

Rejection sensitivity and interaction quality in everyday life

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Abstract

The elevated satisfaction that comes from interacting with close ties, as opposed to distal ties, is well-established in past research. What remains less clear is how the quality of daily interactions between close versus distal ties may vary as a function of personality. Drawing on data from a 2-week experience sampling study ($N = 108$ participants, $N = 7755$ observations), we consider how trait rejection sensitivity (RS)—or the tendency to worry about potential social rejection—interacts with perceived closeness and interaction channel (i.e., face-to-face vs. technology-mediated) in daily life. We find that individuals who are high (vs. low) in rejection sensitivity not only view distal tie interactions as less satisfying, they also perceive close tie exchanges as more enjoyable and supportive—but only for technology-mediated (vs. face-to-face) interactions. We also find that individuals who are high in rejection sensitivity have higher variability in the perceived quality of their interactions. These findings demonstrate the interlocked factors of personality tendencies, perceived closeness, and interaction channel in shaping the variability in the quality of daily interactions.

Keywords

Flux, perceived closeness, social anxiety, social distance, social enjoyment, social support, strong ties, tie strength, weak ties

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Personality traits guide how people initiate and interpret social interactions in both face-to-face and mediated exchanges (e.g., Gil De Zuniga et al., 2017; Tov et al., 2016). Within these social exchanges, a pivotal factor that shapes interaction quality is perceived closeness—that is, how “close” an individual feels to another person (Triệu et al., 2019). As expanded upon below, closeness represents a foundational facet of relationships, with people pursuing interactions with close (vs. weak) ties for distinct reasons and seeing those exchanges in different ways. What is less understood is how these factors work together; that is, closeness may *modulate* the effects of personality on interaction quality. Although people generally report more positive experiences when communicating with more familiar ties (Vittengl & Holt, 1998b), interacting with “weak” ties can also contribute to well-being (Sandstrom & Dunn, 2014). Consequently, an overlooked question is how different individuals balance the unique benefits of close and distal ties in daily life, along with how channel (i.e., face-to-face vs. technology-mediated interactions) may play a role. The present study pursues this theoretical space to determine whether different types of ties hold special value (and risk) for individuals who vary in *rejection sensitivity*.

Personality and interaction quality

As people navigate their social environments, including whom they interact with and the nature of those connections, personality shapes these preferences (Wrzus & Neyer, 2016). Research in this area tends to concentrate on Big Five factors, with less work to date on a range of other social cognitive orientations that are potentially relevant. For instance, extroverts both give and receive more social support than introverts (Asendorpf & Wipers, 1998). More broadly, personality predicts the quality of interactions during daily life, as well as overall friendship satisfaction (Tov et al., 2016; Wilson et al., 2015). Extroversion, in particular, is associated with higher quality interactions, at least in terms of increased self-disclosure, conversation depth, and emotional expression (Wilson et al., 2015). The same study found that higher agreeableness and lower neuroticism are also tied to better interactions, albeit less consistently (Wilson et al., 2015). Another study showed that the impact of extroversion on friendship satisfaction is mediated by perceived trust, whereas agreeableness contributes to satisfaction through less confrontational interactions (Tov et al., 2016). Although such studies have revealed important linkages between Big Five factors and interaction quality, there remain a range of unexplored connections between individual and situational factors. In particular, personality traits specifically tied to social cognition (e.g., rejection sensitivity, social anxiety) are likely to underpin how people process cues and conversations in the moment. As described below, such differences in how people respond to social interactions are not captured by the Big Five yet relevant to well-being.

Furthermore, Tov et al. (2016) note that the bulk of research thus far on how dispositional factors influence relationships has concerned romantic ties, sidestepping other social relationships and acquaintances encountered in the midst of everyday life. Prior research also tends to be oriented toward general friendship satisfaction, rather than daily variation in satisfaction produced by different types of social connections

(e.g., close vs. distal relationships) and channels (e.g., face-to-face vs. technology-mediated interactions). For these reasons, our study probes how individual differences in navigating social environments relate to the perceived enjoyment and supportiveness of daily interactions.

Individual differences in handling rejection

Perhaps the most critical risk in social interaction is that of rejection. A wide range of theories and studies across the social sciences suggest that the fear of being rejected, ignored, and isolated by others is nearly universal (Baumeister & Leary, 1995; Durkheim, 1851; Noelle-Neumann, 1974). And these core human concerns are not specious; the experience of being excluded, even temporarily and artificially, is remarkably potent (Bayer et al., 2019; DeWall & Richman, 2011). Indeed, being excluded—from close ties to complete strangers—damages individuals' mood and (sometimes) self-esteem (Blackhart et al., 2009; Gerber & Wheeler, 2009). Over time, actors at the periphery of a social network (i.e., the most secluded individuals) suffer substantially worse health consequences than the people positioned at the network center (Cacioppo et al., 2009).

Most people regularly experience minor instances of perceived exclusion, isolation, or rejection. Some people, though, are more concerned than others about the potential for social rejection to occur. This individual tendency is referred to as *rejection sensitivity* (Kelly, 2001). More precisely, rejection sensitivity (RS) represents the tendency to anticipate and react strongly to the possibility of social rejection (Downey & Feldman, 1996; Mehrabian, 1970). Rejection sensitivity is associated with a number of negative indicators of relationships and well-being, including decreased friendship satisfaction and increased inflammatory responses (Moieni et al., 2015; Wang et al., 2016). As such, this study follows calls for increased attention to the social outcomes of personality (Back & Vazire, 2015) to clarify how rejection sensitivity influences daily interaction quality across different types of ties.

Rejection sensitivity and interaction quality

Leary (2010) describes how a newly rejected individual may “. . . become more attuned to cues regarding his or her relational value, show greater sensitivity to other people's thoughts and feelings about him or her, and devote more cognitive resources to thinking about social situations” (p. 876). Minimal work has focused on the direct link between rejection sensitivity and perceptions of daily interactions across social situations. However, there are reasons to suspect that rejection sensitivity is implicated in daily interaction quality. Rejection sensitivity is positively associated with neuroticism and negatively associated with extroversion (Mehrabian, 1994), as well as negatively correlated with interpersonal competence (Butler et al., 2007). These links are notable given past studies showing that more neurotic and introverted people have worse interactions and develop fewer friendships (Asendorpf & Wipers, 1998; Wilson et al., 2015). Not only do people with increased sensitivity to rejection end up with reduced social resources on average, they also approach new interactions with greater trepidation and defensiveness (Kawamoto et al., 2015). For instance, rejection-sensitive people are more

likely to misperceive ambiguous cues as signs of rejection (Downey & Feldman, 1996), and see seemingly neutral actions by their romantic partners as conflictual (Norona et al., 2014). By comparison, people with low rejection sensitivity actually overlook rejection cues as a form of interpersonal optimism (Romero-Canyas & Downey, 2012).

As a whole, Butler et al. (2007) suggest that rejection sensitivity can be seen as “a more focused, interpersonal component” (p. 1377) of the global trait of neuroticism. Given their guarded approach to social engagement, we anticipated that interaction quality would be lower on average for individuals higher in rejection sensitivity. Specifically, in line with prior studies of daily interactions (Triệu et al., 2019; Vittengl & Holt, 1998a), we centered on two dimensions of interaction quality: perceived enjoyment and supportiveness.

H1: Individuals who are high (vs. low) in rejection sensitivity will perceive interactions with others to be (a) less enjoyable and (b) less supportive.

Moderating role of closeness

Past social psychological studies have typically focused on the effects of social rejection for romantic partners, in-lab strangers, and hypothetical others (e.g., DeWall & Richman, 2011; Kawamoto et al., 2015; Leary, 2010; Mehrabian, 1970; Vanhalst & Leary, 2014). Hence, less is known about how perceived rejection may intersect with the wider spectrum of personal ties encountered during everyday life. We concentrate on the core factor of relationship *closeness*, which is described in different terms across literatures (Berscheid et al., 1989; Binder et al., 2012; Fingerman, 2009). Close (vs. distant) relationships are viewed with greater trust, stronger memories, and deeper support (Sutcliffe et al., 2012), contributing to the fundamental distinctions between “close” vs. “distal” others (Trope & Liberman, 2010) and “strong” vs. “weak” ties (Granovetter, 1973). While there are many dimensions that can contribute to the depth or value of a given relationship (Fingerman, 2009; Wellman, 2012), here we focus on perceived closeness, or the extent to which another individual is *perceived* as close (Triệu et al., 2019). From this lens, romantic partners and loyal friends are likely to be perceived as very close, whereas the barista at the local coffee stop is unlikely to be seen as close—unless one has established a rapport from regular visits.

Synthesizing past perspectives, we test the possibility that the perception of interaction quality might depend on the combination of personality and closeness. Specifically, we question whether rejection-sensitive individuals display a default preference for close vs. distal ties in terms of which ties are interacted with more often, as well as which ties are perceived as more enjoyable and/or supportive. Importantly, close ties tend to provide higher emotional rewards in the midst of daily life, regardless of who initiates contact (Fu et al., 2013). This clear emotional gap between strong and weak ties is now well-established (Ramsey & Gentzler, 2015; Triệu et al., 2019). Accordingly, people often assume they will get more satisfaction from interacting with strong ties—yet this is not always the case (Fu et al., 2013). Indeed, some work emphasizes the emotional benefits of interacting with weaker ties (Sandstrom & Dunn, 2014), confirming that close ties do not necessarily provide greater satisfaction.

For example, since Granovetter's (1973) well-known weak tie hypothesis, research has proliferated around the strategic value of interacting and maintaining weaker, distal ties. According to network theories, weaker ties represent a chance for actors to find new and exclusive bits of information (Triệu et al., 2019). Consistent with Granovetter's thesis, being connected to a wider range of weak ties appears to yield new ideas. Conversely, other research has highlighted benefits of weak ties beyond informational access, including social support (Fingerman, 2009; Fu et al., 2013; c.f., Krämer et al., 2014; Small, 2013). Wright and Rains (2013) highlight how weak ties can have overlooked benefits when providing support for people in difficult situations: "Weak ties offer several advantages relative to strong ties such as family and friends, including being less judgmental and more objective, offering unique information, and a reduced potential for role conflict" (p. 310).

Given the various (and at times overlapping) benefits of both strong and weak ties, some work has examined factors that make individuals prefer one or the other. For instance, Wright and colleagues have shown that "strong-tie versus weak-tie support preference" influences the process of social support mobilization, especially in certain domains such as seeking support for serious health conditions (Wright & Rains, 2013; Wright et al., 2010). In particular, such studies have revealed that people preferred to receive social support about sensitive health information from weak ties. This strong-versus-weak orientation is comparable to past work on "sociotropic differentiation" (Vanhalst & Leary, 2014), which defines the degree to which individuals distinguish between "close" and "distal" ties. In line with this work, we hypothesized that individual differences, such as rejection sensitivity, might influence the preference for engaging with strong, close relationships versus weak, distal relationships.

Specifically, Mehrabian's (1970) early operationalization of rejection sensitivity suggested that individuals high in rejection sensitivity are more likely to rely on familiar others to minimize the chance of new rejection. Hence, rejection sensitivity can lead people take a more guarded approach to social interaction, and potentially shape the likelihood of seeing new or less familiar faces. Levy et al. (2001) posited that people high in rejection sensitivity would pursue close-knit groups in threatening social contexts—and found that rejection-sensitive students entered into fewer and less diverse friendships. Across various domains of interpersonal competence, Butler et al. (2007) find support that rejection-sensitive people are generally worse at relationship initiation. This interpersonal hesitancy, and in some cases hostility (see, Leary, 2010, for a review), has the potential to influence the types of relationships approached and avoided in daily life (Bayer et al., 2018). Consequently, we hypothesized that rejection-sensitive individuals would interact with a greater proportion of close ties and thus lower proportion of distal ties.

H2: Individuals with high (vs. low) rejection sensitivity will have a lower proportion of distal tie interactions in daily life.

Moreover, we suggest closeness may represent a critical moderator in the relationship between rejection sensitivity and interaction quality. Butler et al. (2007) suggest, "as rejection sensitivity increases, both confidence and ability in social interactions decreases, particularly on the occasion of meeting new people where the chances of

rejection are highest” (p. 207). Rejection-sensitive individuals tend to anticipate negative outcomes of social interaction in general, but these expectations are likely to differ based on the familiarity of the context or relationship at hand (Park & Pinkus, 2009; see also N. Van Zalk et al., 2011). In turn, we expected individuals high in rejection sensitivity would view distal interactions as challenging or negative, and then perceive them as less satisfying post-hoc. In other words, rejection sensitivity may magnify the established gap in interaction quality such that there is a larger difference between interacting with close and distal ties. When interacting with distal ties, rejection-sensitive individuals may be self-conscious and/or over-perceive negative social signals, even if there is not a marked difference in their interactions with close friends.

H3: There will be an interaction between rejection sensitivity (RS) and perceived closeness, such that individuals with higher (vs. lower) RS will perceive interactions with distal (but not close) ties to be (a) less enjoyable and (b) less supportive.

Moderating role of interaction channel

Theoretical perspectives on rejection sensitivity thereby imply the importance of social cues—and misinterpretations. The significance of cues holds special relevance in contemporary society, as individuals hop across a range of platforms to reinforce their personal networks (Tandoc et al., 2018). Consequently, it is vital to understand how the type of interaction channel—in particular, we focus on face-to-face vs. technology-mediated interactions—may modulate the relationship between rejection sensitivity and interaction quality. Since technology-mediated interactions often provide fewer social cues (as compared to face-to-face exchanges), people high in rejection sensitivity may experience differential outcomes during such interactions. This consideration is especially relevant given the theoretical overlap between rejection sensitivity and social anxiety. Whereas rejection sensitivity fixates on how people think about rejection specifically, social anxiety covers the broader set of concerns tied to the anticipation, experience, and performance of social interactions (Van Zalk et al., 2011). Notably, prior work has linked social anxiety to perceptions of daily interactions (e.g., Vittengl & Holt, 1998b) and online interaction preferences (e.g., Weidman et al., 2012).

In general, individuals who are higher (vs. lower) in social anxiety, who are wary of negative feedback such as rejection, feel more comfortable online and may prefer technology-mediated interactions over face-to-face ones (see Prizant-Passal et al., 2016, for a review). This preference may emerge because socially anxious individuals have reduced expectations regarding their efficacy to manage self-presentation (Maddux et al., 1988). As a result, these individuals are likely to embrace channels that afford more control over communication and thus attenuate their self-presentational concerns (M. Van Zalk et al., 2014). For instance, asynchronous text-based channels can increase the individuals’ abilities to carefully edit their messages while reducing audio and visual cues (Walther, 2011). With reduced expectations to project and interpret social cues in the moment, mediated (vs. face-to-face) interactions may provide a more comforting experience for rejection-sensitive people. As such, we hypothesized that rejection-

sensitive individuals would feel more satisfied engaging with others via technology-mediated (vs. face-to-face) channels in daily life.

H4: Individuals who are high (vs. low) in rejection sensitivity will perceive face-to-face (vs. mediated) interactions to be (a) less enjoyable and (b) less supportive.

At the same time, closeness and channel are inextricably linked to one another due to the tendency for individuals to talk to certain types of ties via certain technologies (Hall, 2017; Pouwels et al., 2021). For instance, calling and mobile messaging tend to be reserved for closer ties, whereas email and social network sites often include more distal partners (Bayer et al., 2016). Past work also affirms how strong-tie versus weak-tie preferences are uniquely relevant in key mediated contexts such as online health support (Wright & Rains, 2013). In sum, the firm links between closeness and channel raise the question of whether the two factors operate together—along with rejection sensitivity—to guide interaction quality in daily life. For instance, rejection-sensitive individuals' anxiety around unfamiliar ties may be alleviated in mediated interactions with the enhanced control of communication cues and timing. This joint lens echoes past diary studies revealing that social anxiety, partner familiarity, and communication quality can combine to predict daily mood (Vittengl & Holt, 1998b). Given such possibilities, we posed an exploratory research question pertaining to the interaction of our three key predictors.

RQ1: Do rejection sensitivity, perceived closeness, and interaction channel jointly influence the (a) enjoyment and (b) supportiveness of daily interactions?

Variability in interaction quality

Beyond the average quality of daily interactions, rejection sensitivity has potential implications for another dimension of daily interactions: variability (also referred to as “flux”). A high degree of “flux” in perceived quality of daily interactions indicates that people perceive the quality of their interactions to vary widely, spanning from high quality to low quality. Relatedly, higher flux in negative affect across daily life is correlated with greater neuroticism, lower extroversion, and lower agreeableness (Sadikaj et al., 2015). In turn, Sadikaj et al. (2015) proposed that, “High negative affect flux may indicate an enhanced sensitivity and reactivity to negative interpersonal situations, such as those in which the individual is at risk for exclusion and rejection, thereby leading to higher negative affect flux” (p. 471). Extending this line of reasoning, those who are rejection sensitive may exhibit greater flux in the perceived quality of their daily interactions—*independent of whether they report more negative interactions on average.* As such, we posed a final hypothesis:

H5: Individuals who are high (vs. low) in rejection sensitivity will exhibit greater variability in their perceptions of recent interaction (a) enjoyment and (b) supportiveness.

Current study

To deepen our understanding of how rejection sensitivity may underpin daily interactions, we conducted an experience sampling method (ESM) study. Specifically, we examine the links between rejection sensitivity and interaction quality, while accounting for the potential moderating roles of perceived closeness and interaction channel. We utilize ESM in order to investigate how people experienced interactions with others at different levels of closeness right after interactions occur in daily life (i.e. outside of a lab context). Personal network or relationship researchers will often focus on close ties due to the difficulty of measuring distal ties, which may be forgotten or misremembered in retrospective surveys. Therefore, our study was designed to prioritize the collection of naturalistic interactions that varied in closeness level and channel type.

Method

Participants

Data were drawn from a sample of undergraduates at a large university in the Midwestern United States as part of a larger project about social interactions and social media (for more information about the overall project, see Bayer et al., 2016; Bayer et al., 2018; Triêu et al., 2019). A total of 1,656 undergraduates, randomly selected by the Registrar's Office, received an invitation email with a link to an online screening survey in the Spring of 2014. Screened individuals ($n = 364$) were automatically and immediately informed of their eligibility. To be eligible, participants had to be 18 years or older, own a smartphone, have a U.S. phone number, and report posting content to Facebook daily (in order to restrict the sample to active social media users). Of the 220 eligible participants, 154 participants chose to participate in the full study. Our final sample size for analyses was reduced ($n = 108$) because certain survey measures, including our key predictor (rejection sensitivity), were only displayed to a random sub-sample of participants due to an overlooked setting in our Qualtrics survey display logic. Overall, the sample was 20.5 years old on average ($SD = 2.11$), with 75 (69.4%) participants identifying as female and 33 (31.6%) identifying as male. Across the sample, participants identified as one or more racial identities as follows: White: 80; Black: 6; Native American: 4; Asian American: 19; Hispanic: 8; Native Hawaiian or Pacific Islander: 2; Other: 6.

Procedures

All study procedures were approved by the University of Michigan and performed in accordance with relevant guidelines and regulations. Informed consent was obtained for all participants. Participation included three main parts: an online baseline survey including demographics and personality measures, experience sampling across 14 days, and an endpoint survey about Facebook and other technology use not included in current study (see Online Supplemental Materials). Following the initial questionnaire, participants were given instructions for the ESM period. Over the 2-week experience sampling collection, participants received six surveys each day (84 possible responses), with the sixth "end-of-day" survey being significantly longer and including questions

pertaining to the entire day. The completion rate for the 108 participants was 85.8% on average ($SD = 0.14$; range: 39.3–100%). Surveys took between 1 and 2 minutes to finish, and a unique link for each survey was delivered to participants via text messaging. Importantly, participants were told to complete the surveys “right away”—and not to complete a survey if a newer one had arrived. Participants could up to \$5.00 per day (see Online Supplemental Materials for details).

Measures

Rejection sensitivity. At the baseline appointment, participants completed the Sensitivity to Rejection Scale (MSR; Mehrabian, 1970, 1976). The MSR scale focuses on perceived (lack of) control related to common social scenarios, such as controversial arguments, critical discussions, and personal requests. The complete MSR scale contains 24 items, including items such as “I sometimes prefer being with strangers than with familiar people” (reverse coded) and “I try to feel a group out before I take a definite stand on a controversial issue.” Individuals who score high on rejection sensitivity (RS) are more concerned about the potential for negative social feedback, and therefore report taking steps to reduce that possibility. Participants responded to each statement on a Likert scale ranging from (1) *Strongly Disagree* to (7) *Strongly Agree* (Cronbach’s $\alpha = .80$; $M = 4.25$, $SD = 0.66$).

Daily interactions. Four experience sampling questions (each sent 6 times per day) asked about the “most recent interaction” that occurred in participants’ lives. Interactions were defined broadly as “any form of communication between you and another person.” The first question was “How did your most recent interaction occur?” and presented the following interaction options: Face-to-Face ($N = 4577$), Voice Call ($N = 410$), Text or Instant Message ($N = 1886$), Email ($N = 171$), Facebook including Messenger ($N = 431$), Twitter ($N = 29$), Instagram ($N = 30$), Snapchat ($N = 138$), and Other (excluded from analysis). We collapsed all mediated categories to produce a dichotomous variable for analysis: face-to-face ($N = 4577$) vs. mediated ($N = 3208$) interactions. The other three questions dealt with interaction enjoyment and supportiveness, and closeness of interaction partner: “How pleasant or unpleasant was your most recent interaction?” with response options: (5) very pleasant to (1) very unpleasant ($M = 4.00$, $SD = 0.98$); “Within that interaction, how supportive or unsupportive was that person to you?” with response options: (5) very supportive to (1) very unsupportive ($M = 3.90$, $SD = 0.98$); and “How close are you to that person?” with response options: (5) very close to (1) not at all close ($M = 3.87$, $SD = 1.24$). These core dimensions are reflected in prior research related to daily interactions, friendship maintenance, and mediated interactions (e.g., Oswald et al., 2004; Trju et al., 2019; Vittengl & Holt, 1998a). As such, we considered two dimensions of interaction quality and examined how these dimensions varied as a function of RS.

Analytical approach. Our analyses accounted for the nested dimensions of the data set, which violate the assumption of independent observations. As such, we conducted multilevel linear mixed effects models, specifying days (1–14) nested within participants (1–108). Models were run in R using the *lmer* function via REML estimation through the

lme4 package. Our analyses were not preregistered and thus should be treated with appropriate caution given their exploratory nature. For H1, H3, H4, RQ1, and H5, we ran separate models for our two interaction quality outcomes (i.e., supportiveness and enjoyment); for H2, perceived closeness was specified as the outcome variable. In all models (see Online Supplemental Materials for equations), we controlled for gender and age unless stated otherwise, which reduced our sample for analyses to 106 due to missing age data for two participants. We allowed intercepts and slopes for focal Level-1 predictors (interaction channel, perceived closeness) to vary randomly, following recommendations to control for Type I Errors (Heisig & Schaeffer, 2019). All continuous predictor variables were grand mean centered unless specified otherwise. Analysis code and output is available on the Open Science Framework.

Results

(H1) To examine the hypothesis that rejection sensitivity (RS) would be associated with lower perceived quality of interactions, we specified RS as a fixed effect and included random intercept terms to account for the fact that observations were nested within days, within individuals. We did not observe a significant main effect of rejection sensitivity on perceived enjoyment of the recent interaction, $\gamma_{001} = -0.11$, $t(7607) = -1.79$, $p = 0.08$, nor perceived supportiveness, $\gamma_{001} = -0.08$, $t(7601) = -1.42$, $p = 0.16$. Thus, H1 was unsupported.

(H2) To assess the hypothesis that individuals high in rejection sensitivity would report interacting with fewer distal ties (and more close ties) in daily life, we specified RS as a fixed effect and closeness as the dependent variable. We did not observe a main effect of rejection sensitivity on perceived closeness; i.e. individuals high in rejection sensitivity were not more likely to report engaging with closer ties, $\gamma_{001} = 0.00$, $t(7621) = -0.05$, $p = 0.96$.

(H3) To test the hypothesis that rejection sensitivity would predict less satisfying interactions with distal ties, we specified an interaction term including rejection sensitivity and perceived closeness as fixed effects. In simpler, intercept-only models, we found support for the hypothesis that higher rejection sensitivity would be associated with lower perceived interaction quality with distal ties. Thus, there was a significant interaction between RS and closeness in both the enjoyment model, $\gamma_{101} = 0.03$, $t(7592) = 2.34$, $p < 0.02$, and the supportiveness model, $\gamma_{101} = 0.04$, $t(7586) = 2.73$, $p < 0.01$. The pattern of responses also demonstrated that rejection-sensitive individuals viewed interactions with their close ties to be *more* rewarding than those of participants who were lower in RS. Hence, the effects displayed a radial pattern such that RS participants had greater divergence in interaction quality for stronger and weaker ties. The null main effects for the H1 models, then, appeared to reflect a “wash” effect—the better close tie interactions and worse distal tie interactions cancel out in aggregate.

As a robustness check given recent recommendations to allow random slopes where possible to reduce type I error (Barr et al., 2013), we also ran models allowing a random slope for the relationship between closeness and quality. These more conservative models, which allowed the relationship between closeness and interaction quality to vary across people and days, attenuated the radial effects observed above. Specifically, we

Table 1. Linear mixed effects models for interaction quality.

Predictors		Outcomes			
		Enjoyment		Supportiveness	
Level-3	Level-1	γ	t-Value	γ	t-Value
RS × Closeness Models					
	Gender ¹	-0.14	-1.81	-0.17*	-2.26
	Age	-0.01	-0.21	-0.02	-0.60
	RS	-0.09	-1.58	-0.07	-1.29
	Close	0.14***	9.47	0.21***	12.29
	RS × Close	0.02	0.84	0.03	1.11
RS × Channel Models					
	Gender ¹	-0.23**	-2.82	-0.26**	-3.14
	Age	-0.01	-0.44	-0.01	-0.51
	RS	-0.14*	-2.36	-0.09	-1.47
	Channel ²	-0.30***	-9.24	-0.18***	-5.25
	RS × Channel	0.11*	2.19	0.03	0.67
Three-Way Models					
	RS	-0.10	-1.90	-0.04	-0.78
	Channel ²	0.35***	-16.41	-0.24***	-11.78
	Close	0.14***	8.71	0.22***	11.64
	RS × Channel	0.09**	2.91	0.01	0.38
	RS × Close	0.00	-0.13	0.01	0.51
	Channel × Close	0.04*	2.43	0.03	1.49
	RS × Channel × Close	0.06*	2.28	0.05*	1.98

All models reported above included a random slope for the most relevant Level-1 variable (i.e., channel or closeness). Estimates are unstandardized coefficients.

¹Female: 0; Male: 1.

²Face-to-Face: 0; Mediated: 1.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

found that perceived closeness did not significantly moderate the relationship between RS and enjoyment, $\gamma_{101} = 0.02$, $t(7592) = 0.84$, $p = 0.40$. Similarly, the second model showed that the interaction between RS and closeness did not significantly predict supportiveness, $\gamma_{101} = 0.03$, $t(7586) = 1.12$, $p = 0.27$. Thus, we observed mixed evidence for a relationship between closeness and interaction quality. However, closeness was positively related to the enjoyment and supportiveness, replicating the idea that close ties are more rewarding on average (see Table 1).

(H4) To examine the hypothesis that rejection sensitivity would be differentially associated with interaction quality during mediated (vs. face-to-face) interactions, we tested the cross-level interaction between rejection sensitivity and the channel type of each interaction (face-to-face vs. technology-mediated), nested within days and participants. We first tested simpler, intercept-only models—i.e. not allowing the slope of the relationship between channel type and interaction quality to vary across individuals. In the enjoyment model, we observed a significant interaction between RS and channel, $\gamma_{101} = 0.11$, $t(7607) = 3.35$, $p < 0.001$. More precisely, high (vs. low) rejection sensitivity was

associated with a narrower difference in the perceived enjoyment of recent interactions comparing mediated and face-to-face interactions. Hence, while rejection-sensitive individuals found face-to-face interactions more enjoyable than mediated interactions on average, this gap was significantly reduced as compared to low RS individuals in our data. By contrast, we did not observe an interaction in the supportiveness model, $\gamma_{101} = 0.03$, $t(7601) = 0.99$, $p = 0.32$. As above, we ran separate models that specified a random intercept and random slope for interaction channel. These models yielded similar conclusions: In the enjoyment model, we again found that the interaction between RS and channel was significant, $\gamma_{101} = 0.11$, $t(7607) = 2.19$, $p = 0.03$, and non-significant in the second model predicting supportiveness, $\gamma_{101} = 0.03$, $t(7601) = 0.67$, $p = 0.51$. Thus, H4 was supported with respect to perceived enjoyment, but not supportiveness (see Table 1).

(RQ1) To explore whether the interaction between rejection sensitivity and perceived closeness on interaction quality depended on interaction channel, we specified a three-way interaction between RS, closeness, and channel. We included a random intercept and a random slope for the relationship between perceived closeness and interaction quality. In models specified using grand-mean-centered closeness (i.e., interpreted such that 0 is the average perceived closeness of relationships across the full sample), we found a three-way interaction for both outcomes. The three-way interaction term significantly predicted enjoyment, such that the radial pattern described above was stronger for mediated (vs. face-to-face) interactions, $\gamma_{301} = 0.06$, $t(7740) = 2.28$, $p = 0.02$. Similarly, the three-way interaction was associated with supportiveness, $\gamma_{301} = 0.05$, $t(7735) = 1.98$, $p < 0.05$, such that the interaction between RS and closeness was more pronounced for mediated interactions (see Table 1; Figure 1).

(H5) Finally, we tested whether participants with high rejection sensitivity exhibited greater variability in the quality of their daily interactions (i.e., greater flux). Using the H1 model specification, visual evaluation of the residuals suggested that individuals high in RS exhibit greater flux in their daily interactions. In addition, we conducted Levene's Tests to evaluate whether the assumption of homogeneity of variance was violated when comparing the residuals of low, medium, and high rejection-sensitive individuals.¹ Results confirmed that there was significant heterogeneity in the residuals for enjoyment at different levels of rejection sensitivity, $F(2,7604) = 10.80$, $p < 0.001$. Likewise, the assumption of homogeneity was also violated when comparing the residuals of supportiveness across three levels of rejection sensitivity, $F(2,7598) = 27.51$, $p < 0.001$. See Figure 2 for a visualization of model residuals across levels of RS.

Following Zuur et al. (2009), we also tested whether models allowing for heterogeneity demonstrated better fit than null models (i.e., standard multilevel models in which homogeneity is assumed). These additional linear mixed effect (LME) models were specified in R using the *lme* function (via the *nlme* package) and operate in a similar manner to the *lmer* models reported above. Notably, the *nlme* package includes variance functions that allow specifying different levels of variability in the residuals of *lme* models as a function of predictor variables (e.g., rejection sensitivity). To test H5, we ran a model that specified rejection sensitivity as a fixed effect, and again included random intercept terms to account for the fact that observations were nested within days, within individuals. In line with the approach described by Zuur et al. (2009), we used the *varPower* and *varExp* variance structure functions included in *nlme* to assess whether the

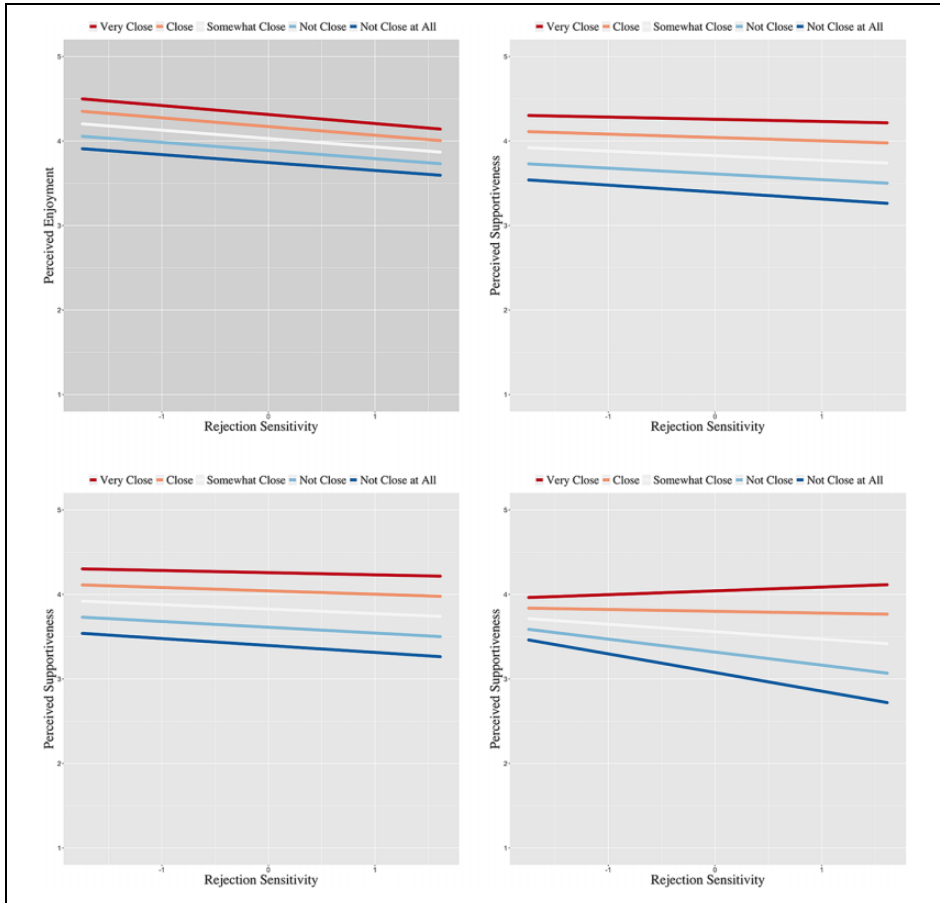


Figure 1. The plots above display the three-way interactions in which rejection sensitivity, closeness (visualized as a categorical variable), and channel jointly predict perceived enjoyment (top) and perceived supportiveness (bottom). For both dimensions of interaction quality, rejection-sensitive individuals exhibited a wider gap between close and distal tie interactions when interacting via mediated channel (vs. during face-to-face interactions).

variability of interaction quality depended on rejection sensitivity, and ran ANOVAs to compare model fit. All heterogeneity models were specified using the original, uncentered variables.

Results provided evidence of heterogeneity due to rejection sensitivity; that is, ANOVAs comparing the null model with models allowing for heterogeneity in the residuals indicated better fit for the latter models in most cases. Specifically, the first enjoyment model allowed for heterogeneity to increase across levels of rejection sensitivity via the *varPower* variance function. This model (AIC = 20224.47) did not display a significantly better fit in a log likelihood ratio test, $L = 3.18$ ($df = 1, p = 0.07$), than the null model assuming homogeneity (AIC = 20225.65). However, a second

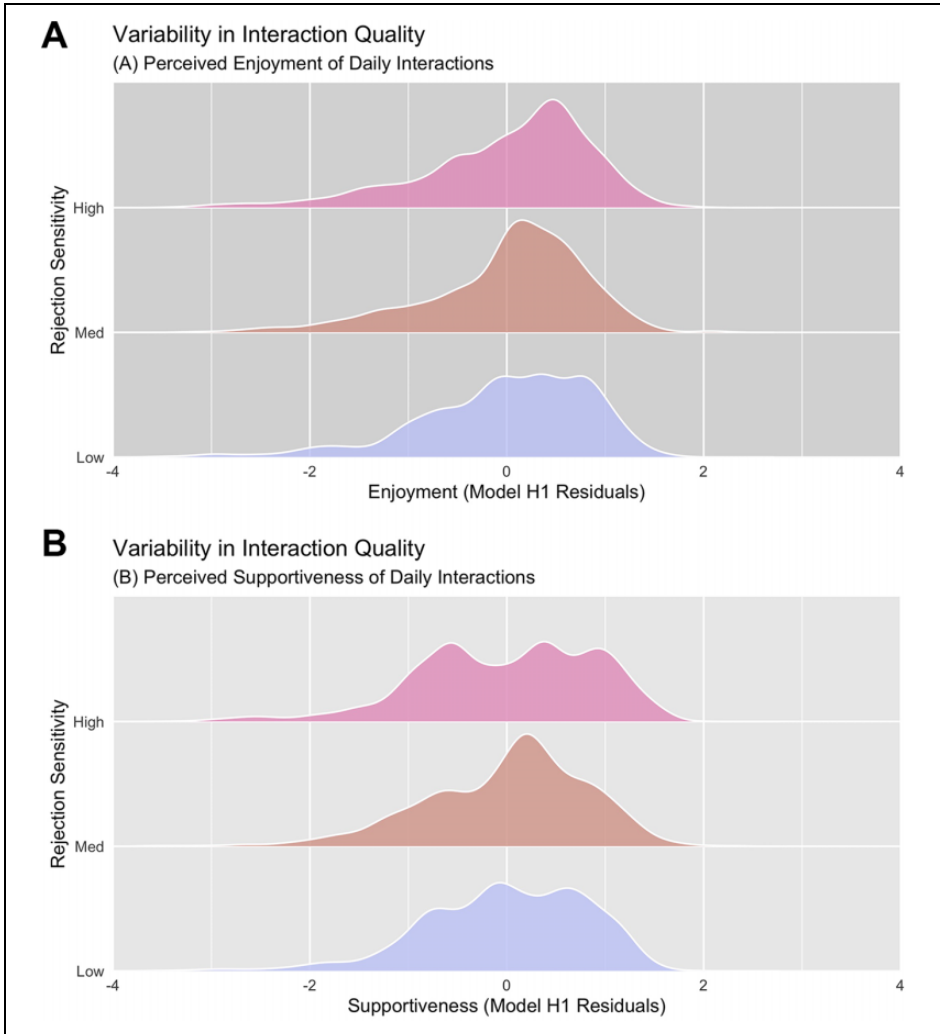


Figure 2. The density ridge plots above illustrate how rejection-sensitive individuals exhibited greater variability in their perceptions of interaction enjoyment (top; A) and supportiveness (bottom; B). Here, participants were separated into thirds and each group is shown on a separate row of the Y axis. The increased variability is visible in the wider tails and additional peaks for individuals high in rejection sensitivity (top row in pink). For an alternative approach to visualization taking an overlaid approach, see Figure 3 in the Online Supplemental Materials.

enjoyment model allowed for heterogeneity to increase across levels of rejection sensitivity via the *varExp* variance function ($AIC = 20222.44$) demonstrated a better fit, $L = 5.21$ ($df = 1$, $p = 0.02$), than the nested model assuming homogeneity ($AIC = 20225.65$). Additionally, we found convergent evidence for elevated heterogeneity in supportiveness among individuals with higher rejection sensitivity. The first

supportiveness model again allowed for heterogeneity to increase across levels of rejection sensitivity via the *varPower* variance function (AIC = 20145.82), and showed a better fit in a log likelihood ratio test, $L = 19.81$ ($df = 1, p < 0.0001$), than the null model assuming homogeneity (AIC = 20163.63). Likewise, a second supportiveness model allowed for heterogeneity to increase across levels of rejection sensitivity via the *varExp* variance function (AIC = 19715.11), and also indicated a better fit, $L = 24.51$ ($df = 1, p < 0.0001$), than the nested model assuming homogeneity (AIC = 20163.63). Collectively, our results offer support for the idea that rejection-sensitive individuals experience greater variability in the quality of their daily interactions, especially in terms of perceived supportiveness.

Discussion

Previous research has typically presumed (and found) that close, strong ties are more rewarding than distal, weak ties. As Sutcliffe et al. (2012) relate, “Meeting intimate friends should produce a measurably more intense emotional response than meeting just good friends” (p. 162). Adhering to this theorized rule of close relationships, we replicate the positive relationship between perceived closeness and interaction satisfaction. The closer participants felt to the other person, the more enjoyable and supportive they reported the social interaction on average. At the same time, we observed initial evidence that, during technology-mediated exchanges, rejection sensitivity appears to widen this established gap in interaction quality.

The literature on social rejection has considered the negative implications of perceived and actual rejection for children, romantic relationships, and strangers, among other populations (Leary, 2010). Here, we observe an indication of an underlying moderator: perceived closeness of the interaction partner. More specifically, people who were higher (vs. lower) in rejection sensitivity reported less enjoyable and supportive interactions with distal ties during daily life. Concurrently, and somewhat surprisingly, these individuals also tend to enjoy some types of interactions with their close ties—i.e. during technology-mediated interactions—more than people with lower rejection sensitivity. This pair of findings suggests that individual differences in rejection sensitivity have the potential to shape social experiences in unique ways across levels of closeness. However, this pattern of effects was clearly conditional on a third factor in our final models: interaction channel; there was a visibly distinct set pattern of effects when dividing daily interactions by interaction channel (see Figure 1). During technology-mediated interactions, participants displayed a radial pattern in which high (vs. low) rejection-sensitive individuals reported lower satisfaction when communicating with distal ties, and somewhat higher satisfaction when interacting with close ties. But this was not the case for face-to-face interactions. That is, we find that the amplified spread in interaction quality occurs more strongly for mediated (vs. face-to-face) interactions.

As a whole, we find consistent evidence that rejection-sensitive individuals experience face-to-face and mediated interactions differently. Individuals high in rejection sensitivity showed a reduced appreciation for face-to-face (vs. mediated) interactions, though their face-to-face exchanges were still slightly more rewarding on average. This warrants comparison to research showing that socially anxious individuals tend to prefer

online interactions—in part because there are fewer audio and visual cues apparent (see Prizant-Passal et al., 2016). In the case of asynchronous channels such as texting (our most common mediated interaction type), anxious individuals are granted more time to edit and reflect upon their responses. Our findings thus echo the social compensation hypothesis, or the idea that online spaces offer a safe environment for socially vulnerable individuals to build connections with others (Valkenburg & Peter, 2007). In doing so, we generalize the social compensation hypothesis to individual differences in rejection sensitivity. As such, our data provide (indirect) evidence that social channels (and the nature of their cues) may interact with social cognitive tendencies in reliable ways. Further research is needed to integrate perspectives on rejection sensitivity and social anxiety, and how they relate to interactions across the media ecosystem.

More broadly, the observed interaction effect between rejection sensitivity and perceived closeness aligns theoretically with research on trait loneliness. Rejection sensitivity can be viewed as a personality precursor to trait loneliness, with the “added-stress hypothesis” stating that the negative health risks of being lonely occur due to the chronic perception of rejection and exclusion (Cacioppo et al., 2003). At the same time, other hypothesized pathways by Cacioppo and colleagues depict a more complicated story of social experiences in daily life. Of most relevance, the “differential-reactivity hypothesis” suggests that lonely individuals react differently to environmental conditions, including the presence of intimate ties (van Roekel et al., 2018). Furthermore, recent empirical work has provided evidence for this “differential” hypothesis (van Roekel et al., 2014, 2018), such that lonely individuals tend to experience the highest levels of state loneliness when alone—yet also the lowest levels when being with intimate or positive ties. Altogether, our study reaffirms the need to consider how people can obtain a sense of belonging to others via multiple paths, including the role of individual differences in guiding which path is taken (Hirsch & Clark, 2019).

Beyond the moderating roles of perceived closeness and interaction channel, our study contributes to our understanding of the downstream social implications of personality in daily life (see Back & Vazire, 2015). Surprisingly, we did not find a main effect of rejection sensitivity on interaction quality nor the proportion of distal interactions in daily life. This suggests that, despite facing (and/or causing) unique social tribulations at times (Leary, 2010), rejection-sensitive individuals are not experiencing categorically negative outcomes or engaging with vastly different relationships (cf., Bayer et al., 2018). Rather, individuals high in rejection sensitivity appear to have wide-ranging perceptions of social interactions that depend on situational factors (e.g., closeness and channel). This takeaway is further echoed by the finding that rejection-sensitive individuals reported greater variability (i.e., flux) in their perceptions of interactions across daily life. As displayed in Figure 2, we found evidence that those with high (vs. medium or low) rejection sensitivity report more daily interactions as unsupportive *and* supportive in parallel. Combined, these additional insights suggest personality traits (e.g., rejection sensitivity) can modulate the mean and variability of interaction quality in dynamic ways that require attention to real-world spaces and situations.

In recent decades, a series of defining research narratives have cemented in relation to daily interactions with personal networks. These include the ideas that social support bolsters well-being (e.g., Albrecht & Adelman, 1984), weak ties offer novel informational

opportunities (e.g., Granovetter, 1973), and close ties facilitate positive affect (e.g., Vittengl & Holt, 1998b). Although these narratives have a wealth of studies behind them, their centrality can also lead researchers to overlook or oversimplify the spectrum of social experiences that occur in the flow and flux of everyday life. Yet new findings are complicating the narratives summarized above; for example, the importance of expediency for selecting among social support givers (Seo et al., 2016), the importance of strong ties for informational support (Krämer et al., 2014), and the hidden value of weak ties for boosting mood (Sandstrom & Dunn, 2014). In this study, we further complicate these perspectives by finding that the experience of interacting with close and distal ties may depend on the interaction of personality and technology.

Limitations and future directions

Due to design and analysis constraints, our study discounts a variety of social interaction and communication episode qualities that may have different implications for perceived closeness and personal well-being (e.g., Hall, 2018). In particular, our measurement of interaction quality as enjoyment and supportiveness was relatively narrow, and our associated analyses did not untangle interaction quality from basic emotion processes (cf., Ramsey & Gentzler, 2015). Additionally, our measurement of “technology-mediated” interactions was limited given the myriad ways in which mediated channels differ from one another. Although concerns about power level and convergence issues deterred us from focusing on more fine-grained moderation effects, exploratory analyses revealed largely consistent effects when focusing on our most common form of mediated interaction (texting). Follow-up studies should seek to combine other dimensions of everyday talk and communication technologies with perspectives on rejection sensitivity and other social cognitive orientations. In doing so, future research should investigate broader approaches to measuring “closeness,” especially given the potential for such perceptions to vary as a function of other variables. Whereas we treated closeness as a concrete, situational variable, it is possible that other factors could cause some individuals (e.g., those high in rejection sensitivity) to perceive their relationships as more distant in the moment.

Last, it is important to note that we encountered different effects sizes in some models based on specification choices. The interaction effects in our simpler, intercept-only models became weaker when including the random slopes for Level-1 variables (interaction channel, perceived closeness). Most saliently, we found more robust evidence for the hypothesis that the interaction of rejection sensitivity and perceived closeness would be associated with interaction quality when excluding the random slope for the Level-1 closeness variable. Though our collective set of models indicated how rejection sensitivity, interaction channel, and perceived closeness are interrelated, our results illustrate how even robust cross-level interaction effects can be severely attenuated when allowing the slope for closeness to vary by individual. Given the relatively small size of our sample (~100 participants), the ambiguous results leave open the possibility that we were underpowered, especially given our scope on cross-level moderation effects. These complexities underscore the significance of specification choices when analyzing multi-level datasets (Barr et al., 2013; Heisig & Schaeffer, 2019), as well as their relevance to

experience sampling studies going forward. Future research on personality and everyday interactions should anticipate such challenges, while balancing the need to guard against both Type I and Type II errors.

Conclusion

The prospect of rejection represents a perennial human concern, but is especially salient for some individuals. Overall, we have shown that these individuals—the people who worry the most about being rejected—report a distinctive pattern of daily interactions. Most notably, we identify how rejection sensitivity, perceived closeness, and interaction channel can operate together to shape the quality and variability of daily interactions. As such, despite the well-recognized appreciation of intimate ties, we confirm the need to study how personality guides the fulfillment of social needs from different sources and channels. Not only did high (vs. low) rejection-sensitive individuals view distal ties as less satisfying, they also perceived close tie interactions as more rewarding via technology-mediated channels—thus magnifying the quality gap in a radial pattern. In this way, the people who worry the most may also savor their close ties the most, reflecting the complexity of real-world social experiences.


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Open research statement

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: This research was not preregistered. The analysis code and output from the research will be made available via OSF. The data and materials used in the research can be obtained by emailing: bayer.66@osu.edu.

Supplemental material

Supplemental material for this article is available online.

Note

1. To perform these analyses, Rejection Sensitivity (RS) was recoded into a categorical variable with three groups: bottom third ($N = 36$), middle third ($N = 36$) and top third ($N = 36$).

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