate analysis of variance examining differences in relationship length, closeness, satisfaction, and frequency of contact in relation to relationship context detected a significant effect ( $Wilks' \lambda [8, 688] = .18, p < .0001, \eta^2 = .58$ ); specifically for relationship length ( $F [2, 347] = 641.42, p < .0001, \eta^2 = .79$ ), frequency of contact ( $F [2, 347] = 54.11, p < .0001, \eta^2 = .24$ ), and closeness ( $F [2, 347] = 17.01, p < .0001, \eta^2 = .09$ ). Relationship satisfaction did not significantly differ by relationship context ( $F [2, 347] = 2.60, p = .08, power = .52$ ). Tukey HSD post hoc tests revealed that the three relationship contexts significantly differed from another in terms of relationship length (dating partners  $M = 20.59, SD = 19.59$ , cross-sex friends  $M = 61.07, SD = 51.95$ , siblings  $M = 233.50, SD = 62.86$ ).

Further, dating partners were in significantly more frequent contact and were significantly closer (contact  $M = 1.20$ ,  $SD = .446$ , closeness  $M = 6.38$ ,  $SD = .849$ ) than either cross-sex friends (contact  $M = 1.94$ ,  $SD = .791$ , closeness  $M = 5.75$ ,  $SD = .991$ ) or siblings (contact  $M = 2.17$ ,  $SD = .882$ , closeness  $M = 5.72$ ,  $SD = 1.05$ ). Satisfaction levels did not differ by relational context (dating partners  $M = 5.86$ ,  $SD = 1.26$ , cross-sex friends  $M = 5.70$ ,  $SD = 1.20$ , siblings  $M = 5.48$ ,  $SD = 1.41$ ).

- [4] To ensure that there were no differences in emotion and rumination levels according to whether the cross-sex friend was a former romantic partner or not, univariate ANOVAs were conducted for each dependent variable. Results indicated that levels of emotion ( $F [2, 114] = .38$ ,  $p = .68$ ,  $power = .11$ ) and rumination ( $F [2, 115] = 1.66$ ,  $p = .20$ ,  $power = .34$ ) did not significantly differ according to former romantic status of participants' cross-sex friends. Thus, all cross-sex friend participants were retained for hypothesis and research question testing.
- [5] Please contact the first author for hypothetical scenario content.
- [6] For more details about the two pilot studies, please contact the first author.
- [7] For means and standard deviations for the jealousy scenarios and jealousy expression messages, please either refer to Tables 3 and 4 in Bevan (2004) or contact the first author.

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