With Partners Like You, Who Need Strangers? Ostracism Involving a Romantic Partner

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With Partners Like You, Who Needs Strangers?:
Ostracism Involving a Romantic Partner

Ximena B. Arriaga
Purdue University, West Lafayette, Indiana, USA

Nicole M. Capezza
Stonehill College, Easton, Massachusetts, USA

Jason T. Reed
Adler Planetarium, Chicago, Illinois, USA

Eric D. Wesselmann
Illinois State University, Normal, Illinois, USA

Kipling D. Williams
Purdue University, West Lafayette, Indiana, USA

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Correspondence concerning this article should be addressed to Dr. Ximena Arriaga,
Department of Psychological Sciences, Purdue University, 713 Third Street, West Lafayette, IN
47907-2081, 1-(765)-494-6888, arriaga@purdue.edu
Abstract

Being ostracized by others threatens the satisfaction of fundamental needs, although less so when individuals first are reminded of a close relationship. What remains unknown is the effect of being ostracized directly by a relationship partner, which may vary depending on attachment security. We examined how a partner's involvement in ostracism affects need satisfaction and relationship evaluations, and explored attachment security. 130 couple members played Cyberball in a between-S experiment manipulating ostracism and partner involvement. Need satisfaction was more strongly affected by the partner’s presence (vs. absence). Individuals evaluated their relationship more negatively as a function of partner ostracism and high attachment avoidance. Attachment anxiety was associated with lower need satisfaction. The results highlight relational expectations and influences on belonging needs.

Keywords: ostracism, attachment, belonging needs, relationship evaluations
With Partners Like You, Who Needs Strangers?:

Ostracism Involving a Romantic Partner

Relationship partners often protect each other in personally threatening circumstances. For example, happily married wives experience less physical pain from an electric shock when they are holding their husband’s hand rather than a stranger’s hand (Coan, Shaefer, & Davidson, 2006). Relationship partners fulfill basic social connection and intimacy needs (Aron, Ketay, Riela, & Aron, 2008; Baumeister & Leary, 1995), so that when people feel their social connection with others or their social validation is threatened, relationship partners can provide a safe haven (Mikulincer & Shaver, 2007). For example, simply thinking about a close and supportive other protects against the negative impact of being ostracized by strangers (Karremans, Heslenfeld, van Dillen, & Van Lange, 2011), as does having stable positive beliefs about others’ supportiveness (Eisenberger, Taylor, Gable, Hilmert, & Lieberman, 2007).

However, romantic partners also falter in their protective function and can become a source of personal distress (Arriaga, Capezza, Goodfriend, Slaughterbeck, & Sands, 2013). Things may go awry when a partner is directly involved in thwarting one’s social connection with others and undermining one’s needs from being met. We examined reactions to having a partner involved in an act of ostracism, which brings into question a partner’s beneficence.

Ostracism by strangers has been shown to thwart the satisfaction of four fundamental needs: belonging, control, meaningful existence, and self-esteem (Williams, 2009). In examining the effect of being ostracized by a relationship partner, the current research fills several gaps in understanding the effects of harmful partner behavior.

One such gap concerns the absence of causal evidence establishing that partner ostracism lowers the satisfaction of immediate needs. A qualitative study revealed that being the recipient of the “silent treatment” by a partner is a painful experience (Zadro, Arriaga, & Williams, 2008). In another study, adolescents felt the satisfaction of their immediate needs
thwarted when they were ostracized by a friend (Pharo, Gross, Richardson & Hayne, 2011). However, no research to date has experimentally manipulated a romantic partner’s involvement.

A second gap concerns whether the effects of partner ostracism vary depending on a person’s attachment security. Partner ostracism fits with other partner acts that can be hurtful (e.g., aggression and harmful conflict, betrayal, deception; Miller, 1997); such acts have in common that they compromise one’s sense of being valued by a partner and trust in the partner’s ability to meet one’s needs (Murray, Holmes, & Collins, 2006). Individuals differ in their vulnerability to interpersonal threats; attachment security affects this vulnerability (Mikulincer & Shaver, 2007). What remains scarcely researched is the role of attachment security in shaping responses to ostracism.

A third gap concerns how ostracism by others (strangers or a partner) affect evaluations one’s relationship (cf. Maner, DeWall, Baumeister, & Schaller, 2007, on being ostracized by strangers and seeking reconnection with others in interactions with new strangers). Given our goal of making causal inferences, we examined the effects of partner ostracism using an established experimental paradigm (Cyberball; Williams, Cheung, & Choi, 2000). The current research tested: (1) competing predictions regarding how a partner’s involvement in an act of ostracism affects the extent to which immediate needs are being met, (2) predictions regarding the role of attachment security, and (3) predictions regarding the effect of partner ostracism on relationship evaluations.

**Need Satisfaction**

**Partner involvement.** People derive important needs from their interactions with relationship partners, which may make the satisfaction of their needs relatively more vulnerable to a partner’s actions than a stranger’s actions. A major aim of the current research was to examine whether the satisfaction of immediate needs would be thwarted more versus less when a partner is among the ostracizers.
Relative to being ostracized by two strangers, being ostracized by a partner and stranger may alter how the ostracism event is interpreted. On the one hand, ostracism involving a partner may seem less threatening because one trusts that the partner is not being deliberately hurtful. Simply knowing that a partner is involved in an interaction may prime a sense of belonging (Aron et al., 2008) and security (Karremans et al., 2011). Individuals who derive security from a partner (Murray & Holmes, 2009) or who feel a strong relational bond (Arriaga, Slaughterbeck, Capezza, & Hmurovic, 2007) are relatively immune to relationship threats, and even compensate for costly interactions (Murray et al., 2009). This suggests a modest or no decline in immediate needs being met when a partner is involved in an ostracism event (i.e., the difference in needs being met may be smaller when a partner is involved versus absent).

Alternatively, the satisfaction of needs may be compromised more when an act of ostracism involves a partner versus only strangers. People have more at stake in interactions with a partner, relative to interactions with strangers. Existing theory suggests that being rejected by others with whom one has established a bond may be more aversive than not having been included in the first place (Leary, 2005), and two studies have documented negative effects of being ostracized by close others (Pharo et al., 2011; Zadro et al., 2008). Just as a betrayal is particularly painful when it occurs from close others, so too might ostracism be more painful coming from a partner than from strangers (Miller, 1997).

Relationship partners are particularly central to satisfying the need to connect with others (Baumeister & Leary, 1995; Murray & Holmes, 2009). This suggests that whatever protective or damaging effect a partner might have during an act of ostracism, the effect may be particularly pronounced on whether immediate belonging needs are satisfied (or thwarted), relative to other fundamental needs (control, meaningful existence, or self-esteem).

**Attachment security.** A second aim of the current research was to examine individual differences in reactions to ostracism based on attachment security, which reflects deep-seated expectations about one’s own value in eyes of others and about others’ availability and
responsiveness in times of distress (Mikulincer & Shaver, 2007). Secure individuals derive needs from others more so than their insecure counterparts. Indeed, recent research revealed that relative to insecure individuals, secure individuals primed with acceptance experienced fewer negative outcomes from being ostracized (Hermann, Skulborstad, & Wirth, 2013). In contrast, insecure individuals may struggle in whether their needs can be met by others. We examined two primary dimensions of attachment insecurity: Attachment anxiety, reflecting heightened concerns over a close other’s availability and acceptance, and doubts about one’s self-worth; and attachment avoidance, reflecting heightened independence and inhibition of intimacy (Fraley & Shaver, 2008).

Ostracism is precisely the type of interpersonal situation that may amplify a sense of vulnerability among insecure individuals. Relative to more secure individuals, anxiously attached individuals may exhibit more negative reactions to ostracism. They are hyper-vigilant in monitoring whether others are responsive to their needs and hinge their sense of self-worth on other’s behavior toward them (Mikulincer & Shaver, 2007; Park, Crocker, & Mickelson, 2004). Therefore, they may be more reactive to being ostracized than relatively more secure individuals. Avoidantly attached individuals also may be susceptible to negative effects of ostracism given that they reacted more positively relative to less avoidant individuals to being accepted by others (versus a control condition that involved no evaluation from others; Carvallo & Gabriel, 2006; MacDonald & Borsook, 2010). Therefore, avoidant individuals may be more reactive to being ostracized than relatively more secure individuals.

We expected attachment insecurity to correlate with failing to have needs met, particularly when ostracized as this activates the attachment system. We did not advance predictions specific to each dimension of attachment insecurity prior to collecting the data, but a recent study suggests pronounced effects for anxious attachment in particular. Specifically, in an exclusion condition (versus inclusion), attachment anxiety was uniquely associated with neural activity implicated in the experience of pain as measured with fMRI data, more so than attachment avoidance (DeWall et al., 2012).
We also examined whether the vulnerabilities of insecure individuals might be specifically triggered when their partner is involved in the act of ostracism, given that a partner’s ostracism may be especially likely to activate attachment concerns (Fraley & Shaver, 2008). Specifically, attachment security may qualify how people respond to ostracism by a partner. Secure individuals may not experience a change in having their needs met given their resilience when confronted with a potential relationship threat (Murray et al., 2006), whereas insecure individuals may interpret partner ostracism as an immediate threat and respond by feeling the fulfillment of their needs thwarted (Mikulincer & Shaver, 2007).

**Relationship Evaluations**

Existing research has not examined how being ostracized affects evaluations of one’s romantic relationship, which was a third aim of the current research. Relationship evaluations vary in their malleability based on current interactions with a partner; relationship satisfaction is strongly influenced by interactions with a relationship partner (Kelley, 1979), as is feeling close to and connected with a partner (Aron, Aron, & Smollar, 1992), whereas other evaluations may be more stable across interactions. We examined closeness and variables derived from the Investment Model (satisfaction, alternatives, investments, commitment; Rusbult, Martz, Agnew, 1998), given that these evaluations capture substantial variation in the course of relationships (Le & Agnew, 2003). These relationship evaluations are likely to be affected by ostracism involving the relationship partner, more so than ostracism by strangers (cf. Maner et al., 2007).

Regardless of whether an ostracizing partner satisfies (or fails to satisfy) fundamental needs, a partner’s direct involvement in ostracism constitutes a negative partner interaction (Zadro et al., 2008). Partners often may function to satisfy a basic need to belong and yet do hurtful or harmful things (Arriaga et al., 2013; Miller, 1997). We predicted that independent of the effects on needs, being ostracized (versus included) by a partner would cause more negative relationship evaluations, relative to the effect of ostracism among strangers. Given the resilience of committed individuals when confronted with relationship threats, we also examined whether
highly committed individuals would be immune to the effects of partner ostracism on relationship evaluations (Arriaga et al., 2007; Murray et al., 2009; i.e., whether high commitment moderates the negative effect of ostracism when a partner is involved in the interaction).

Method

Participants and Design

The sample consisted of \( n = 127 \) couple members (\( M_{\text{age}} = 19.3 \) years, \( SD = 1.1; \) relationship duration, \( M_{\text{months}} = 13.22, SD = 13.4, \) range 1-49), who primarily self-identified as Caucasian/white (76.9%); all but six (5%) were at the same university as their partner.\(^1\) One or both partners received course credit for their participation.

The current experiment manipulated ostracism using a computerized game, Cyberball, in which participants are included or excluded in a ball-tossing activity with two other players (Williams et al., 2000). Participants were randomly assigned (independently, regardless of their partner’s condition) to conditions in a 2 (ostracism: included, excluded) × 2 (partner involvement: partner not involved in the game, partner involved) between-subjects design.

Procedure and Manipulation

Participants (up to four couples in each one-hour session) received instructions in a meeting room and completed the study procedures in individual computer cubicles. Participants were informed that they would play an internet game designed to practice mental visualization, with other randomly determined people that might include their partner. Each player was assigned an ID consisting of a number and letter; couples had matching ID numbers but different letters (e.g., 101a and 101b). Participants were instructed to remember their ID number (e.g., 101) so that they would know whether they were playing their partner (matching number). They were instructed to concentrate more on mentally visualizing the game than on their performance. Once in individual cubicles, participants completed pre-manipulation measures, played the game, and completed post-manipulation measures.
The game, “Cyberball”, consists of having participants toss a “cyber” ball on a computer to two other players, presumably on their own computers in other locations. Participants could see three animated players displayed on their computer: self and two others, each with an ID. Unbeknownst to participants, the two others were computer-controlled confederates.

The others’ ID numbers were varied to elicit the partner involvement manipulation. In the partner involved condition, participants were led to believe they were playing a stranger and their partner based on the others’ ID numbers on the screen (e.g., 306b for stranger, 101a for partner, matching their own ID, 101b); in the partner not involved condition, the two others’ ID numbers differed from each other and the participant’s own ID. The game elicited an ostracism manipulation based on the number of times the ball was tossed to participants by others. In the inclusion condition, the ball was tossed equally to all players; in the exclusion condition, the ball was tossed to the participant only once by each of the other two players early in the game. The game lasted 6 minutes (40 tosses). After completing the manipulation checks and dependent measures, participants were escorted into the meeting room, reunited with their partner and other participants, and thoroughly debriefed.

Pre-Manipulation Measures

Participants completed a subset of items from an established measure of attachment (Brennan, Clark, & Shaver, 1998; selected items demonstrated high factor loadings in the original scale development); 9 items measured anxious attachment ($\alpha = .87$) and 9 items measured avoidant attachment ($\alpha = .87$) using a 9-point response scale (1 = do not agree at all, 9 = agree completely). Items tapping each dimension were averaged to reflect, respectively, mean attachment anxiety ($M = 4.18$, $SD = 1.61$) and avoidance ($M = 2.85$, $SD = 1.30$; $r = .22$, $p = .015$), and did not differ by experimental condition.

Three items from the Investment Model Scale (Rusbult et al., 1998) measured current relationship commitment ($\alpha = .90$; 1 = do not agree at all, 9 = agree completely). They were
averaged to reflect level of pre-manipulation commitment ($M = 7.71$, $SD = 1.57$), and did not differ by experimental condition.

**Dependent Measures**

**Need satisfaction.** After the Cyberball game, participants indicated how they felt during the game using measures from previous ostracism studies (Van Beest & Williams, 2006). The satisfaction of four immediate needs were assessed retrospectively, each with five items using 5-point scales (1 = not at all, 5 = extremely): belonging ($\alpha = .94$), control ($\alpha = .87$), meaningful existence ($\alpha = .87$), and self-esteem ($\alpha = .90$).\(^2\) Items for each variable were reverse-coded as appropriate, and averaged such that a higher number indicated having a need met.

**Relationship evaluation.** Participants completed a single-item measure of closeness with their partner (Aron et al., 1992), consisting of seven pairs of circles representing the self and partner and ranging from no overlap (1) to a nearly complete overlap (7). Participants selected the pair of circles describing their closeness with their partner. Participants also completed the Investment Model Scale (Rusbult et al., 1998), to measure relationship satisfaction (five items; $\alpha = .90$), alternatives to the relationship (five items; $\alpha = .78$), investments in one’s relationship (five items; $\alpha = .80$), and relationship commitment (seven items; $\alpha = .94$), using 9-point response scales (1 = do not agree at all, 9 = agree completely). Items were averaged to reflect more positive evaluations, except alternatives (reflecting better alternatives).

**Manipulation checks.** To assess the effectiveness of the other players manipulation, a subset of participants ($n = 78$) were asked to recall the ID numbers of the other players in the game to determine whether they recognized when their partner was involved in the game. All but two participants (97.4%) recalled the correct ID numbers of the other players. To assess the effectiveness of the ostracism manipulation, participants reported the percentage of throws they received, and also answered two questions asking whether they were ignored and excluded during the game (items averaged, $\alpha = .92$; 1 = not at all, 5 = extremely). The results for numbers of throws and being excluded are described below.
Results

Following current conventions for analyzing couple data, the analyses employed multilevel modeling (SAS PROC MIXED; Campbell & Kashy, 2002). Unless otherwise noted, couple intercepts were modeled as random effects to account for non-independent observations within each couple.

Manipulation Checks

To assess the effectiveness of the ostracism manipulation, reports of number of throws and being excluded each were tested with models that included the main effects of ostracism (0 = inclusion, 1 = ostracism), partner involvement (0 = partner not involved, 1 = partner involved), and their interaction, controlling for attachment anxiety and avoidance (both centered); both models accounted for couple nonindependence. A model testing the effect on number of throws revealed only a main effect of ostracism, $t(41) = -13.91, p < .001$ (the same results were obtained without attachment variables). Excluded participants reported receiving fewer throws during the game ($M = 7\%, SD = 5\%$) than included participants ($M = 39\%, SD = 12\%$).

A model testing the effect on being excluded revealed a main effect of ostracism, $t(43) = 9.57, p < .001$, but also a main effect of partner involvement, $t(43) = -2.46, p = .018$, and their interaction, $t(43) = 2.05, p = .047$ (the interaction was marginal without attachment variables, $p = .055$). Participants reported being ignored/excluded more in the excluded condition ($M = 4.13, SD = 1.06$) than in the inclusion condition ($M = 1.57, SD = .76$), but this difference was bigger when the partner was involved in the game (excluded condition, $M = 4.17, SD = .99$, versus included condition, $M = 1.31, SD = .56$, $t = 14.80, p < .001$), than when the partner was not involved (excluded, $M = 4.09, SD = 1.17$, versus included, $M = 1.88, SD = .86$, $t = 12.02, p < .001$).

Effects on the Need Satisfaction

Four models tested main and interaction effects on need satisfaction variables (one model for each need). Each model included the main effects of ostracism (0 = inclusion, 1 = ostracism), partner involvement (0 = partner not involved, 1 = partner involved), attachment
dimensions (anxiety and avoidance, both centered), and all two-way interactions.\textsuperscript{3} The results of main and interaction effects described below are based on these models (i.e., adjusting for all main effect and interaction terms in the model) and accounted for couple nonindependence. Tables 1 and 2 present the unadjusted means and standard deviations (i.e., unadjusted for other variables tested as predictors in the models).

There was a main effect of ostracism on the satisfaction of all four needs, replicating past research: As shown in Table 1, being excluded significantly lowered need satisfaction relative to being included. Also, the findings revealed a main effect of partner involvement on belonging and meaningful existence, suggesting that simply having a partner involved fortified a sense of belonging and meaningful existence regardless of the ostracism condition.

However, the main effect of partner involvement on belonging and meaningful existence was qualified by an ostracism by partner involvement interaction (significant for belonging, marginal for meaningful existence, as seen in $t$ values reported in Table 2). The simple effect of ostracism was significant within each partner involvement condition but the difference in means was bigger when the partner was involved (belonging / meaningful existence: partner not involved, $t = -9.97$ / -9.09, partner involved, $t = -14.07$ / -14.90, all $p$'s $< .001$). We also examined the partner involvement simple effect within each ostracism condition. When excluded by others, belonging and meaningful existence was unaffected by the partner’s involvement (belonging / meaningful existence: $t = 0.47$ / $t = -0.25$, both non-significant), suggesting that in an absolute sense, being excluded by a partner was no different than being excluded by strangers. However, when being included by others, the simple effect of the partner’s involvement was significant for belonging ($t = 3.22$, $p = .048$) and trended for meaningful existence ($t = 2.41$, $p = .095$), suggesting that included participants felt these needs were satisfied more when the partner was involved than when the partner was absent.

Several effects involving attachment insecurity also emerged in the four models tested on need satisfaction (models as described above). For descriptive purposes, Table 3 presents

\begin{table}
\centering
\caption{Unadjusted Means and Standard Deviations for Need Satisfaction}
\begin{tabular}{|c|c|c|c|c|}
\hline
Need & Ostracism & Partner Involvement & Ostracism \times Partner Involvement & \multicolumn{2}{c|}{Standard Deviation} \\
\hline
Belonging & Excluded & Included & Significant & & \\
\hline
Mean & 5.0 & 7.0 & $t = -2.3$ & & \\
\hline
Mean & 6.0 & 8.0 & $t = -1.5$ & & \\
\hline
Mean & 7.0 & 9.0 & $t = -2.5$ & & \\
\hline
Mean & 8.0 & 10.0 & $t = -3.0$ & & \\
\hline
\end{tabular}
\end{table}

\begin{table}
\centering
\caption{Adjusted Means and Standard Deviations for Need Satisfaction}
\begin{tabular}{|c|c|c|c|c|c|}
\hline
Need & Ostracism & Partner Involvement & Ostracism \times Partner Involvement & \multicolumn{2}{c|}{Standard Deviation} \\
\hline
Belonging & Excluded & Included & Significant & & \\
\hline
Mean & 4.0 & 7.0 & $t = -1.2$ & & \\
\hline
Mean & 5.0 & 8.0 & $t = -1.5$ & & \\
\hline
Mean & 6.0 & 9.0 & $t = -1.7$ & & \\
\hline
Mean & 7.0 & 10.0 & $t = -2.0$ & & \\
\hline
\end{tabular}
\end{table}
conventional correlations that do not account for couple nonindependence and that partial out
the effect of the other attachment dimensions (i.e., associations involving attachment avoidance
partial out attachment anxiety, and vice versa). Unlike Tables 1 and 2 that provide mean levels
of each dependent variable as a function of each manipulation, Table 3 provides the
associations of each attachment dimension with each dependent variable as a function of each
manipulation.

Across all conditions and as shown in Table 3, attachment anxiety was negatively
associated with having needs satisfied; this was not uniformly the case for attachment
avoidance. This suggests that relative to others, anxiously attached individuals in particular
were prone to experiencing a greater threat to having their immediate needs satisfied.

As predicted, the ostracism main effect on having needs satisfied was qualified by
insecure attachment, namely by avoidant attachment on belonging, $t(38) = -2.20, p = .034$,
and control, $t(38) = -2.67, p = .011$, and by anxious attachment on meaningful existence,
$t(38) = -2.62, p = .013$, and self-esteem, $t(38) = -2.85, p = .007$. As seen in Table 3
(“Ostracism” columns), higher attachment avoidance was associated with having belonging
and control needs met when included, whereas avoidance was not significantly related to
need satisfaction in the excluded condition. Higher attachment anxiety was negatively
associated with having meaningful existence and self-esteem needs met, but even more so
in the excluded condition for these two needs. Although insecurely-attached individuals felt
their need satisfaction thwarted more than did secure individuals, the effects of attachment
were not more pronounced when ostracized specifically by a partner (i.e., all tests of the
three-way ostracism × partner involvement × attachment interactions yielded nonsignificant
effects).

Ancillary analyses revealed that anxiously-attached individuals were more inclined to
feel that their belonging and self-esteem needs were not met (belonging, $t = 2.16, p = .037$; self-
esteeem, $t = 2.25, p = .031$) when the partner not involved in the game than when the partner
was involved. These associations were unique to attachment anxiety and did not occur as a function of attachment avoidance.

**Effects on Relationship Evaluations**

All five models testing relationship evaluations included the main effects of ostracism, partner involvement, their interaction, and each attachment dimension (centered). Higher-order interactions involving attachment dimensions were dropped from analyses given the absence of significant effects. As shown in Table 1, neither ostracism nor partner involvement exhibited a main effect on relationship evaluations. Table 2, however, displays a series of significant interactions.

As predicted, there was a significant interaction of ostracism and partner involvement on closeness and satisfaction, which are relatively more malleable than alternatives, investments, or commitment. The interaction was marginal for alternatives and commitment, and was not significant for investments. Tests of the ostracism simple effect within each partner involvement condition revealed that being excluded by a partner (versus included) caused participants to feel less close ($t = -2.13, p = .049$), less satisfied ($t = -2.41, p = .028$), marginally less committed ($t = -1.95, p = .069$), and to perceive better alternatives ($t = -2.24, p = .039$; reverse-coded in the tables), whereas being excluded by two strangers did not affect relationship evaluations (all $t$'s were nonsignificant). Tests of the partner involvement simple effect within each ostracism condition revealed that within the inclusion condition, the partner’s involvement did not affect relationship evaluations more than did strangers (all $t$'s were nonsignificant). However, within the exclusion condition, participants felt less close ($t = -2.65, p = .045$), less satisfied ($t = -2.78, p = .039$), and marginally less committed ($t = -2.15, p = .084$) when the partner was involved in the act of ostracism than when only strangers were involved.

We examined whether individuals who were highly committed to their relationship prior to the manipulation were immune to the simple effect of ostracism involving the partner. This was not the case: The three-way interaction of partner involvement, ostracism, and pre-manipulation commitment on each relationship evaluation was not significant, nor was the two-
way interaction of ostracism and pre-manipulation commitment within the partner involved condition (t’s were |1.10| or weaker).

Several effects involving attachment insecurity also emerged in the five models that were tested on relationship evaluations (models as described above). Across all conditions and as shown in Table 3, attachment avoidance was associated with relatively more negative relationship evaluations; this was not uniformly the case for attachment anxiety. This suggests that relative to others, avoidantly attached individuals in particular were prone to have more negative evaluations of their relationship.⁵

**Discussion**

The results of the current experiment suggest that need satisfaction is more strongly affected when an interaction directly involves a partner, versus only strangers. The effect of the ostracism manipulation on belonging was magnified when the partner was involved, relative to when the partner was not involved (and marginal for meaningful existence). The results did not reveal that a partner’s involvement in ostracism buffers against threats to having needs met: Need satisfaction levels were comparable when excluded by a partner versus by strangers. Hence, when partners engage in exclusion, they might as well be strangers.

However, within the inclusion condition, the simple effect of having a partner involved boosted one’s sense of belonging relative to having only strangers involved, suggesting greater benefits of a partner’s involvement when the interaction is more positive than negative. Another study in participants watched a stranger play Cyberball may be relevant insofar as participants felt a bond with the stranger via a perspective-taking manipulation (Wesselmann, Bagg, & Williams, 2009): Participants who were instructed to adopt the perspective of the stranger when the stranger was included felt their needs satisfied more than participants who did not adopt the perspective of the stranger. This suggests that in a three-person interaction that is not personally harmful, a greater sense of belonging accrues from feeling a bond with another person (via having a relationship with the other person or adopting the other person’s perspective).
This study was the first to examine relationship evaluations, which yields an even richer account of the effects of partner ostracism. As with need satisfaction, observed differences in relationship evaluations were more pronounced when the partner was involved than when the partner was absent. However, the relatively larger impact of the ostracism manipulation on relationship evaluations when a partner was involved (versus not involved) was more a function of being excluded, rather than a function of being included as was the case for need satisfaction variables (belonging and meaningful existence). Those who were ostracized by a partner (versus included) felt less satisfied, less close, and at marginal levels, they perceived better alternatives and felt less committed.

The need satisfaction and relationship evaluation findings together suggest that being excluded by a partner strips a person of the belonging benefits that otherwise would occur when included by a partner; when excluded, partners are not better than stranger in meeting belonging needs. But the effect goes beyond merely failing to satisfy momentary needs: Partner ostracism (versus inclusion) can cause participants to reevaluate their relationship with their partner, at least momentarily.

Whether the observed effects on relationship evaluations lasted beyond a brief moment remains to be tested over an extended timeframe. The effects of partner ostracism were significant for immediate satisfaction and closeness but were marginal for alternatives and commitment. Whatever immediate setbacks these individuals felt in their connection with their partner, their commitment may have bounced back. Indeed, the sample consisted of couples that exhibited relatively high levels of commitment prior to the study (mean = 7.7 on a scale ranging from 1 to 9) and may have been more immune than less committed couples to the effects of ostracism (Arriaga et al., 2007; Murray et al., 2011). The high commitment level observed in this sample also may explain why the effect of partner ostracism on satisfaction and closeness was not more pronounced among those whose commitment was wavering (i.e., there was insufficient variation in commitment to moderate other associations).
Given the importance of attachment security in managing situations that may prime rejection, particularly rejection by a partner, we were interested in whether individuals differed in their responses to being ostracized as a function of their attachment security. Anxiously attached individuals experienced lower need satisfaction regardless of experimental conditions, but their sense of meaningful existence and self-esteem were particularly thwarted when they were excluded by others (regardless of the partner’s involvement), and their sense of belonging and self-esteem were particularly thwarted when the partner was not involved in the interaction (regardless of ostracism condition). Consistent with recent research on neural activation of pain regions (DeWall et al., 2012), anxiously attached individuals may be more reactive to ostracism than avoidantly attached individuals.

The need satisfaction of avoidantly attached individuals also exhibited some reactivity as a result of the ostracism manipulation, specifically in meeting belonging and control needs, but the associations of avoidance occurred within the inclusion condition. Past research has shown that attachment avoidance may become particularly activated (more so than attachment anxiety) in situations that highlight approval from others (Carvallo & Gabriel, 2006). The immediate needs of insecure individuals were no more reactive to ostracism when their partner was one of the ostracizers (versus two strangers; i.e., nonsignificant three-way interaction of ostracism, partner involvement, and either attachment dimension).

Attachment insecurity also figured prominently in relationship evaluations. Avoidantly attached individuals exhibited lower relationship evaluations regardless of experimental condition; they consistently evaluated their relationships more negatively and perceived better alternatives. This finding is consistent with the idea that avoidant individuals prefer relationships that involve relatively lower intimacy and more independence (Mikulincer & Shaver, 2007). The pattern of associations for attachment anxiety was more inconsistent than for attachment avoidance, but anxiety did exhibit a trend of negative associations with relationship satisfaction and consistent positive associations with investments; regardless of conditions, anxiously
attached individuals trended toward lower satisfaction and yet may have felt much at stake (i.e., much that they would lose if their relationship were to end).

In summarizing the attachment results, the current study yielded novel findings regarding the role of attachment insecurity in responses to ostracism. However, there was not evidence of attachment effects specific to being ostracized by a partner. Rather, attachment insecurities exhibited associations more for the general context of ostracism than for the specific context in which a partner is (versus is not) involved in doing the ostracism.

This research has several limitations. First, the findings were based on highly committed couples, which limits generalizability; partners who experience fragile commitment may react more strongly to partner-involved ostracism. Second, the findings demonstrated effects on immediate needs and relationship evaluations. It remains unknown for how long the effects would last in the absence of the debriefing procedures that were adopted, which becomes an important theoretical issue in understanding the impact of negative interactions on ongoing relationships. Third, the current findings are based on a single study. As additional research on partner ostracism becomes disseminated, there will be more data documenting the impact and boundary conditions of partner ostracism.

This study is novel in many ways. First, it involved experimentally manipulating being ostracized by a partner (versus strangers). Many studies have examined the negative effect of being ostracized by strangers (see Williams, 2009 for a review) and the benefits of thinking about a partner when ostracized by strangers (Karremans et al., 2011). However, not much is known about the effects of ostracism when it arguably matters the most: when ostracism is directly caused by a relationship partner (see Zadro et al., 2008 for an excellent integration of correlational work on this issue). Second, this research contributes to the little that currently is known about the role of attachment insecurity in reactions to ostracism; the attachment findings reveal more consistent findings for needs being thwarted in the general context of ostracism than in partner-specific ostracism. Third, this research examined relationship evaluations, which
yielded an interesting and nuanced pattern of findings across the two sets of dependent variables (need satisfaction, relationship evaluation): Individuals do not get a boost from a partner when the partner is directly involved in an act of ostracism and adjust their relationship evaluations accordingly.

Interactions that damage relationships are important given that individuals rely on a partner for satisfying personal needs, particularly a sense of belonging. Relationship partners are not expected to engage in hurtful behavior, and yet often they do (Arriaga & Capezza, 2011; Miller 1997), which makes salient the expectations one has about how to be treated by a partner (Agnew, Arriaga, & Wilson, 2008). Severely harmful behavior (e.g., physical abuse) involves an extreme violation of such expectations, whereas when it comes to hurtful behavior that does not include immediate physical harm, the effects of such hurtful behavior may occur “under the radar” (Arriaga & Capezza, 2008). This research suggests that any boost to a sense of belonging derived during an inclusive interaction involving a partner (versus strangers) is absent during an ostracism interaction. When excluded by others, individuals feel their immediate needs unmet regardless of whether the others involve a partner, which lowers closeness with a partner and may call into question, even if momentarily, the very reason for being in relationship.
References


Miller, R. S. (1997). We always hurt the ones we love: Aversive interactions in close relationships. In R. Kowalski (Ed.), Aversive interpersonal interactions (pp. 11-29). New York: Plenum.


Footnotes

1 Three individuals were eliminated from the original sample of n = 130 (which did not alter the results) because of their awareness that the ostracism activity was pre-programmed, negating the ostracism and partner role manipulations. Despite recruiting “dating” couples, three of the 127 individuals reported being married; all but one couple self-identified as heterosexual.

2 Additional post-manipulation variables included two that were ancillary to this research (negative mood, self-reported pain), and one included in an exploratory vein beyond the established needs measures (betrayal, 1 item, “I was betrayed”). Means and standard deviations of mood, pain, and betrayal, respectively, for each condition (see Table 3) were as follows: partner not involved, included, $M = 2.07, 1.29, 1.45, SD = 0.68, 0.49, 0.87$, vs. excluded, $M = 3.33, 2.33, 2.22, SD = 1.05, 1.35, 1.60$; partner involved, included, $M = 1.82, 1.23, 1.11, SD = 0.55, 0.52, 0.32$, vs. excluded, $M = 3.00, 2.06, 2.08, SD = 0.73, 1.05, 1.23$.

3 Higher-order interaction (three-way and four-way) were non-significant and therefore omitted.

4 There was one exception, an interaction of the two attachment dimensions on satisfaction, whereby lowest levels of satisfaction occurred among individuals high in anxiety and avoidance. Including all two-way and three-way interactions involving attachment dimensions yielded the same pattern of significance on the ostracism × partner interaction.

5 All analyses were repeated controlling for pre-manipulation level of commitment. All of the results yielded effects in the same direction (some effects slightly stronger, some slightly weaker, most unaltered). The one exception was in the model predicting post-manipulation commitment; when controlling for pre-manipulation commitment, the association of avoidance with post-manipulation commitment remained negative but weakened substantially, from $t(43) = -8.16, p < .001$, to $t(42) = -1.17, p = .247$. 
### Table 1

Means, Standard Deviations, and Summary of Findings for the Entire Sample and by Ostracism and Partner Involvement Conditions

<table>
<thead>
<tr>
<th></th>
<th>Entire sample</th>
<th>Ostracism</th>
<th>Partner involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 127)</td>
<td>Included</td>
<td>Excluded</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td></td>
<td>(n = 64)</td>
<td>(n = 63)</td>
<td>(n = 56)</td>
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<td></td>
<td>(n = 71)</td>
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<td></td>
</tr>
<tr>
<td>Need satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>3.08 (1.24)</td>
<td>4.04a (0.79)</td>
<td>2.03b (0.79)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.89a (1.17)</td>
<td>3.21b (1.37)</td>
</tr>
<tr>
<td>Control</td>
<td>2.37 (1.06)</td>
<td>3.20a (0.77)</td>
<td>1.52b (0.49)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.31 (1.09)</td>
<td>2.41 (1.05)</td>
</tr>
<tr>
<td>Meaningful existence</td>
<td>3.10 (1.12)</td>
<td>3.98a (0.62)</td>
<td>2.21b (0.76)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.04a (1.08)</td>
<td>3.16b (1.17)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>3.04 (0.99)</td>
<td>3.65a (0.66)</td>
<td>2.42b (0.88)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.87 (1.07)</td>
<td>3.17 (0.91)</td>
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<tr>
<td>Relationship evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness</td>
<td>5.99 (1.05)</td>
<td>6.14 (1.01)</td>
<td>5.84 (1.08)</td>
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<tr>
<td></td>
<td></td>
<td>6.20 (0.86)</td>
<td>5.83 (1.16)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>7.43 (1.43)</td>
<td>7.57 (1.31)</td>
<td>7.29 (1.54)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.60 (1.40)</td>
<td>7.29 (1.44)</td>
</tr>
<tr>
<td>Alternatives</td>
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<td>3.52 (1.32)</td>
<td>4.02 (1.66)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.63 (1.39)</td>
<td>3.87 (1.61)</td>
</tr>
<tr>
<td>Investments</td>
<td>6.39 (1.55)</td>
<td>6.55 (1.43)</td>
<td>6.23 (1.67)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.61 (1.65)</td>
<td>6.21 (1.46)</td>
</tr>
<tr>
<td>Commitment</td>
<td>7.36 (1.64)</td>
<td>7.60 (1.40)</td>
<td>7.11 (1.83)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.72 (1.36)</td>
<td>7.08 (1.79)</td>
</tr>
</tbody>
</table>

Note. Higher numbers indicate higher need satisfaction (1 to 5) and more positive relationship evaluations, except for alternatives in which higher numbers indicate better alternatives (closeness 1 to 7; all other relationship evaluations, 1 to 9). Different superscripts indicate an ostracism main effect or a partner involvement main effect tested using multilevel modeling (couple intercept modeled as a random factor). All model tests included anxious attachment and avoidant attachment as predictors, and tests of need satisfaction variables also included all two-way interactions.
Table 2

Means, Standard Deviations, and Summary of Findings for the Combined Conditions of Ostracism and Partner Involvement

<table>
<thead>
<tr>
<th></th>
<th>Partner not involved</th>
<th></th>
<th>Partner involved</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Included (n = 29)</td>
<td>Excluded (n = 27)</td>
<td>Included (n = 35)</td>
<td>Excluded (n = 36)</td>
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<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>t</td>
<td>p</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>3.70 (0.91)</td>
<td>2.03 (0.71)</td>
<td>4.33 (0.54)</td>
<td>2.14 (0.80)</td>
</tr>
<tr>
<td>Control</td>
<td>3.04 (1.00)</td>
<td>1.53 (0.44)</td>
<td>3.34 (0.49)</td>
<td>1.52 (0.53)</td>
</tr>
<tr>
<td>Meaningful existence</td>
<td>3.79 (0.73)</td>
<td>2.22 (0.74)</td>
<td>4.14 (0.47)</td>
<td>2.21 (0.78)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>3.50 (0.72)</td>
<td>2.20 (0.98)</td>
<td>3.77 (0.59)</td>
<td>2.58 (0.78)</td>
</tr>
<tr>
<td>Relationship evaluations</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Closeness</td>
<td>6.14 (0.92)</td>
<td>6.26 (0.81)</td>
<td>6.14 (1.09)</td>
<td>5.53 (1.16)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>7.41 (1.43)</td>
<td>7.81 (1.37)</td>
<td>7.69 (1.20)</td>
<td>6.90 (1.56)</td>
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<tr>
<td>Alternatives</td>
<td>3.61 (1.32)</td>
<td>3.65 (1.48)</td>
<td>3.43 (1.34)</td>
<td>4.29 (1.75)</td>
</tr>
<tr>
<td>Investments</td>
<td>6.67 (1.54)</td>
<td>6.55 (1.77)</td>
<td>6.45 (1.34)</td>
<td>5.98 (1.56)</td>
</tr>
<tr>
<td>Commitment</td>
<td>7.70 (1.20)</td>
<td>7.73 (1.53)</td>
<td>7.51 (1.55)</td>
<td>6.65 (1.92)</td>
</tr>
</tbody>
</table>

Note. t and p values correspond to the ostracism × partner involvement interaction tested using multilevel modeling (ostracism: 0 = included, 1 = excluded; partner involvement: 0 = partner not involved, 1 = partner involved). All model tests included anxious attachment and avoidant attachment as predictors, and tests of need satisfaction variables also included all two-way interactions.
Table 3

Associations of Attachment Dimensions with Need Satisfaction and Relationship Evaluations, for Entire Sample and by Ostracism and Partner Involvement Conditions

<table>
<thead>
<tr>
<th></th>
<th>Entire sample</th>
<th>Ostracism</th>
<th>Partner involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 127)</td>
<td>Included</td>
<td>Excluded</td>
</tr>
<tr>
<td></td>
<td>(n = 64)</td>
<td>(n = 63)</td>
<td>(n = 56)</td>
</tr>
<tr>
<td>Anx      Avo</td>
<td>Anx Avo</td>
<td>Anx Avo</td>
<td>Anx Avo</td>
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<tr>
<td>Need satisfaction</td>
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<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>-0.23**</td>
<td>-0.33**</td>
<td>-0.45**</td>
</tr>
<tr>
<td>Control</td>
<td>-0.21**</td>
<td>-0.36**</td>
<td>-0.35**</td>
</tr>
<tr>
<td>Meaningful existence</td>
<td>-0.27**</td>
<td>-0.29*</td>
<td>-0.55**</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-0.31**</td>
<td>-0.28*</td>
<td>-0.49**</td>
</tr>
<tr>
<td>Relationship evaluations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness</td>
<td>-0.03</td>
<td>-0.61**</td>
<td>-0.11</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>-0.21*</td>
<td>-0.41**</td>
<td>-0.25*</td>
</tr>
<tr>
<td>Alternatives</td>
<td>0.00</td>
<td>0.08</td>
<td>0.39**</td>
</tr>
<tr>
<td>Investments</td>
<td>0.30**</td>
<td>0.30*</td>
<td>-0.36**</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.00</td>
<td>-0.61**</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

Note: Anx = pre-manipulation anxious attachment; Avo = pre-manipulation avoidant attachment. Participants randomly assigned to different conditions did not differ in their pre-manipulation levels of each attachment dimension. The associations with each attachment dimension partials out the effect of other attachment dimension. The associations reported above do not account for couple nonindependence; the main analyses reported in the text do. *p < .05, **p < .01.