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Abstract

In a behavioral observation study with dating couples, we examined (a) how attachment orientations predict humor use and (b) how people respond to their partners' use of humor. Couples were videotaped while trying to resolve a relationship conflict. Each discussion was rated on several theoretically relevant dimensions. Highly avoidant individuals used more aggressive humor and less affiliative humor during their discussions, whereas highly anxious individuals used more self-defeating humor. Individuals also tailored their humor use to partners who were highly anxious and distressed. Aggressive humor was received more negatively by partners who sought more care. Affiliative humor was favorably received, especially when partners were more distressed, whereas self-defeating humor elicited negative responses from highly distressed partners. Both highly anxious and avoidant individuals reacted unfavorably when they were the recipients of the humor styles they used most often. The implications of these results for our understanding of relationships and humor are discussed.

Keywords

humor, conflict, attachment, close relationships, social interaction

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The importance of humor for personal and relational well-being has long been recognized by psychologists (Eysenck, 1942; Freud, 1905) and laypersons alike. A glance at personal ads or online dating websites quickly reveals that a sense of humor is one of the most desirable characteristics in a partner, and displaying a good sense of humor is one of the best ways to attract a mate (Buss, 1988). Given the value of humor in potential romantic partners, one might expect that it would be associated with favorable relationship outcomes. Indeed, strangers who share a humorous experience during initial encounters feel closer to each other than do strangers who share a playful yet nonhumorous experience (Fraley & Aron, 2004).

Within established relationships, humor is also associated with many positive outcomes. For example, both wives and husbands in long-term marriages consider a sense of humor as one of the most important ingredients for a stable and satisfying marriage (Lauer, Lauer, & Kerr, 1990), the use of greater self-reported own and partner benign humor predicts higher relationship satisfaction (De Koning & Weiss, 2002; Ting-Toomey, 1983), and humorous remarks in the form of “inside jokes” are associated with increased intimacy, stronger feelings of belongingness, and greater cohesiveness (Ziv

& Gadish, 1989). Humor can also stabilize ties between partners during conflicts. Krokoff (1991), for example studied couples experiencing work stress and videotaped them while they tried to resolve a recurring relationship disagreement. Greater humor lessened the aversiveness of the conflicts by facilitating the expression of negative emotions. And if benign humor is reciprocated during problem-solving discussions, marital satisfaction tends to improve (Carstensen, Gottman, & Levenson, 1995).

Humor, however, is not always a boon to relationship functioning. Bippus (2000) found that romantic partners occasionally use humor in attacking or overbearing ways. Married couples report being less satisfied with their marriages when they or their partners use potentially hurtful

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forms of humor, such as sarcasm (Alberts, 1990; De Koning & Weiss, 2002). Moreover, individuals involved in less satisfying dating relationships report higher levels of negative humor to express hostility in both conflictual and pleasant situations (Butzer & Kuiper, 2008). In a recent behavioral observation study, people who reported higher relationship quality had partners who used less aggressive and more affiliative humor during conflict discussions (Campbell, Martin, & Ward, 2008). These individuals also reported increased closeness and better conflict resolution immediately after the discussions when their partners used less aggressive and more affiliative humor.

In sum, the varying effects of humor on relationship outcomes underscore its multifaceted nature and highlight the need to clarify the specific interpersonal functions that different types of humor serve in close relationships. Our study, therefore, had two major aims. First, informed by attachment theory (Bowlby, 1969, 1973, 1980), we examined stable dispositions (i.e., attachment orientations) that might explain how certain people *use* humor in tactically different ways when trying to meet their own and their partners' relational needs. Second, we examined how people *respond* to different types of humor. Specifically, we adopted a person-by-situation approach to identify the interpersonal situations in which different forms of humor are most detrimental or beneficial to relationship outcomes. Because humor is fundamentally a social process, the interpersonal effects of different humor styles should transpire most clearly when attributes of the humor recipient (such as his or her emotional states or dispositional characteristics) are most relevant to the expression of the particular humor style used.

Humor Styles

According to a functional model of humor styles developed by Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003), humor differs in the extent to which it is (a) benign or detrimental to personal and relational well-being and (b) directed at the self versus at others (see also Craik & Ware, 1998). Other-directed, benevolent humor is termed *affiliative humor*. Martin et al. (2003) suggest that affiliative humor is tolerant (affirming of the self and others) and often used to enhance relationships. People who score high on this dimension use humor to strengthen bonds with others and to increase others' well-being or to reduce their tension/discomfort. They may do so by saying witty things, engaging in good-natured teasing, or cracking "inside" jokes. *Aggressive humor* is also other-directed, but it reflects a more negative view of others. Aggressive humor involves hostile or cruel use of humor to enhance the self at the expense of others, without regard for its impact on them (Martin et al., 2003). People who score high on this dimension use humor to belittle or "put down" others, even though it may be masked as playful fun. They may also use sarcasm, cynicism, or teasing to manipulate others via implied threats.

Humor can also be targeted at the self. Self-directed humor that is benign and indicative of a positive self-view is termed *self-enhancing humor*. People who score high on this dimension have a cheerful outlook and maintain a humorous perspective when they are distressed (Martin et al., 2003).¹ Self-directed humor that is less beneficial and reflects a negative self-view is termed *self-defeating humor*. People who score high on this dimension try to enhance relationships with others at their own expense by making self-disparaging comments or laughing along with others while they are being ridiculed. Individuals who use self-defeating humor tend to ingratiate themselves to others to gain their reassurance by saying or doing funny things that make them look foolish. This form of humor may also be used to repress one's negative emotions or to avoid dealing with conflict. Although self-defeating humor can be amusing, its excessive use is unhealthy because it originates from low self-esteem and emotional neediness (Fabrizi & Pollio, 1987). Indeed, greater self-reported use of self-defeating humor predicts poorer well-being and less satisfaction with social support (Martin et al., 2003).

Which personality characteristics might predispose people to use certain forms of humor in relationship contexts? Attachment theory (Bowlby, 1969, 1973, 1980) provides one explanatory framework for why and how people might use humor in tactically different ways when trying to meet their own and their partners' specific interpersonal goals and needs.

Predictors of Humor Use: Own and Partners' Attachment Orientations

Attachment theory posits that experiences with caregivers give rise to mental representations (working models) of the self and others. Working models contain expectations about others, relational needs and goals based on experiences with prior attachment figures, and strategies for achieving them (see Collins, Guichard, Ford, & Feeney, 2004). Over time, working models generate unique patterns of feeling, thinking, and behaving in relationships that are reflected in adult attachment orientations. Adult attachment orientations exist within a two-dimensional space defined by attachment anxiety and avoidance (Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996).

Attachment anxiety reflects the extent to which individuals worry that their partners will not be available when needed. Driven by abandonment concerns, highly anxious people use hyperactivating strategies that include persistent efforts to maintain close proximity to others to ensure they receive their continued attention and care. These efforts involve clinging and controlling responses, and emotional overdependence on partners (Shaver & Hazan, 1993). Hyperactivation is also characterized by negative self-views, heightened focus on one's distress, rumination about personal and relationship deficiencies, and hypervigilance to signs that partners might leave (Simpson & Rholes, 2012).

Attachment avoidance reflects the extent to which individuals strive to maintain control, be self-reliant, and limit emotional intimacy in relationships. Highly avoidant people have pessimistic views of others and doubt their willingness to be caring and responsive. Driven by concerns about maintaining independence, highly avoidant people try to maintain comfortable emotional distance from others. They do so by using deactivating strategies, such as not turning to others for support to avoid further distress that might be caused by others' unavailability or rejection (Cassidy & Kobak, 1988). Deactivation is also characterized by denial of and inattention to attachment-relevant needs, personal vulnerabilities and imperfections, and defensive withdrawal from others in stressful situations (Mikulincer & Shaver, 2003).

People who score low on both anxiety and avoidance are prototypically securely attached. Highly secure persons have positive views of themselves and others, view themselves as worthy of others' care and affection, and believe that others are trustworthy and well-intentioned.

Although hyperactivation and deactivation strategies associated with attachment anxiety and avoidance, respectively, direct emotional and behavioral responses generally, certain tactics reflect the specific ways in which these strategies are enacted in particular situations. Humor may be one such tactic. Similar to attachment working models, humor styles also involve benevolent and negative views of self and others. Indeed, in research using self-report measures of humor styles, higher anxiety scores predicted more negative and less positive *self*-directed humor, whereas higher avoidance scores predicted more maladaptive and less benevolent *other*-directed humor (Cann, Norman, Welbourne, & Calhoun, 2008). Few if any studies, however, have assessed these different types of humor as *behavioral responses* during actual interactions between relationship partners.

Behavioral responses that are designed to achieve specific attachment-relevant goals and needs should be most strongly triggered when individuals are distressed or threatened, such as during relationship conflicts (Bowlby, 1973; Simpson & Rholes, 2012). To the extent that conflict arouses concerns about self-worth and abandonment in highly anxious people, they should use behavioral strategies designed to obtain their partners' continued affection. Self-defeating humor is one tactic that highly anxious people might use to satisfy their strong needs for reassurance and draw closer to their partners. Although affiliative humor can also be used to enhance closeness, the focus of this type of humor is to increase *others'* well-being. Given their heightened focus on their *own* internal distress during relationship conflicts (Simpson et al., 1996), highly anxious people may not have sufficient resources to use affiliative humor and, therefore, should display more self-defeating humor.

Conflict situations can also activate highly avoidant people's needs for independence and autonomy, triggering strategies designed to prevent feelings of vulnerability associated with past rejections or failures to obtain support. Thus, to

limit closeness, highly avoidant people should use more aggressive and less affiliative humor. For these individuals, disparaging partners in humorous ways may be a tactic to increase psychological distance during conflict and signal their aversion to, or discomfort with, emotional intimacy.

Individuals' use of humor should not only be predicted by their own attachment orientations; it should also be predicted by their *partners'* attachment orientations. For example, individuals may be inclined to "tailor" their humor use to partners who are highly anxious and visibly distressed. If individuals recognize their anxious partners' heightened needs for acceptance and reassurance, they should use more affiliative humor and less aggressive humor. Support for this assumption comes from research showing that individuals adjust their emotional and behavioral responses by amplifying positive affect and concealing negative affect to diffuse their chronically insecure partners' doubts about interpersonal acceptance (Lemay & Dudley, 2011).

Consequences of Humor Use: Own and Partners' Responses to Humor

The second goal of this research was to test a novel set of person-by-situation predictions regarding responses to different relationship-relevant humor styles. Our guiding questions were, "When (in which interpersonal situations) are benign forms of humor (i.e., affiliative humor) a resource for relationships?" and "When do maladaptive forms of humor (i.e., aggressive and self-defeating humor) undermine relational well-being?" Martin et al. (2003) suggest that the *degree* to which people use different humor styles determines whether certain styles have beneficial or detrimental consequences. This view, however, does not consider how interpersonal situations influence the expression of different humor styles. The positive versus negative effects of different humor styles should emerge when people find themselves in interpersonal situations that are most relevant to the expression of different forms of humor. Because humor is a social phenomenon (Provine & Fisher, 1989), the critical features of interpersonal situations ought to be the temporary or chronic desires, needs, and goals of the *partner* toward whom humor is being directed (see Simpson & Winterheld, 2012).

Aggressive humor, for instance, might not always generate negative partner responses. It should be most injurious in socially diagnostic situations that provide feedback about a partner's responsiveness to one's important needs or goals. For example, if aggressive humor is directed at a partner while he or she is disclosing self-doubts and seeking reassurance, a negative partner response such as anger should follow.

One relationship-promotive function of affiliative humor is reducing interpersonal tension and putting others at ease. Even though this form of humor should generally have positive interpersonal effects, it should be particularly well-received by people who are highly distressed. In addition to

having positive consequences for others, affiliative humor is also associated with beneficial outcomes for those who use it (Martin et al., 2003). What might explain this? Affiliative humor should benefit those who use it mainly when their humor attempts are successful. In tense interpersonal situations, a good indicator of successful affiliative humor use should be the dissipation of a partner's anger, which may partly explain the positive connection between an individual's affiliative humor use and his or her own well-being.

Self-defeating humor shares relationship-enhancing functions with affiliative humor, rendering these two forms of humor phenotypically similar. However, they should have opposing outcomes in certain interpersonal situations. Unlike affiliative humor, self-defeating humor involves a heightened focus on the self and on one's personal needs, which may minimize one's capacity to reduce a partner's tension effectively. Self-defeating humor should, therefore, be particularly ineffective when one's partner is highly distressed, and it should then predict negative partner responses. Because it comes at a cost to the self, self-defeating humor should also be associated with negative outcomes for those who use it.

Aside from fleeting emotional states, stable characteristics such as attachment working models should also guide individuals' interpretations of humor and explain why certain people respond in unique ways to their partners' use of humor during conflict. Given their heightened needs for closeness, highly anxious people should respond more favorably to their partners' humor if it signals the desire to bond and enhance the relationship, which can be accomplished with affiliative humor. Highly anxious people should, however, respond less favorably to their partners' use of self-defeating humor. Although this form of humor can enhance bonding, it involves ingratiation and self-disparagement, which might communicate to highly anxious people that their partners are ineffective or unresponsive caregivers. Highly avoidant people, in contrast, should respond negatively to their partners' use of aggressive humor. To the extent that highly avoidant people recognize the negative goals and intentions that are often conveyed by disparaging humor, they should become aware of possible rejection and experience this form of humor with negative affect such as anger.

The Current Study

We conducted a behavioral observation study with couples involved in long-term dating relationships. After each partner completed attachment and other relevant measures, each couple engaged in a videotaped conflict resolution discussion task. The videotaped interactions were then rated by trained observers for the following: (a) the extent to which each humor style was used each time one partner made a humor attempt, (b) the immediate response that each humor attempt elicited in his or her partner, and (c) how satisfied each partner was with the conflict resolution. So that we could test whether and how partners' states moderated the

link between individuals' humor use and their partners' responses, observers also rated each partner's level of care-seeking and distress during the discussion.

This research extends previous work on humor in close relationships in several ways. First, although previous research has demonstrated beneficial and aversive partner effects of affiliative and aggressive humor, respectively (Campbell et al., 2008), little is known about the specific situations in which different humor styles are effective or ineffective, or about the mechanisms that may account for why they are beneficial or detrimental. Second, prior research has focused on other-directed (affiliative and aggressive) humor in relationships. In this study, we also tested how self-directed (i.e., self-defeating) humor affects outcomes during spontaneous dyadic interactions. Third, we examined individual difference variables (i.e., attachment orientations) that may explain why some people use certain forms of humor when interacting with their partners, why some people respond to different types of humor in specific ways, and how people respond to their partners' attachment-relevant needs. Fourth, rather than rating different types of humor globally across each discussion (Campbell et al., 2008), we had observers rate each humor attempt when it occurred during each discussion for the degree to which it involved each of the three humor styles.

Our first set of hypotheses (Hypotheses 1-3) centered on the use of humor as the dependent variable, with individuals' own and their partners' attachment orientations as predictors. Consistent with their strong need for closeness and reassurance, highly anxious people should use humor to increase closeness and elicit reassurance from their partners, that is, they should display more self-defeating humor (Hypothesis 1). Consistent with their need for self-reliance and limited emotional intimacy, highly avoidant people should be less likely to use humor that increases closeness such as affiliative humor (Hypothesis 2a), and they should be more likely to use humor that increases psychological distance such as aggressive humor (Hypothesis 2b). We also tested whether individuals "tailor" their use of humor to their *partner's* attachment needs. We predicted that individuals should respond to their highly anxious partners' greater need for reassurance by using more affiliative humor (Hypothesis 3a) and less aggressive humor (Hypothesis 3b), especially when their anxious partners were more distressed.

The second set of hypotheses (Hypotheses 4-8) involved *responses* to humor as the dependent variable, with individuals' use of different humor styles and various partner characteristics (i.e., partners' emotional states and attachment orientations) as predictors. We predicted that individuals would be less satisfied with the conflict discussion outcome when their partners used more aggressive humor (Hypothesis 4a). However, being the target of aggressive humor should be particularly painful in situations that involve increased vulnerability, such as when one seeks comfort from one's partner. Thus, we predicted that individuals who displayed more care-seeking should display greater anger in response

to their partners' aggressive humor than individuals who sought less care (Hypothesis 4b).

We further predicted that affiliative humor should elicit positive partner reactions such as more laughter (Hypothesis 5a), less anger (Hypothesis 5b), and greater satisfaction with the conflict outcome (Hypothesis 5c). Given the tension-reducing nature of affiliative humor, the associations between individuals' affiliative humor use and their partners' responses to it should be moderated by their partners' level of distress. Specifically, individuals who display greater distress should laugh more in response to their partners' affiliative humor use than their less stressed counterparts (Hypothesis 5d), and they should display less anger (Hypothesis 5e).

Affiliative humor should also benefit those who use it, in that these individuals should be more satisfied with the conflict outcome (Hypothesis 5f). Moreover, individuals who use more affiliative humor should be especially satisfied with conflict outcomes when their humor attempts are successful. One indicator of successful affiliative humor is the dissipation of the partner's anger. Hence, decreases in partner's anger should at least partially mediate the relation between individuals' affiliative humor use and how satisfied they are with the conflict outcome (Hypothesis 5g).

Because self-defeating humor involves a heightened focus on one's own shortcomings, it should be most ineffective during discussions with highly distressed partners. Therefore, we predicted that individuals who display greater distress should laugh less (Hypothesis 6a) and show greater anger (Hypothesis 6b) in response to their partners' use of self-defeating humor than less stressed individuals. Because self-defeating humor comes at an emotional cost to those who use it, individuals who display more self-defeating humor should also be less satisfied with their conflict outcomes (Hypothesis 6c).

Finally, we predicted that attachment orientations should predispose individuals to respond in unique ways to their partners' use of different humor styles. Specifically, given their heightened need for closeness and reassurance, highly anxious individuals should respond with more laughter when their partners use more (rather than less) affiliative humor (Hypothesis 7a). However, highly anxious people should laugh *less* when their partners use more (rather than less) self-defeating humor (Hypothesis 7b). And to the extent to that highly avoidant individuals recognize the negative intentions of their partner's aggressive humor, they should respond with greater anger (Hypothesis 8).

Method

The study had two phases. In Phase 1, each partner privately completed self-report measures (see below), after which each couple engaged in a videotaped conflict resolution discussion task. In Phase 2, trained observers rated each partner on the behaviors and attributes described below.

Participants

Participants were 96 dating couples. At least 1 couple member was enrolled in an introductory psychology class and received partial course credit for participation. Couples were required to have dated each other for at least 3 months to ensure they were involved in relatively well-established relationships. The mean length of relationships was 17.63 months ($SD = 15.30$ months, range = 3-65 months).² Mean ages of men and women were 19.53 and 18.80 years, respectively.

Phase 1: Self-Report Measures and Conflict Resolution Discussion Task

When they arrived at the lab, each partner was led to a private room to complete self-report measures. Couples were then led to a room where the conflict resolution discussion took place. To ensure that the discussions varied in importance and intensity, each couple was randomly assigned to discuss either a major or a minor unresolved relationship problem. After the experimenter instructed each couple to identify a problem, each partner listed up to four problems. Once both partners had created their lists, each person examined his or her partner's list, and both partners agreed on which issue to discuss. Couples were told they had approximately 7 min to discuss the conflict, and that they should try to resolve it as best as they could in the allotted time. The partners were then left alone to discuss the conflict, which was videotaped with each couple's prior consent.

Attachment Orientations. Participants completed the Adult Attachment Questionnaire (AAQ; Simpson et al., 1996), a 17-item measure that assesses thoughts and feelings about romantic partners on two dimensions: *avoidance* and *anxiety*. The *Avoidance* subscale contains items such as "I'm nervous whenever anyone gets too close." The *Anxiety* subscale contains items such as "I often want to merge completely with others, and this desire sometimes scares them away." Participants rated the extent to that they agreed with each item on a scale from 1 (*I strongly disagree*) to 7 (*I strongly agree*). Cronbach's alphas were .77 for the Avoidance Scale and .81 for the Anxiety Scale.

Personality Measures and Relationship Satisfaction. For discriminant-validity purposes, participants also completed relevant subscales of a Big Five Personality measure (Goldberg, 1990) and a current Relationship Satisfaction Scale (Hendrick, 1988).

Phase 2: Behavioral Codings

The videotaped discussions were viewed and coded by teams of trained observers who were blind to the hypotheses and participants' other data. To minimize potential halo effects, one of five independent coding teams rated each

construct described below. Coders were given detailed definitions, instructions, and training on each humor style prior to the task. After training, each coder rated each partner (independently of the other coders) on specific behaviors and attributes (see below).

Humor Styles. Development of the coding scheme was informed by Martin et al.'s (2003) model of humor styles. During the training sessions, coders (and the first author) agreed that participants displayed affiliative, aggressive, and self-defeating humor during the discussions, but self-enhancing humor was more difficult to observe. Accordingly, we did not code for self-enhancing humor. Two coders first identified all time points at which participants displayed humor attempts during the discussions. Coder agreement was 98%. Five coders then rated each humor expression on items assessing affiliative, aggressive, and self-defeating humor on a 5-point scale (anchored 1 = *not at all*, 5 = *a great deal*). For affiliative humor, a sample rating item was, "To what extent did the individual try to put the partner at ease or lighten the mood by using humor?" A sample rating item for aggressive humor was, "To what extent did the individual put the partner down by using humor?" Sample rating items for self-defeating humor were, "To what extent did the individual make fun of his or her own weaknesses?" and "To what extent did the individual try to ingratiate him/herself to the partner by using humor?" Interrater reliabilities ranged from .68 to .98.

Ratings for each item were then summed across coders. The items hypothesized to measure each humor style were internally consistent (affiliative humor $\alpha = .98$; aggressive humor $\alpha = .97$; self-defeating humor $\alpha = .95$) and were aggregated to form separate scales reflecting the three humor styles. Higher scores indicated more use of that form of humor.

Responses to Humor Behavior. In a separate wave of coding, three coders rated how participants responded to each of their partners' humor attempts. Specifically, coders rated the extent to which participants (a) laughed and/or appeared genuinely amused and (b) appeared angry/annoyed/irritated at the time points when their partners displayed humorous behaviors. Each item was rated on a 5-point scale (anchored 1 = *not at all*, 5 = *a great deal*). Interrater reliabilities ranged from .67 to .99, and ratings for each item were then summed across coders.

Care-Seeking. Another team of nine coders rated the extent to which participants signaled their distress or discomfort to their partner. Behavioral examples included verbally expressing one's emotions and needs directly without attacking the partner, asking the partner to acknowledge one's emotions, asking the partner for help or support, emitting clear facial expressions such as hurt or worry, or seeking physical contact by reaching for the partner's hand. Ratings were made on a 9-point scale (anchored 1 = *not at all*, 9 = *a great deal*).

Table 1. Descriptive Statistics: Means and Standard Deviations.

	Men (N = 96)	Women (N = 96)	Matched pairs t-test
Attachment avoidance	25.69 (8.27)	25.97 (7.79)	-0.24, <i>ns</i>
Attachment anxiety	27.53 (9.38)	29.02 (9.99)	-1.26, <i>ns</i>
Affiliative humor	13.33 (9.75)	9.98 (8.08)	3.24, $p = .002$
Aggressive humor	9.65 (6.96)	5.58 (3.54)	3.69, $p < .001$
Self-defeating humor	8.83 (6.92)	5.75 (3.65)	3.94, $p < .001$
Laughter in response to humor	8.74 (6.50)	13.90 (11.70)	-3.81, $p < .001$
Anger in response to humor	4.06 (3.99)	7.52 (6.87)	-3.96, $p < .001$
Care-seeking	4.38 (1.26)	5.02 (1.21)	-3.13, $p = .002$
Distress	24.77 (1.83)	25.02 (1.73)	-1.68, <i>ns</i>
Satisfaction with conflict resolution	4.49 (1.59)	4.91 (1.48)	-4.56, $p < .001$

Note: Standard deviations are in parentheses. "Attachment avoidance" and "attachment anxiety" refer to participants' self-reports; all other variables are observer-rated.

Interrater reliability was .89, and ratings were thus summed across raters.

Distress. To assess the level of stress/anxiety displayed by each partner during the discussion, another set of five coders evaluated each participant's behavior on the following items using 9-point scales (anchored 1 = *not at all*, 9 = *extremely*): stressed, anxious, upset, calm (reverse-scored), and relaxed (reverse-scored). Ratings of each item were reasonably reliable across raters (mean $\alpha = .65$), so each item was averaged across raters to form a mean for each rated item. All five items loaded on a single factor within each gender. Thus, we aggregated these scores to form a global observer-rated index of stress/anxiety ($\alpha = .90$ for men and .89 for women). Higher scores indicated greater stress/anxiety.

Satisfaction With the Conflict Resolution. Finally, another team of five coders rated the extent to which each participant appeared satisfied with the outcome of conflict discussion on a 9-point scale (anchored 1 = *not at all*, 9 = *a great deal*).

Results

Descriptive Statistics

Means and standard deviations for attachment orientations and each observer-rated construct are reported in Table 1. Men were rated as using all humor styles more than women. Women laughed more and displayed greater anger in response to their partners' humor expressions than men, displayed greater care-seeking, and were more satisfied with the conflict outcomes.

Correlations among the primary study variables are shown in Table 2. Greater avoidance in men was positively correlated with observer-rated aggressive humor. Both men and women who displayed more affiliative humor also displayed more aggressive and self-defeating humor. Men who

Table 2. Correlations Among Primary Variables.

	1	2	3	4	5	6	7	8	9	10
1. Men avoidance	—	.16	-.10	.23*	.12	-.01	.23*	-.10	-.04	-.13
2. Men anxiety	—	—	.03	.06	.20	.14	.28**	-.23	-.20	-.21
3. Men affiliative humor	—	—	—	.58**	.77**	-.02	.03	.26*	.16	.19
4. Men aggressive humor	—	—	—	—	.74**	-.02	.06	-.08	.13	-.04
5. Men self-defeating humor	—	—	—	—	—	-.01	.08	.03	.17	.09
6. Women avoidance	—	—	—	—	—	—	.16	-.17	.17	-.16
7. Women anxiety	—	—	—	—	—	—	—	-.14	-.15	.10
8. Women affiliative humor	—	—	—	—	—	—	—	—	.64**	.78**
9. Women aggressive humor	—	—	—	—	—	—	—	—	—	.76**
10. Women self-defeating humor	—	—	—	—	—	—	—	—	—	—

Note: $N = 96$ men and 96 women.

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

displayed more affiliative humor had partners who displayed more affiliative humor.

Actor–Partner Interdependence Model (APIM)

Men's and women's scores were correlated for some variables. Therefore, we analyzed the data using the APIM (Kashy & Kenny, 2000). A central assumption of the APIM is that when individuals are involved in an interdependent relationship, their outcomes and responses are attributable not only to their own characteristics, but to their partners' characteristics as well. For example, an individual might be rated as more satisfied with the conflict resolution when he or she uses more affiliative humor (an actor effect). However, he or she might also be more satisfied when his or her partner displays more affiliative humor (a partner effect). In the APIM, the dyad is treated as the unit of analysis, and actor and partner effects are tested with the proper degrees of freedom. All analyses were conducted with SPSS Version 18. All of the significant effects that emerged are reported below.

We conducted preliminary analyses to test whether the condition to which each couple was randomly assigned (discussing a major versus a minor issue) interacted with any of the predictors. No significant interactions emerged. We next tested whether gender interacted with any of the predictors. Four significant interactions emerged. First, women laughed more when men used more affiliative humor, $b = .71$, $t(71) = 3.38$, $p = .001$. Second, women were rated as less angry when men used more affiliative humor, $b = -.31$, $t(93) = -2.54$, $p < .02$. Third, men laughed more when women used more self-defeating humor, $b = -1.20$, $t(87) = -2.37$, $p = .02$. Fourth, women were rated as more angry when they used more aggressive humor, $b = .46$, $t(110) = 2.54$, $p < .02$. Including gender as a covariate in all of the models reported below did not change the significance of any effects.

Predicting Humor Use From Actors' and Partners' Attachment Orientations. To test whether individuals who have different attachment orientations use different humor styles, we ran three APIM models, treating observer-rated affiliative, aggressive, and self-defeating humor as the dependent variables. The predictors in each model were actors' and partners' scores on attachment avoidance and anxiety. We included the number of humor expressions displayed by individuals as a covariate to control for variation in frequency of humor use. As predicted, highly anxious individuals used more self-defeating humor, $b = .05$, $t(120) = 2.24$, $p < .03$ (Hypothesis 1). Also as expected, highly avoidant individuals used less affiliative humor, $b = -.11$, $t(98) = -2.58$, $p = .01$ (Hypothesis 2a), and more aggressive humor, $b = .14$, $t(108) = 2.72$, $p = .008$ (Hypothesis 2b).

To test whether individuals use humor to respond to their partners' attachment-relevant needs, we reran the model above, but added partners' observer-rated distress and all two-way interactions between attachment orientations and observer-rated distress as predictors. A model with affiliative humor as the dependent variable showed a main effect for partner distress, indicating that individuals used less affiliative humor when their partners were more distressed, $b = -.59$, $t(123) = -3.30$, $p = .001$. A significant interaction, however, confirmed that actors used more affiliative humor when their partners were higher in anxiety and were rated as more distressed, $b = .04$, $t(127) = 2.35$, $p = .02$ (Hypothesis 3a; see Figure 1).³ The regression line for high partner distress was significantly different from zero, $t = 1.95$, $p = .05$, whereas it was not for low partner distress, $p = .86$.

Repeating the same model using aggressive humor as the dependent variable revealed a main effect for partner distress, such that individuals used more aggressive humor when their partners were rated as more distressed, $b = .71$, $t(111) = 3.14$, $p = .002$. A significant interaction showed that individuals used less aggressive humor when their partners were more anxious and more distressed, $b = -.05$, $t(130) = -2.31$, $p = .02$ (Hypothesis 3b; see Figure 2). Neither the regression line for

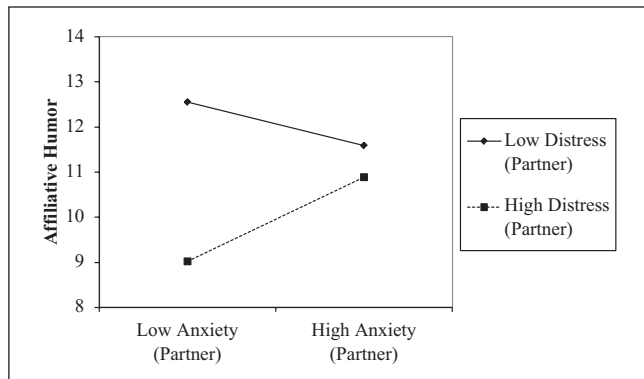


Figure 1. The interaction of partners' attachment anxiety and partners' distress, predicting actors' use of affiliative humor.

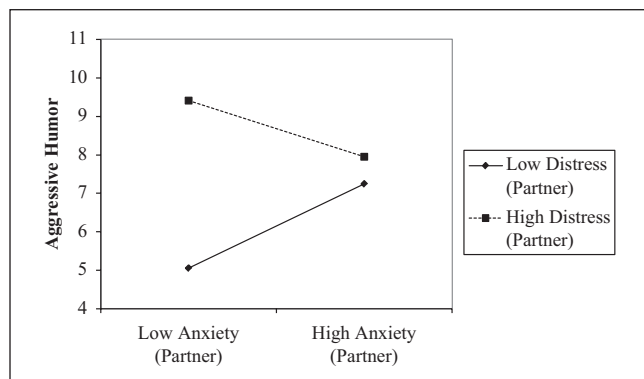


Figure 2. The interaction of partners' attachment anxiety and partners' distress, predicting actors' use of aggressive humor.

high partner distress ($p = .44$) nor for low partner distress ($p = .12$) were significantly different from zero.⁴

Predicting Own and Partner Responses From Actors' Humor Use and Partners' States. To test whether and how different humor styles predict individuals' own and their partners' responses, we used a base model containing actors' and partners' observer-rated affiliative, aggressive, self-defeating humor, and number of humor expressions. For ease of presentation, we report Hypotheses 4 to 6 separately for each humor style.

Responses to Aggressive Humor. An APIM base model (described above), treating observer-rated satisfaction with conflict resolution as the dependent variable, confirmed that individuals were rated as less satisfied when their partners used more aggressive humor, $b = -.08$, $t(87) = -2.19$, $p = .03$ (Hypothesis 4a). We repeated the model using anger as the dependent variable, and added the extent to which individuals sought care from their partner as a predictor, as well as all two-way interactions between actors' care-seeking and

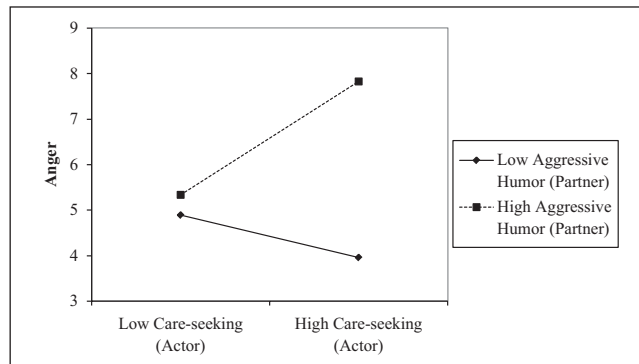


Figure 3. The interaction of actors' care-seeking and partners' use of aggressive humor, predicting actors' anger in response to partners' humor.

humor styles. Supporting Hypothesis 4b, individuals who were rated higher in care-seeking displayed greater anger when their partners used more aggressive humor than did those who sought less care, $b = .08$, $t(102) = 1.98$, $p = .05$ (see Figure 3). Simple-slopes analyses indicated that the regression line for partners' high aggressive humor use was marginally different from zero, $t = 1.80$, $p = .07$, whereas it was not for partners' low aggressive humor use, $p = .28$.

Responses to Affiliative Humor. Three APIM base models (described above) on individuals' laughter, observer-rated anger, and satisfaction with the conflict outcome showed that, when their partners used more affiliative humor, individuals laughed more (Hypothesis 5a), $b = 1.07$ (110) = 4.65, $p < .001$, appeared less angry (Hypothesis 5b), $b = -.37$, $t(87) = -2.98$, $p < .005$, and more satisfied with the conflict outcome (Hypothesis 5c), $b = .09$, $t(96) = 2.05$, $p < .05$.

To test whether individuals who were rated as more distressed responded more favorably to their partners' affiliative humor attempts, we reran the APIM base model (first on individuals' laughter, then on individuals' anger), adding actors' observer-rated distress and all two-way interactions between actors' distress and the three humor styles used by partners as predictors. A significant interaction between actors' distress and partners' affiliative humor use confirmed that individuals laughed more in response to their partners' affiliative humor attempts when they (individuals) appeared more distressed, $b = .18$, $t(101) = 2.80$, $p = .006$ (Hypothesis 5d; see Figure 4). Simple-slopes tests showed that the regression line for partners' high affiliative humor use was significantly different from zero, $t = 2.13$, $p < .04$, whereas it was not for partners' low affiliative humor use, $p = .31$. In addition, individuals displayed less anger when their partners used more affiliative humor attempts when they (individuals) were more distressed, $b = -.09$, $t(81) = -2.88$, $p = .005$ (Hypothesis 5e).

We also predicted that individuals who used more affiliative humor would be more satisfied with the conflict outcome

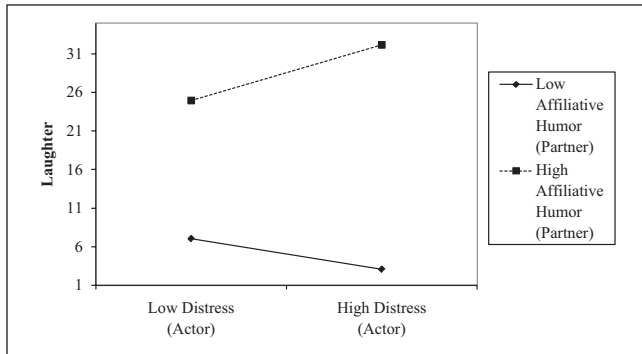


Figure 4. The interaction of actors' distress and partners' use of affiliative humor, predicting actors' laughter in response to partners' humor.

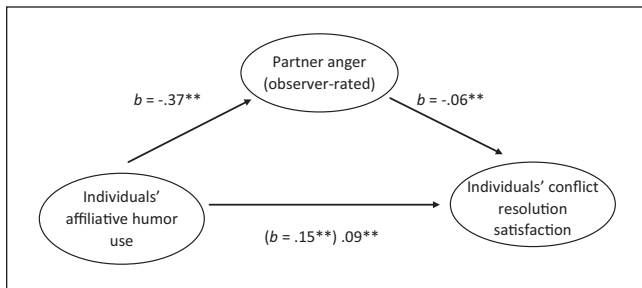


Figure 5. Mediation of the effect of individuals' affiliative humor use on their own conflict resolution satisfaction via partner anger during the conflict discussions.

(Hypothesis 5f). An APIM base model with individuals' own observer-rated satisfaction with the discussion as the dependent variable confirmed this prediction, $b = .15$, $t(96) = 3.55$, $p = .001$. We then tested whether this association was explained by partners' decrease in anger in response to affiliative humor. Sobel's test confirmed that the effect of individuals' affiliative humor on their satisfaction with the discussion outcome was partially mediated by decreased partner anger, $z = 2.15$, $p = .03$ (Hypothesis 5g; Figure 5).

Responses to Self-Defeating Humor. We predicted that individuals who were highly distressed would laugh less (Hypothesis 6a) and be angrier (Hypothesis 6b) in response to their partners' self-defeating humor attempts. A marginal interaction suggested that more distressed individuals laughed less when their partners used more self-defeating humor, $b = -.21$, $t(102) = -1.82$, $p = .07$. Moreover, a significant interaction revealed that individuals displayed more anger in response to their partners' self-defeating humor when they (individuals) were more distressed, $b = .11$, $t(84) = 1.98$, $p = .05$ (see Figure 6). The regression line for partners' high self-defeating humor use was significantly different from zero, $t = 2.56$, $p = .01$, whereas it was not for partners' low affiliative humor use, $p = .14$. Moreover, an APIM base model on individuals' satisfaction with the conflict outcome

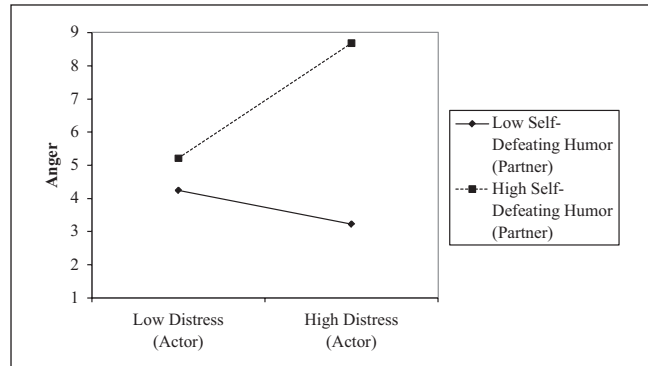


Figure 6. The interaction of actors' distress and partners' use of self-defeating humor, predicting actors' anger in response to partners' humor.

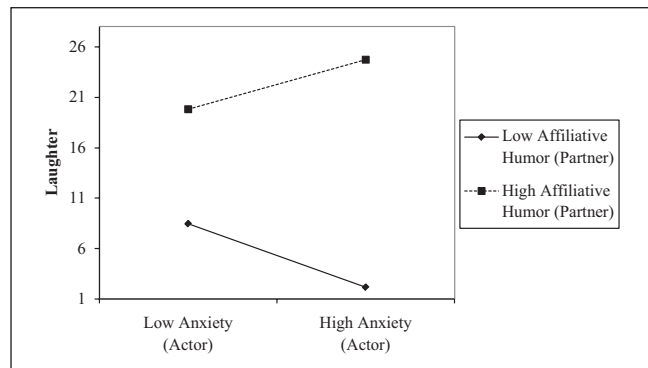


Figure 7. The interaction of actors' attachment anxiety and partners' use of affiliative humor, predicting actors' laughter in response to partners' humor.

confirmed that those who used more self-defeating humor were less satisfied with the outcome, $b = -.11$, $t(89) = -2.63$, $p = .01$ (Hypothesis 6c).

Predicting Partner Responses From Actors' Humor Use and Partners' Attachment Orientations. To examine anxious and avoidant individuals' responses to their partners' use of humor, we ran two APIM models, treating the extent to which individuals laughed or appeared angry in response to their partners' humor attempts as dependent variables. Each model contained actors' and partners' avoidance and anxiety scores, actors' and partners' observer-rated affiliative, aggressive, and self-defeating humor use, and all two-way interactions as predictors.

Confirming Hypothesis 7a, an interaction effect showed that highly anxious individuals laughed more when their partners' affiliative humor use was high rather than low during the discussion, $b = .03$, $t(104) = 2.53$, $p = .01$ (see Figure 7). Neither the regression line for partners' high affiliative humor ($p = .93$) nor the regression line for partners' low affiliative humor ($p = .30$) were significantly different from zero. As expected, a second interaction indicated that highly

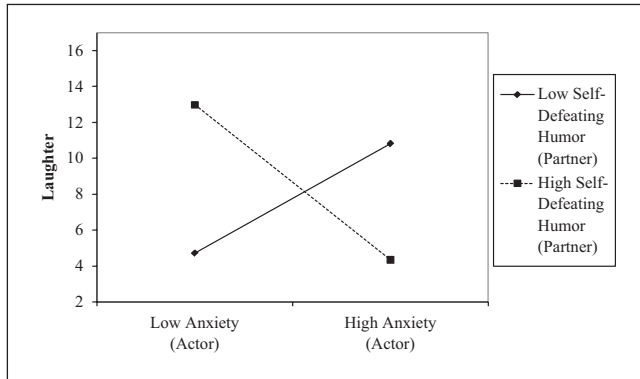


Figure 8. The interaction of actors' attachment anxiety and partners' use of observer-rated self-defeating humor, predicting actors' laughter in response to partners' humor.

anxious individuals laughed *less* when their partners used more self-defeating humor, $b = -.06$, $t(102) = -2.08$, $p = .04$ (Hypothesis 7b; see Figure 8). The regression line for high self-defeating humor was marginally significant from zero, $t = -1.66$, $p = .09$, whereas it was not for low self-defeating humor, $p = .86$.

The second APIM model predicting anger in response to partners' humor use revealed a marginally significant interaction, $b = .02$, $t(100) = 1.90$, $p = .06$, suggesting that highly avoidant individuals were angrier when their partners used more aggressive humor (Hypothesis 8).

Discriminant Analyses

To ensure that any humor use effects are attributable to participants' attachment orientations and not shared variance with personality traits, we reconducted all analyses involving attachment orientations to statistically control for each individual's scores on personality traits (agreeableness, extraversion, neuroticism). All of the significant effects remained statistically significant, except for one that became marginal ($p = .06$). Finally, when we repeated all analyses reported above with each individual's score on relationship satisfaction as a covariate, all results remained statistically significant.

Discussion

We proposed that humor is best understood as an interaction between the person using a specific humor style and the specific situation that he or she is in (see Simpson & Winterheld, 2012). Because humor is inherently a social process, the most relevant features of the situation are likely to involve the states or dispositions of both partners. The results of this study are consistent with this interactionist approach, showing that humor use during conflict resolution discussions can best be modeled and understood by considering

information about both partners. To our knowledge, this is the first study to examine "dyadic" effects for three forms of humor (aggressive, affiliative, and self-defeating humor), each of which was hypothesized to have unique interpersonal implications.

Attachment Orientations and Humor Use

We first examined whether and how individuals' own and their partners' attachment orientations predict use of different humor styles. Bowlby (1969, 1980) suggested that caregivers can use humor to express affection, ease others' distress, convey hostility, or manipulate others. Highlighting the affiliative function of humor, he claimed that children's laughter entices caregivers to maintain positive interactions, which can facilitate intimacy and connectedness. Bowlby (1973) also discussed how caregivers use ridicule to distance themselves emotionally from their child (e.g., by belittling the child's distress) or to exert control over the child (e.g., by deriding the child's attempts at being independent). Supporting our attachment predictions, highly avoidant individuals used less affiliative humor and more aggressive humor during their discussions, whereas highly anxious individuals used more self-defeating humor. These associations are largely consistent with prior self-report studies on attachment and humor (e.g., Cann et al., 2008), and they buttress the notion that highly avoidant people use humor to increase psychological and emotional distance between themselves and their romantic partners during conflict, whereas highly anxious people use humor to increase closeness and elicit reassurance from their partners.

We also found evidence that individuals are sensitive to their *partners'* attachment orientations when using humor. Individuals used more affiliative humor and less aggressive humor when their partners were both highly anxious and highly distressed. This suggests that people may recognize their anxious partners' chronic need for reassurance, especially when their partners are distressed, and then adjust their humor use accordingly. In so doing, individuals might affirm their partners and minimize rejection-related signals, thereby regulating their partners' chronic interpersonal insecurities. These findings are consistent with recent research showing that individuals can detect others' chronic insecurities and subsequently work to disconfirm others' expectations for rejection and assuage their concerns about interpersonal acceptance (Lemay & Dudley, 2011).

To our knowledge, this is the first behavioral observation study to document how individuals who have different attachment orientations spontaneously express humor while trying to resolve relationship conflicts, and how individuals use humor to respond to their *partners'* attachment orientations and associated needs. Our findings fit well with both attachment theory and Bowlby's speculations of how different forms of humor can be used to emotionally connect or distance oneself from others, and suggest that humor might

be part of the tactical repertoire that people mobilize to meet their own and others' attachment-related goals and needs.

Responses to Humor: Considering Both Partners' States and Traits

We also examined the interpersonal consequences of observer-rated maladaptive and benign forms of humor. Consistent with past research (e.g., Campbell et al., 2008), when individuals used more aggressive humor, their partners were rated as less satisfied with the conflict resolution. Importantly, when individuals used more aggressive humor, their partners also responded with greater observer-rated anger, but only when these partners sought more care. The absence of main effects for aggressive humor on partners' anger suggests that aggressive humor may not always be harmful. Although some previous research has found negative outcomes for aggressive humor use (Alberts, 1990; De Koning & Weiss, 2002), other research has not (Baxter, 1992). The present research sheds light on why past work has produced mixed results: Most studies have not considered characteristics of the person toward whom humor is directed. Aggressive humor should be most hurtful when one's partner is vulnerable and actively seeks reassurance. The hostile component of aggressive humor may then overshadow any playfulness that might have been intended, eliciting a negative partner response. Using aggressive humor in less stressful situations, however, might have less adverse impact on relationship outcomes.

Affiliative humor was systematically related to positive observer-rated partner responses (more laughter, less anger, and greater satisfaction with the conflict resolution). Moreover, underscoring the tension-reducing nature of affiliative humor, partners' immediate positive responses were amplified when they were rated as more distressed. Although affiliative humor is an other-directed humor behavior that involves care and concern for others, individuals who used it more were also more satisfied with the conflict resolution themselves. This is consistent with prior research showing that affiliative humor is associated with positive outcomes for the self, such as increased psychological well-being, higher self-esteem, greater social intimacy, and lower depression and anxiety (Martin et al., 2003). People who use more affiliative humor ought to be more satisfied with the conflict outcome because they are likely to have achieved their goal of reducing tension in their partner. Indeed, observer-rated declines in partners' anger partly explained the connection between individuals' affiliative humor use and their own level of satisfaction.

We also examined consequences of self-defeating humor. Although self-defeating and affiliative humor both involve a desire to develop closer bonds, they should affect own and partner outcomes in opposing ways. Self-defeating humor often comes at a personal cost, and it is linked to greater depression and anxiety, less psychological well-being, lower

self-esteem, and less social intimacy (Martin et al., 2003). Consistent with this, people in our study who used more self-defeating humor were less satisfied with the conflict resolution. Although it is a self-directed behavior designed to regulate one's own emotions, self-defeating humor should also affect *others* in relationship contexts. Because this form of humor involves an increased focus on one's own distress and perceived foibles, it should make those who use it less able to address their partner's distress effectively. As a result, when partners are highly distressed, they should—and do—respond negatively to this form of humor by laughing less and displaying greater anger.

Finally, we investigated whether and how different attachment orientations might predispose people to respond in specific ways to their partners' humor expressions. Highly anxious individuals laughed more when their partners used more affiliative humor. Considering their strong need for closeness, highly anxious individuals should respond favorably to their partners' affiliative humor use because this form of humor conveys a desire to increase bonding and cohesiveness. This finding is also consistent with research by Fraley and Aron (2004), who found that while almost all people report feeling closer to a stranger after sharing a humorous experience, highly anxious people report feeling significantly closer.

Interestingly, both anxious and avoidant people responded unfavorably to the very humor styles that they themselves used most often in the conflict discussions. Highly anxious people had a less favorable reaction to their partners' use of self-defeating humor. Self-deprecation has advantages in certain situations. For example, men are perceived more favorably when they use self-defeating humor, but only if they are physically attractive or have high status (Greengross & Miller, 2008). Generally, however, people who use self-defeating humor are viewed as having lower self-esteem, less confidence, and less intelligence than those who display aggressive humor (Stocking & Zillmann, 1976). If highly anxious people believe their partners are trying to elicit reassurance through the use of self-deprecating humor, they may view their partners as ineffective and unresponsive caregivers, which may lead them to respond less positively to this form of humor.

Highly avoidant individuals displayed more anger when their partners expressed more aggressive humor. Because ridicule, which is a form of aggressive humor, is one tactic that caregivers use to distance themselves emotionally from and/or to control their children (Bowlby, 1973, 1980), the display of aggressive humor by romantic partners may make rejection concerns salient, leading avoidant people to experience negative affect.

Gender Interactions

We found four significant gender interactions, which suggest that women and men express and react to different forms of humor somewhat differently (Lampert & Ervin-Tripp, 1998). Women laughed more and appeared less angry when their

male partners expressed more affiliative humor. These findings are consistent with prior research showing that women react positively to men who display a good sense of humor (Bressler & Balshine, 2004). In our study, the use of benevolent humor by men may have defused tension in their partners, most of whom were pressing for changes during their conflict discussions (cf. Christensen & Heavey, 1990). Moreover, men laughed more when their partners displayed self-defeating humor. During conflict, women's use of self-defeating humor may convey the absence of threat to men who, in turn, experience positive affect. Finally, women appeared angrier when they expressed aggressive humor, which might reflect standard gender norms. When distressed, women may "wrap" their anger in humor, especially if they believe that direct expressions of hostility are more hurtful or inappropriate when expressed by women (Eagly & Steffen, 1986).

Conclusion

Although the current results are correlational and inferences about causality cannot be made, this research advances our knowledge and understanding of humor and relationship functioning in several significant ways. The results of our study highlight the importance of studying humor *dyadically*. During social interactions, the way in which individuals express and respond to humor depends on critical features of the individual (e.g., his or her attachment orientation), the partner (e.g., his or her current state or attachment orientation), and the relationship (e.g., relationship-specific norms that guide how both individuals behave). One cannot fully understand or interpret why or how individuals express or react to different forms of humor unless one assesses the relevant states and traits of each partner.

Identifying the interpersonal situations in which humor is harmful or beneficial is important because specific humor interactions may affect relationship functioning over time. For example, repeated use of aggressive humor when one's partner is vulnerable, or of self-defeating humor when one's partner is distressed may become part of habitual "relationship signatures" that erode relationship satisfaction across time. Future research should examine how habitual patterns of humor exchange between relationship partners develop and influence well-being at the individual and dyadic level.

A better understanding of humor is also critical as humor may have implications for physical health (Martin, 2002). More humorous individuals may, for example, have larger social support networks, allowing them to profit from the well-established health benefits of social support (Martin, 2002). Indeed, we found that other-directed humor such as affiliative humor had beneficial outcomes for both the self and others. Conversely, using aggressive and self-defeating humor can lead to negative reactions from others in certain situations, which might diminish one's opportunities for building strong social support networks and for experiencing associated health benefits.

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Notes

1. We did not make predictions for self-enhancing humor, which is less relevant to and less likely to occur in conflict situations. It is more likely to be used privately, and may have few if any observable indicators (Campbell, Martin, & Ward, 2008).
2. We tested for interaction effects involving relationship length, and it did not moderate any of the reported effects. When we included relationship length as a covariate, all of the reported effects remained significant, with only one becoming marginally significant.
3. Interactions are plotted 1 *SD* above and 1 *SD* below the sample mean.
4. There were no significant interactions between actors' attachment anxiety and avoidance in any of the analyses.

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