Research Article

Psychological Science
2020, Vol. 31(6) 607–622

DOI: 10.1177/0956797620904975
www.psychologicalscience.org/PS

The Distinct Effects of Empathic Accuracy for a Romantic Partner's Appeasement and Dominance Emotions

Bonnie M. Le[1], Stéphane Côté[2], Jennifer Stellar[3], and Emily A. Impett[3]

[1]Department of Psychology, University of Rochester; [2]Joseph L. Rotman School of Management, University of Toronto; and [3]Department of Psychology, University of Toronto Mississauga

Abstract

When is accurately reading other people's emotions costly and when is it beneficial? We aimed to identify whether the association between empathic accuracy and both relationship quality and motivation to change varies depending on the type of emotion being detected: appeasement (e.g., embarrassment) or dominance (e.g., anger). Romantic partners (couples: $N = 111$; individuals: $N = 222$) discussed a characteristic they wanted their partner to change and rated their own emotions and perceptions of their partner's emotions. Relationship quality was self-reported and objectively coded. Using multilevel response-surface analysis, we tested preregistered hypotheses about whether empathic accuracy for appeasement and dominance emotions was differentially associated with relationship quality and motivation to change. For appeasement emotions, empathic accuracy predicted higher relationship quality. For dominance emotions, higher intensity of felt emotions—not empathic accuracy—predicted lower relationship quality. Empathic accuracy did not predict the motivation to change. These results suggest that the benefits of empathic accuracy can depend on the emotion type.

Keywords

empathic accuracy, negative emotions, partner change, relationship quality, multilevel response-surface analysis, open materials, preregistered

Received 5/17/19; Revision accepted 12/16/19

Even in the best relationships, romantic partners experience conflict. Given how essential close relationships are for health and well-being (Holt-Lunstad, Smith, & Layton, 2010), it is important for couples to navigate these conflicts successfully. One way to tackle such conflicts is to ask a partner to change, such as to decrease spending, make healthier lifestyle choices, or be more ambitious (Storaasli & Markman, 1990). Requesting such personal and potentially threatening changes can elicit negative emotions and strain relationships (Overall, Fletcher, & Simpson, 2006). Given the importance of enacting change to maintain relationships (Overall & McNulty, 2017), it is crucial to determine how partners can best navigate these emotionally charged situations.

One factor that may be important in navigating change is *empathic accuracy* for emotions, or a person's ability to correctly identify another's emotions (Ickes & Hodges, 2013).[1] Although research has yet to examine how empathic accuracy affects relationships in change conversations, past work offers mixed findings on the costs and benefits of empathic accuracy. Although empathic accuracy for negative emotions is generally associated with better relationship outcomes (Sened et al., 2017), in certain contexts, negative effects of empathic accuracy have been observed (Simpson, Oriña, & Ickes, 2003). To better understand the costs and benefits of empathic accuracy, we tested whether the effects of empathic accuracy vary depending on the type of emotion detected. In

Corresponding Author:
Bonnie M. Le, University of Rochester, Department of Psychology, 479 Meliora Hall, Rochester, NY 14627
E-mail: bonnie.le@rochester.edu

the context of requesting change, we predicted that the consequences of empathic accuracy for relationship quality and motivation to change would depend on the type of negative emotions perceived and specifically whether the emotions serve *appeasement* (e.g., embarrassment) or *dominance* (e.g., anger) functions.

Identifying Costs and Benefits of Empathic Accuracy Within a Social-Functionalist Framework

Empathic accuracy can help people respond in appropriate ways to others, promoting high-quality interactions (Mayer, Salovey, & Caruso, 2008). Recent meta-analytic research has indicated that empathic accuracy for negative emotions was associated with greater romantic-relationship satisfaction (Sened et al., 2017). In other work, however, empathic accuracy undermined closeness when people accurately perceived their romantic partner's threatening thoughts and feelings (Hodges, Lewis, & Ickes, 2015; Simpson et al., 2003). Taking a social-functional approach on emotion (Keltner & Haidt, 1999; Van Kleef, 2016)—which holds that emotions serve different social functions by communicating unique information about the beliefs and the intentions of the person experiencing the emotion—we propose that the associations between empathic accuracy and relationship outcomes should vary depending on the type of emotion that is perceived.

In particular, accurately detecting embarrassment—an emotion that signals remorse for previous actions (Keltner & Haidt, 1999)—may be socially constructive by allowing partners to gauge each other's appeasement motivations. In contrast, accurately detecting anger—an emotion that signals defensiveness and blame (Van Kleef, 2016)—may be socially destructive, with partners asserting their dominance. Although these two emotions are both negative in valence, and are often aggregated together in measures of empathic accuracy for negative emotions, the distinct information they convey may be associated with different relationship outcomes when accurately perceived. We hypothesized that empathic accuracy for appeasement emotions would predict greater relationship quality and motivation to change, whereas empathic accuracy for dominance emotions would predict lower relationship quality and motivation to change. We tested these predictions from the perspective of both a partner requesting change (i.e., *agent* of change) and a partner receiving the change request (i.e., *target* of change).

Appeasement emotions

Appeasement emotions—including guilt, embarrassment, and shame (Keltner & Buswell, 1997; Van Kleef, 2016)—arise with awareness that one has broken a social or moral norm (Tangney, 1999). They often serve to restore relationships by communicating submissiveness and recognition of wrongdoing (Van Kleef, 2016). They also signal that a person values another's welfare, especially in communal relationships (Sznycer, 2019). For example, embarrassment is interpreted by observers as a signal of prosocial intent after making a social error and is associated with greater perceived commitment in romantic relationships (Feinberg, Willer, & Keltner, 2012).

Given the socially constructive nature of appeasement emotions, we advanced two hypotheses (preregistered at https://osf.io/dx82y/). First, we predicted that when agents of change accurately perceive the degree to which targets feel appeasement emotions, both partners would experience higher relationship quality and targets would be more motivated to change. Agents' empathic accuracy for targets' expressions of appeasement emotions may predict higher relationship quality by allowing agents to pick up on targets' recognition of their own shortcomings (Fischer & Manstead, 2016; Keltner & Buswell, 1997; Van Kleef, 2016) and willingness to cooperate with agents' change requests (Van Kleef, 2016). When agents accurately detect these conciliatory signals, they may foster a more accommodating environment that facilitates change in targets.

Second, we predicted that when targets accurately perceive agents' appeasement emotions, both partners would experience higher relationship quality and targets would be more motivated to change. Targets' empathic accuracy for agents' appeasement emotions may foster higher relationship quality because targets may better detect that agents care about and want to protect their feelings (Keltner & Buswell, 1997; Van Kleef, De Dreu, & Manstead, 2010). For instance, agents may express guilt when raising an issue that may hurt their partner (e.g., weight) or embarrassment when addressing a sensitive issue (e.g., sex). When targets accurately perceive such emotions, they may be more motivated to cooperate (Van Kleef et al., 2010) because they perceive agents to be sensitive in their feelings and change requests.

Dominance emotions

Dominance emotions—including anger and contempt (Keltner & Buswell, 1997; Van Kleef, 2016)—arise when people feel that their goals have been blocked. These emotions often manifest in attacking, coercing, or blaming another person for one's own frustrations (Van Kleef, 2016). They are damaging because they are perceived as a signal of social rejection (Heerdink, Van Kleef, Homan, & Fischer, 2014) and elicit interpersonal distance, sometimes grounded in a sense of righteousness or superiority (Hutcherson & Gross, 2011). These emotions are particularly destructive in relationships,

with criticism and defensiveness being threats to relationship longevity (Driver, Tabares, Shapiro, Nahm, & Gottman, 2003).

Given the socially destructive nature of dominance emotions, we advanced two additional hypotheses (preregistered at https://osf.io/dx82y/). First, we predicted that when agents accurately perceive dominance emotions felt by targets, both partners would experience lower relationship quality and targets would be less motivated to change. We expected that agents' empathic accuracy for targets' dominance emotions would reduce relationship quality because agents may detect targets' confrontational or hostile reactions (e.g., defensiveness, criticism) to their change requests (Fischer & Roseman, 2007; Kubany, Bauer, Muraoka, Richard, & Read, 1995; Van Kleef, 2016). Detecting these detrimental cues may also strain relationship interactions, decrease cooperation, prompt counterattacks (Van Kleef, 2016), and reduce a target's motivation to change.

Second, we predicted that when targets accurately perceive dominance emotions felt by agents, both partners would experience lower relationship quality and targets would be less motivated to change. Targets' accurate detection of agents' dominance emotions may help them better perceive agents' desire to control them or the situation (Lemay, Overall, & Clark, 2012; Van Kleef et al., 2010), thereby dampening the quality of the relationship. For instance, agents may feel angry and annoyed by their partner's habits (e.g., neglecting chores, phone use) or may experience contempt (e.g., at partner insensitivity or flirtatiousness). Accurately perceiving dominance emotions—and their related destructive underpinnings—may cause a target to feel threatened or attacked, thereby compromising closeness and undermining motivation to change (Simpson et al., 2003; Van Kleef et al., 2010).

Method

Participants

We recruited a community sample of 111 couples (222 individuals). Our sample size was based on the available budget and past research examining associations between predictors and relationship quality in romantic couples in the lab (80 couples; Impett et al., 2010), as well as outcomes among couples requesting change (e.g., 61–62 couples; Overall et al., 2006; Overall, Fletcher, Simpson, & Sibley, 2009). Our target sample size was 100 couples. However, we oversampled by adding 11 more couples that were scheduled for the study after we reached our target sample size. We decided to retain these participants to compensate for any data that might be missing by the end of the study (i.e., survey nonresponses, technical issues). At the time of conducting this work, statistical power requirements for the analytical technique that we adopted for this research, multilevel response-surface analysis (ML-RSA), had yet to be determined (Nestler, Humberg, & Schönbrodt, 2019). However, our sample size exceeded some multilevel-modeling power recommendations (30–50 Level 2 observations; Maas & Hox, 2005).

Participants ranged in age from 18 to 57 years (M = 26.76, SD = 7.17). Participants were 47.75% male and 49.10% female; 1 participant was transgender, and 2 participants did not report their gender. The majority of participants were in committed unmarried relationships (74.77%), 22.97% were married, and 2.25% did not report their relationship status. The average relationship length was 4.13 years (SD = 2.67). Participants reported the following ethnic backgrounds: 24.63% Western European, 18.23% South Asian, 7.88% Eastern European, 6.90% Caribbean, 5.42% South American, 2.46% African, 2.46% Middle Eastern, 2.46% Southeast Asian, 14.29% bi- or multiethnic, 12.81% other, and 2.46% unreported.

Procedure

Couples completed a lab session and a follow-up survey as part of a multipart study.[2] During the lab session, couples were video recorded as they discussed a characteristic that they would like their partner to change. Partners were randomly assigned to the role of the agent or the target for the first discussion, after which they switched roles for the second discussion.

For each of the two discussions, we adapted a conversational structure used in past research (Fritz, Nagurney, & Helgeson, 2003). At the beginning of the first discussion, the agent was instructed to "please tell your partner about something you would like them to change, work on, or improve." Agents were given 1 min to think of a topic. Then targets listened to the agent respond to this prompt for 1 min. The target of change then responded for 1 min. The agent spoke for an additional 1 min, followed by another minute by the target. Finally, agents and targets spoke freely for an additional 2 min. At the end of the discussion, both agents and targets reported on their relationship quality and targets reported on their motivation to change. Couples then repeated this procedure, with agents and targets switching roles for the second discussion. Initial pilot testing and participant feedback indicated that this conversation structure felt natural to participants and comfortably suited the topic. Topics of change that agents raised included personal characteristics (e.g., sensitivity, anger,

pessimism, affection, communication skills, confidence) and behaviors (e.g., exercise, phone use, swearing, chores, cleaning).

After data collection, but prior to testing hypotheses, we preregistered our hypotheses and analysis plan on the Open Science Framework. Our preregistration, R analysis script, measures, and supplemental material can be found at https://osf.io/d9syw/.

Measures

Key measures were completed twice: once after the first discussion and again after the participants switched roles in the second discussion. Bivariate correlations among all variables are shown in Table S1 at https://osf.io/r8bjx/.

Experience and perception of appeasement emotions. Participants rated the extent to which they felt the following three emotions during the discussion on a 10-point scale (1, *not at all*, to 10, *as much as I've ever felt*): ashamed, embarrassed, guilty. These emotions were selected on the basis of taxonomies of emotions that group together emotions that serve to pacify and preserve relationships (Van Kleef, 2016). Participants responded to the item, "How much did you feel the following emotions during this discussion with your partner?" in their role as agent (α = .80; M = 2.04, SD = 1.38) and their role as target (α = .86; M = 3.26, SD = 2.32). Participants also rated the extent to which they perceived these emotions in their partner with the item, "How much did your partner feel the following emotions during this discussion?" (1, *not at all*, to 10, *as much as they've ever felt*) in their role as agent (α = .85; M = 3.10, SD = 2.13) and their role as target (α = .83; M = 2.04, SD = 1.62).

Experience and perception of dominance emotions. Participants rated the extent to which they felt the following six emotions on a 10-point scale (1, *not at all*, to 10, *as much as I've ever felt*): angry, annoyed, contemptuous, hostile, resentful, and upset. These emotions were selected on the basis of taxonomies of emotions that group together emotions related to feelings of blame and goal frustration in relationships (Van Kleef, 2016). Participants responded to the item, "How much did you feel the following emotions during this discussion with your partner?" in their role as agent (α = .90; M = 2.71, SD = 1.98) and their role as target (α = .90; M = 2.64, SD = 1.92). Participants also rated the extent to which they perceived these emotions in their partner with the item, "How much did your partner feel the following emotions during this discussion?" (1, *not at all*, to 10, *as much as I've ever felt*) in their role as agent (α = .92; M = 2.84, SD = 2.16) and their role as target (α = .89; M = 2.70, SD = 1.91).

Relationship quality. We used a multimethod approach for assessing relationship quality (Impett et al., 2010). This entailed obtaining two self-reported indices of relationship quality (one from the agent and one from the target) and three objectively coded indices (*agent's relationship satisfaction, target's relationship satisfaction*, and *couple's conflict*), for a total of five indices of relationship quality. The first two indices, *agent's self-reported relationship quality* (α = .85; M = 4.97, SD = 1.57) and *target's self-reported relationship quality* (α = .82; M = 4.99, SD = 1.40), were both assessed using the following four items (Impett, Javam, Le, Asyabi-Eshghi, & Kogan, 2013): "I felt satisfied with my relationship in this discussion," "I felt close to my partner in this discussion," "I felt there was tension between my partner and me in this discussion" (reverse scored), and "My partner and I experienced conflict in this discussion" (reverse scored). All four items were rated on a 7-point scale (1, *not at all*, to 7, *a lot*).

Two teams of research assistants coded objective measures of relationship quality, and reliability was assessed using intraclass correlation coefficients (ICCs). A team of four research assistants observed videos of the couples' conversations and rated the third index of relationship quality, agent's relationship satisfaction, ICC(2,4) = .52; M = 3.55, SD = 0.54. A separate team of four research assistants rated the fourth index, target's relationship satisfaction, ICC(2,4) = .67; M = 3.89, SD = 0.67. Agent and target relationship satisfaction were assessed using the item, "In this conversation, how satisfied and happy do you think this person is with their relationship?" In addition, the latter team of four research assistants coded the fifth and last index, couple's conflict, ICC(2,4) = .69; M = 1.89, SD = 0.78, with the item "How much conflict did the COUPLE experience?" All objective codes were rated on a 5-point scale (1, *not at all*, to 5, *an extreme amount*). Reliability for these codes was computed with ICCs using two-way random-effects models assessing absolute agreement among raters (Bliese, 2000). All objective coding was completed prior to hypothesis testing.

To decrease the number of tests conducted and associated increases in Type I errors, we created a single composite of relationship quality to test hypotheses. To do so, we first standardized each of the five relationship-quality indices, because they were measured on different scales. We created a composite measure to represent the subjective and objective assessments of relationship quality equally, because past evidence suggests that subjective reports and informant assessments of well-being are equally valid (Zou, Schimmack, & Gere, 2013). We averaged the composite subjective and composite objective relationship-quality indices (r = .61) to create a single measure of *couple's relationship quality* (M = –0.01, SD = 0.84). In Appendix A (see the supplemental

material at https://osf.io/r8bjx/), we present a multiverse analysis (Steegen, Tuerlinckx, Gelman, & Vanpaemel, 2016) of results for other ways of aggregating the relationship-quality items. Specifically, we report the results of hypothesis tests with each of the five separate relationship-quality items as originally preregistered (Tables S3–S6 and Figs. S1–S4 at https://osf.io/r8bjx/) and with a composite of the five standardized relationship-quality items (Table S7 and Fig. S5 at https://osf.io/r8bjx/).

Motivation to change. Targets rated their motivation to change on a one-item, face-valid measure created for the current study: "To what extent will you put in the effort to make this change for your partner?"[3] This item was rated on a 7-point scale (1, *not at all*, to 7, *a lot; M* = 5.63, *SD* = 1.24).

Exploratory control variables. We conducted robustness checks by testing additional analyses with control variables. Because partners who are more satisfied or close may engage in more emotional disclosure (Laurenceau, Barrett, & Pietromonaco, 1998) and may be more capable of maintaining satisfaction in difficult discussions, we assessed baseline relationship quality as a control to verify that it did not cause spurious associations between empathic accuracy and either relationship quality or motivation to change after the discussion. Baseline relationship quality was a composite of agents' and targets' self-reported relationship quality (r = .66; M = 5.55, SD = 1.06), assessed when participants first entered the lab and prior to engaging in any discussions. Baseline relationship quality was assessed using the same four items (αs = .84; Ms = 5.55, SDs = 1.16) used to assess relationship quality after the discussion. Objectively coded baseline relationship quality was not assessed.

Because problem severity may also impact the emotions expressed and perceived, as well as couples' satisfaction and abilities to meet one another's standards (McNulty, 2016), we assessed the severity of the issues couples discussed to verify that it did not cause spurious associations in our results. Issue severity was coded by four research assistants using one item, "How severe was the issue they want their partner to change?" rated on a 3-point scale (1, *not at all severe*; 2, *somewhat severe*; 3, *very severe*), ICC(2,4) = .67; M = 1.83, SD = 0.40 (Overall et al., 2009).[4]

Results

Analytic strategy: ML-RSA

To test our hypotheses, we used ML-RSA (Nestler et al., 2019). ML-RSA is ideal for assessing questions concerning matching, including how the correspondence between a target's self-reported emotions and an agent's perception of the target's emotions predicts relationship outcomes. Typically, difference scores between partners' actual and perceived emotions are calculated as indices of empathic accuracy. This method removes important information about emotion intensity and may produce ambiguous findings because it cannot disentangle whether results occur because of variation in the difference or variation in just one of the components of the difference (Edwards, 1994). ML-RSA overcomes these issues by preserving all reported information on continuously measured scales and provides a direct test of congruence that difference scores have often been used to approximate (Edwards, 1994). Thus, it was possible for us to test whether empathic accuracy, felt emotions, or perceptions of others' emotions predict motivation to change and relationship quality. In addition, ML-RSA accounts for dependencies in the data, with partners (Level 1) nested within couples (Level 2).

Multilevel polynomial models were estimated with fixed slopes using restricted maximum-likelihood estimation. Criteria were regressed on the following simultaneous predictors: the target's reported emotions, the agent's perceptions of the target's emotions, the interaction between the target's reported emotions and the agent's perception of the target's emotions, a squared term of the target's self-reported emotions, and a squared term of the agent's perception of the target's emotions. Equivalent models were tested with a target's perception of an agent's emotions and an agent's reported emotions. We first ran these models without control variables, as preregistered, and then repeated the analyses with control variables to test for robustness of the effects. Because of newer recommendations for using response-surface analysis, we updated and improved on the analyses outlined in our preregistration by following recent recommendations (Nestler et al., 2019).

In all multilevel polynomial models, the predictors were separated into their person- and couple-level components. Person-level (Level 1) variables consisted of the reported and perceived emotions centered on the grand mean of their average; these centered variables were used for creating the person-level squared and interaction terms. Although we were primarily interested in person-level effects, we also included couple-level (Level 2) variables in all models to control for any remaining dependencies after centering. These included aggregates of reported and perceived emotions that were centered on the grand mean of the average across all couples; these centered variables were used for creating the Level 2 squared and interaction terms.

In our figures, observations are plotted on a three-dimensional response-surface plot to aid interpretation. We provide a concise overview of the key parameters of the plots here (see Edwards, 1994, and Nestler et al., 2019, for full formulas and descriptions). Three characteristics

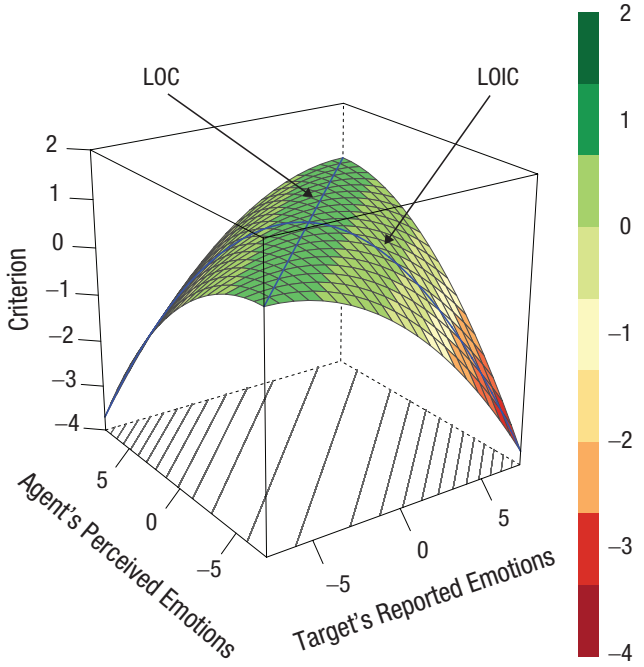

Fig. 1. Example response-surface plot. The response surface depicts the estimated multilevel model assessing congruence between a target's reported emotions and an agent's perception of the target's emotions. The line of congruence (LOC) is where actual emotions and perceived emotions match at all levels. The line of incongruence (LOIC) is where actual and perceived emotions are of equal intensity, but their signs are opposite from each other at all levels. The colored bar on the right represents values of the criterion. Lines appear on the bottom surface of the cube to aid visualization.

of the response surface are important for assessing congruence effects: the line of congruence (LOC), line of incongruence (LOIC), and first principle axis (FPA; Nestler et al., 2019). As shown in Figure 1, the plot includes an LOC where a target's self-reported emotions and an agent's perception of a target's emotions match at all levels. Figure 1 also includes an LOIC where a target's self-reported emotions and an agent's perception of a target's emotions are of equal intensity but whose signs are opposite from each other at all levels. The FPA lies across the surface of the plot where the highest (or lowest) ridge occurs. In Figure 1, the FPA corresponds with the LOC, though that need not always be the case (see Nestler et al., 2019, for other examples).

ML-RSA allows us to test different parameters related to the LOC, LOIC, and FPA to assess evidence for empathic accuracy. We explored two different types of congruence effects to test our hypotheses. The first effect, known as a *strict congruence effect* (Nestler et al., 2019), tested whether accuracy across all levels of an emotion is associated with the highest (in the case of appeasement emotions) or lowest (in the case of dominance emotions) levels of relationship quality and motivation to change. The second effect, known as a *broad congruence effect* (Nestler et al., 2019), tested whether, in addition to an accuracy effect, there is also an effect of predictor levels, so that for two couples with the same discrepancy between felt and perceived emotions, the couple with the higher mean of the two has the highest (in the case of appeasement emotions) or lowest (in the case of dominance emotions) levels of relationship quality and motivation to change.

The key parameters related to the LOC, LOIC, and FPA are $\hat{\alpha}_1$, $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$. These parameters are derived from the multilevel polynomial coefficients and capture unique combinations of how self-reported and perceived emotions relate to the criteria. For the current investigation, all parameters were computed from the person-level multilevel coefficients. The $\hat{\alpha}_1$ and $\hat{\alpha}_2$ parameters test the linear slope and curvature of the LOC and are derived from the linear and second-order (i.e., squared and interaction terms) multilevel polynomial coefficients, respectively. The $\hat{\alpha}_3$ and $\hat{\alpha}_4$ parameters test the linear slope and curvature of the LOIC and are derived from the linear and second-order (i.e., squared and interaction terms) multilevel polynomial coefficients, respectively. The $\hat{\alpha}_5$ parameter tests for the equality of the FPA and the LOC; it is derived from the difference of the squared terms.

ML-RSA allowed us to determine whether empathic accuracy is associated with relationship quality and the motivation to change. Table 1 and Figure 2 show parameters and response-surface plots, respectively, that would indicate strict and broad congruence effects for our predictions concerning appeasement emotions (the directions of the coefficients are reversed for our predictions concerning dominance emotions). Specifically, the plot on the left in Figure 2 displays a strict congruence effect. The curvature of the LOIC is significant and negative ($\hat{\alpha}_4 < 0$)—reflecting an inverted U shape in which values of the criterion are highest when perceived and actual emotions match, relative to when

Table 1. Response-Surface Coefficients for Empathic-Accuracy Congruence Effects

Effect type	$\hat{\alpha}_1$	$\hat{\alpha}_2$	$\hat{\alpha}_3$	$\hat{\alpha}_4$	$\hat{\alpha}_5$
Strict congruence effect	0	0	0	< 0	0
Broad congruence effect	> 0	0	0	< 0	0

Note: The table indicates the pattern of significant and nonsignificant parameters that must be met in order to conclude that one of the two empathic-accuracy effects predicts relationship quality and the motivation to change. These parameters reflect our predictions about appeasement emotions. The direction of the significant effects, if depicted, would be reversed for our predictions about dominance emotions.

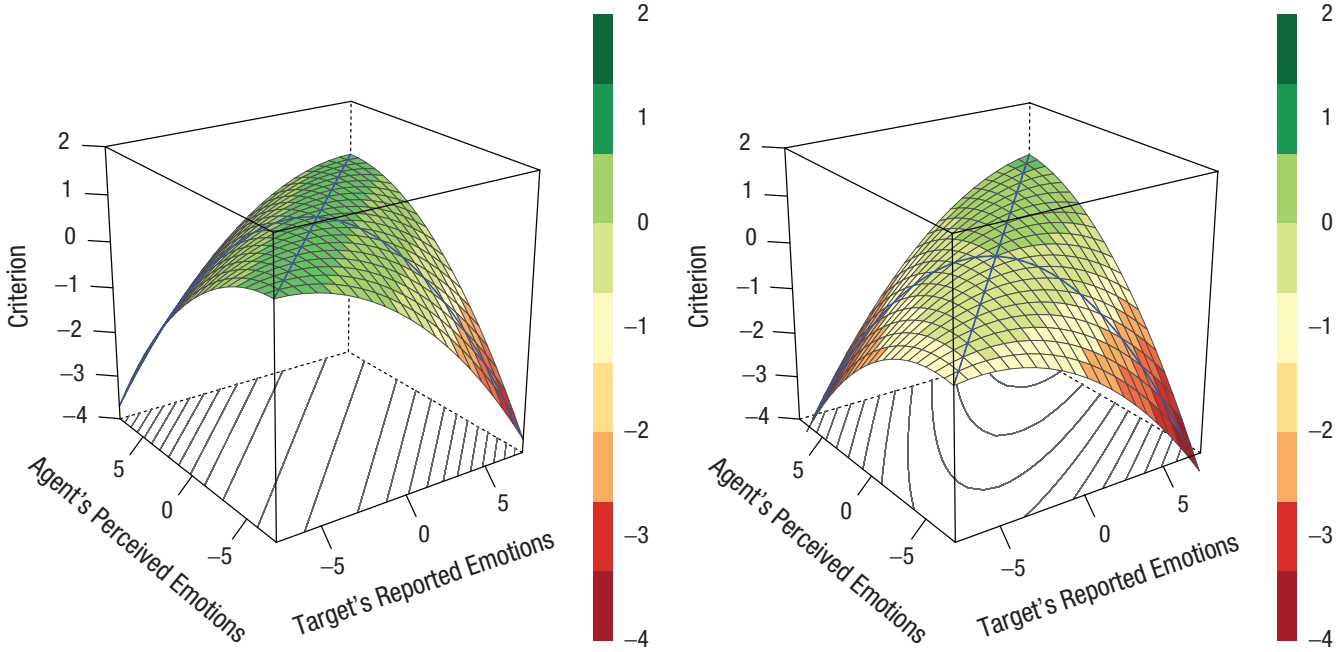

Fig. 2. Example response-surface plots depicting a strict congruence effect (left) and a broad congruence effect (right). In the left-hand plot, empathic accuracy (i.e., congruence between a target's reported emotions and an agent's perceived emotions) positively predicts the criterion. In the right-hand plot, empathic accuracy predicts higher levels of the criterion, with an additional mean-level main effect positively predicting the criterion (i.e., a rising ridge). The direction of the curves along the line of incongruence—and in the case of the broad congruence effect, also along the linear slope of the line of congruence—if depicted, would be reversed for our predictions about dominance emotions. See Figure 1 for an explanation of the key components of the response-surface plot.

they mismatch. Importantly, and as shown in Table 1, for a strict congruence effect to occur, the $\hat{\alpha}_1$, $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_5$ parameters must be nonsignificant. The plot on the right in Figure 2 displays a broad congruence effect: Empathic accuracy predicts greater levels of the criterion, and in addition, the criterion is higher at higher levels of the mean of felt and perceived emotions. The curvature of the LOIC is negative and significant ($\hat{\alpha}_4 < 0$)—reflecting an inverted U shape in which values of the criterion are highest when perceived and actual emotions match, relative to when they mismatch. In addition, the slope of the LOC ($\hat{\alpha}_1 > 0$) is positive and significant—indicating that values of the criterion are highest when the mean of felt and perceived emotions is high relative to when the mean is low. Importantly, and as shown in Table 1, for a broad congruence effect to occur, the $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_5$ parameters must be nonsignificant.

All analyses were conducted in the R programming environment (Version 3.6.1; R Core Team, 2019) using the following packages: *RSA* (Version 0.9.11; Schönbrodt, 2017) with additional ML-RSA functions (Nestler, Humberg, & Schönbrodt, 2018; Nestler et al., 2019), *lme4* (Version 1.1-20; Bates, Mächler, Bolker, & Walker, 2015), and *lmerTest* (Version 3.0-1; Kuznetsova, Brockhoff, & Christensen, 2017). Response surfaces were generated to display all data points, which appear on the base of the graphs, rather than on the curves, for ease of viewing. A bag plot is also shown on the base of each graph, with 50% of the data points appearing in an inner polygon and the remaining data points appearing in an outer polygon and beyond. Plots for response-surface analyses should be interpreted only in the area of the bag plot, where actual data are observed (Nestler et al., 2019).

We clarify when significant response-surface parameters are driven by a single multilevel coefficient (Weidmann, Schönbrodt, Ledermann, & Grob, 2017). Further, we do not interpret response-surface parameters above and beyond the single multilevel coefficient that is driving them. As an example, the $\hat{\alpha}_1$ parameters are derived from a combination of agent-felt emotions and target-perceived emotions in predicting relationship quality. Should an $\hat{\alpha}_1$ effect be driven by a particularly strong (significant) agent-felt emotion coefficient but not a (nonsignificant) target-perceived emotion coefficient, we would interpret the significant $\hat{\alpha}_1$ parameter as being driven by agent-felt emotions rather than by an additive effect that also includes the influence of target-perceived emotions.

Finally, we report the full results of our analyses, including all response-surface analysis and multilevel

Table 2. Multilevel Polynomial and Response-Surface Coefficients for an Agent's Empathic Accuracy for a Target's Appeasement Emotions

	Couple's relationship quality			Target's motivation to change		
Parameter	*b*	*SE*	*p*	*b*	*SE*	*p*
Response-surface coefficients						
$\hat{\alpha}_1$	–0.018	0.028	.525	0.053	0.090	.558
$\hat{\alpha}_2$	–0.008	0.009	.397	–0.018	0.027	.509
$\hat{\alpha}_3$	0.075	0.042	.076	0.175	0.136	.201
$\hat{\alpha}_4$	–0.043	0.019	.024	0.058	0.049	.237
$\hat{\alpha}_5$	0.005	0.011	.616	–0.011	0.031	.720
Multilevel polynomial coefficients						
Intercept	0.141	0.109	.198	5.685	0.150	.000
X_w	0.029	0.026	.264	0.114	0.081	.161
Y_w	–0.047	0.025	.067	–0.061	0.083	.461
X_w^2	–0.010	0.006	.117	0.004	0.018	.805
XY_w	0.018	0.009	.057	–0.038	0.025	.131
Y_w^2	–0.015	0.009	.097	0.016	0.025	.535
X_b	–0.089	0.077	.250	–0.023	0.113	.838
Y_b	–0.055	0.073	.449	–0.080	0.113	.477
X_b^2	0.007	0.035	.842	–0.019	0.047	.690
XY_b	–0.004	0.058	.941	0.027	0.077	.731
Y_b^2	–0.030	0.035	.391	–0.020	0.047	.671

Note: For the multilevel polynomial coefficients, *X* refers to the target's reported appeasement emotions, and *Y* refers to the agent's perception of the target's appeasement emotions; w subscripts denote person-level effects, and b subscripts denote couple-level effects. All $\hat{\alpha}$ values were derived from the person-level multilevel coefficients. The $\hat{\alpha}_1$ to $\hat{\alpha}_5$ parameters were key to our hypotheses.

coefficients, in the four tables that follow. When our hypotheses were not supported, we describe results that we did not hypothesize but that showed convergence across domains—that is, when they were in the same direction for the same emotion and the same criterion (i.e., thereby increasing our confidence that they were not simply Type I errors).

Empathic accuracy for appeasement emotions

Agent's empathic accuracy for a target's emotions. Our first hypothesis was that when an agent had greater empathic accuracy for a target's appeasement emotions, the couple would have higher relationship quality, and the target would be more motivated to change. Full results are shown in Table 2 and Figure 3. All conditions were met for a significant strict congruence effect whereby an agent's empathic accuracy predicted greater relationship quality in the couple ($\hat{\alpha}_4$ = –.043, *SE* = .019, *p* = .024; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ were nonsignificant, *p*s > .075). We did not find support for the broad congruence effect. These results suggest that the more accurately agents tracked their partner's appeasement emotions when requesting a change, the more the couples were satisfied with their relationship relative to couples in which the agent perceived their partner's appeasement emotions less accurately. An agent's empathic accuracy for a target's appeasement emotions was unassociated with the target's motivation to change, supporting neither a broad nor strict congruence effect of empathic accuracy.

To examine the robustness of these effects, we ran an additional set of exploratory analyses with the control variables. Accounting for couple's baseline relationship quality ($\hat{\alpha}_4$ = –.043, *SE* = .019, *p* = .021; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ were nonsignificant, *p*s > .067) and issue severity ($\hat{\alpha}_4$ = –.047, *SE* = .019, *p* = .014; $\hat{\alpha}_1$, $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_5$ were nonsignificant, *p*s > .164) as controls in separate models yielded results indicating that an agent's empathic accuracy for a target's appeasement emotions continued to significantly predict greater relationship quality as a strict congruence effect. Accounting for baseline relationship quality and issue severity yielded no changes in results for an agent's empathic accuracy for appeasement emotions predicting a target's motivation to change; that is, there was neither a broad nor strict

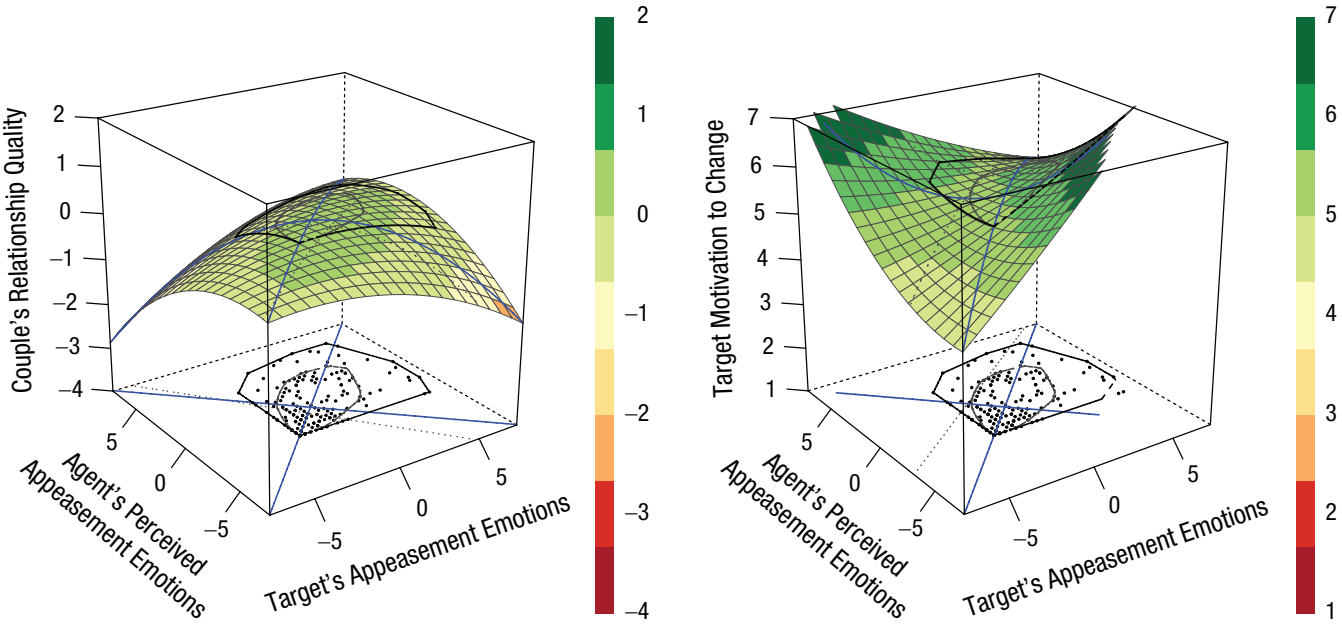

Fig. 3. Response-surface plots depicting the multilevel models assessing an agent's empathic accuracy for a target's appeasement emotions. The plots depict the congruence effect involving an agent's perceived appeasement emotions and a target's appeasement emotions as a predictor of the couple's relationship quality (left) and the target's motivation to change (right). In the bag plots, the inner polygon contains 50% of the data points, and the outer polygon contains most of the remaining data points (points beyond the outer polygon are outliers). See Figure 1 for an explanation of the key components of the response-surface plot.

congruence effect of an agent's empathic accuracy for a target's appeasement emotions predicting a target's motivation to change.

Target's empathic accuracy for an agent's emotions. Our second hypothesis was that when a target had greater empathic accuracy for an agent's appeasement emotions, the couple would have higher relationship quality and the target would be more motivated to change. Full results are shown in Table 3 and Figure 4. All conditions were met for a significant strict congruence effect whereby a target's empathic accuracy predicted greater relationship quality in the couple ($\hat{\alpha}_4 = -.088$, $SE = .030$, $p = .003$; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ were nonsignificant, $ps > .124$). We did not find support for a broad congruence effect. These results suggest that the more accurately a target tracked their partner's appeasement emotions when they received a request to change, the more the couple was satisfied with their relationship, relative to couples in which targets perceived their partner's appeasement emotions less accurately. A target's empathic accuracy for an agent's appeasement emotions was unassociated with the target's motivation to change, supporting neither strict nor broad congruence effects of empathic accuracy.

To assess the robustness of these effects, we ran an additional set of exploratory analyses with the control variables. Support for empathic accuracy predicting relationship quality held after analyses accounted for couple's baseline relationship quality ($\hat{\alpha}_4 = -.081$, $SE = .029$, $p = .006$; $\hat{\alpha}_1$, $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_5$ were nonsignificant, $ps > .132$), again as a strict congruence effect. However, accounting for issue severity yielded an empathic-accuracy pattern consistent with an *optimal-margin* effect (Nestler et al., 2019), a congruence effect that adds a significant, positive $\hat{\alpha}_3$ slope ($\hat{\alpha}_4 = -.069$, $SE = .032$, $p = .016$; $\hat{\alpha}_3 = .171$, $SE = .065$, $p = .009$; $\hat{\alpha}_1$, $\hat{\alpha}_2$, and $\hat{\alpha}_5$ were nonsignificant, $ps > .150$). As shown in Figure 5, this result suggests that relationship quality is highest when an agent's appeasement emotions exceeded a target's perceptions of an agent's appeasement emotions by a small, or optimal, amount. Accounting for baseline relationship quality and issue severity yielded no changes in results for a target's empathic accuracy for an agent's appeasement emotions predicting a target's motivation to change.

Empathic accuracy for dominance emotions

Agent's empathic accuracy for a target's emotions. For dominance emotions, our first hypothesis was that when an agent had greater empathic accuracy for a target's dominance emotions, the couple would have lower relationship quality and the target would be less motivated to change. Full results are shown in Table 4 and Figure 6. An

Table 3. Multilevel Polynomial and Response-Surface Coefficients for a Target's Empathic Accuracy for an Agent's Appeasement Emotions

	Couple's relationship quality			Target's motivation to change		
Parameter	*b*	*SE*	*p*	*b*	*SE*	*p*
Response-surface coefficients						
$\hat{\alpha}_1$	0.004	0.052	.938	0.251	0.166	.129
$\hat{\alpha}_2$	–0.003	0.015	.865	–0.018	0.046	.692
$\hat{\alpha}_3$	0.098	0.064	.125	0.330	0.214	.123
$\hat{\alpha}_4$	–0.088	0.030	.003	–0.028	0.083	.733
$\hat{\alpha}_5$	–0.005	0.018	.765	–0.045	0.055	.420
Multilevel polynomial coefficients						
Intercept	0.086	0.104	.410	5.520	0.149	.000
X_w	0.051	0.042	.226	0.291	0.143	.045
Y_w	–0.047	0.040	.245	–0.039	0.127	.758
X_w^2	–0.025	0.013	.052	–0.034	0.042	.425
XY_w	0.043	0.015	.005	0.005	0.042	.905
Y_w^2	–0.020	0.012	.108	0.011	0.033	.750
X_b	–0.306	0.114	.008	–0.212	0.194	.275
Y_b	–0.016	0.105	.876	–0.292	0.170	.088
X_b^2	–0.058	0.051	.261	–0.013	0.080	.866
XY_b	0.158	0.088	.074	–0.008	0.129	.952
Y_b^2	–0.076	0.080	.344	0.125	0.113	.274

Note: For the multilevel polynomial coefficients, *X* refers to the agent's reported appeasement emotions, and *Y* refers to the target's perception of the agent's appeasement emotions; w subscripts denote person-level effects, and b subscripts denote couple-level effects. All $\hat{\alpha}$ values were derived from the person-level multilevel coefficients. The $\hat{\alpha}_1$ to $\hat{\alpha}_5$ parameters were key to our hypotheses.

agent's empathic accuracy for the target's dominance emotions was not associated with couple's relationship quality or with the target's motivation to change. Thus, neither the broad nor the strict congruence effects were supported.

Although our empathic-accuracy hypotheses were not supported, results of the polynomial multilevel coefficients tentatively suggested that a couple's relationship quality decreased along the LOC ($\hat{\alpha}_1$ = –.103, *SE* = .035, *p* = .003; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ were nonsignificant, *p*s > .207). This effect was explained by a negative association between a target's feelings of dominance emotions and the couple's relationship quality X_w: *b* = –0.083, *SE* = 0.031, *p* = .010). Thus, relationship quality may not be reduced by the accurate detection of dominance emotions, but rather by the experience of those emotions.

We explored the robustness of these results after accounting for the control variables. The negative slope along the LOC remained significant, with a target's felt dominance emotions continuing to predict lower relationship quality in the couple after analyses accounted for the couple's baseline relationship quality ($\hat{\alpha}_1$ = –.104, *SE* = .035, *p* = .001; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and, $\hat{\alpha}_5$ were nonsignificant, *p*s > .189; X_w: *b* = –0.082, *SE* = 0.031, *p* = .010) and issue severity ($\hat{\alpha}_1$ = –.092, *SE* = .036, *p* = .010; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, and, $\hat{\alpha}_5$ were nonsignificant, *p*s > .084; X_w: *b* = –0.089, *SE* = 0.033, *p* = .007). Results also remained unchanged after accounting for couple's baseline relationship quality and issue severity in predicting the target's motivation to change.

Target's empathic accuracy for an agent's emotions. Our final hypothesis was that when a target had greater empathic accuracy for an agent's dominance emotions during the change conversation, the couple would have lower relationship quality and the target would be less motivated to change. Full results are shown in Table 5 and Figure 7. A target's empathic accuracy for the agent's dominance emotions was not associated with the couple's relationship quality or with the target's motivation to change. Thus, neither the broad nor the strict congruence effects were supported.

Although our empathic-accuracy hypotheses were not supported, results tentatively indicated that a couple's relationship quality decreased linearly along the LOC ($\hat{\alpha}_1$ = –.081, *SE* = .040, *p* = .043; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, $\hat{\alpha}_5$ were

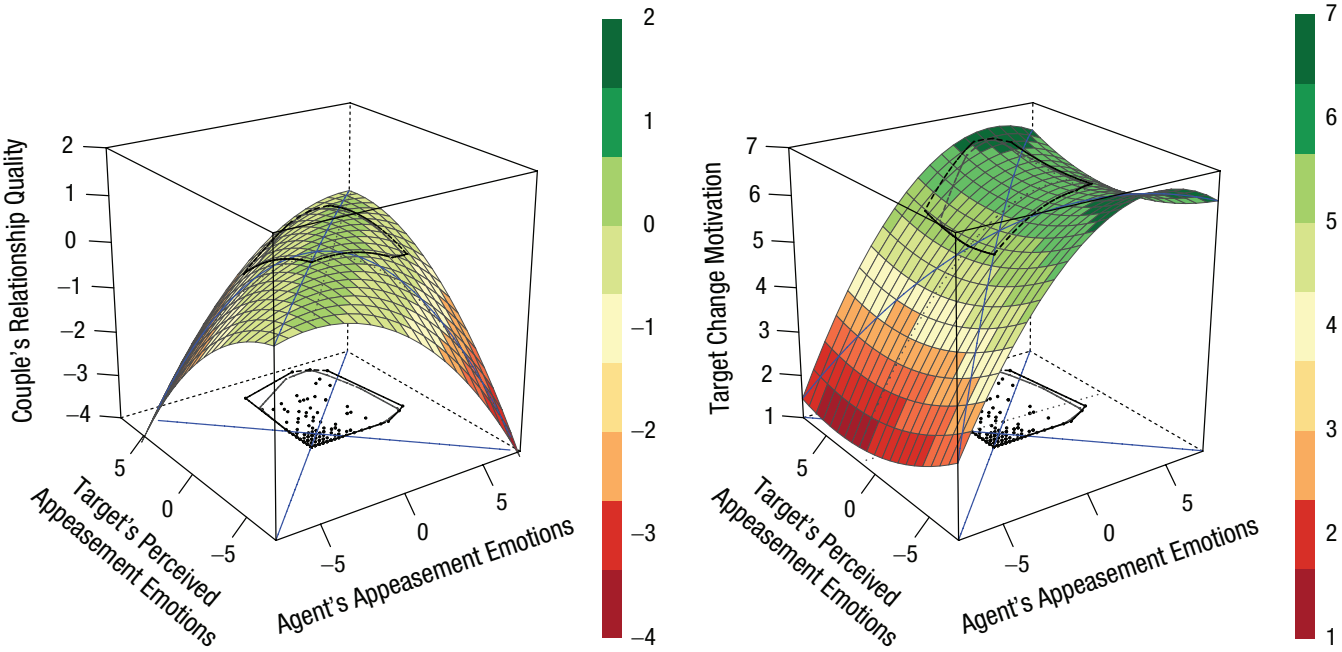

Fig. 4. Response-surface plots depicting the multilevel models assessing a target's empathic accuracy for an agent's appeasement emotions. The plots depict the congruence effect involving a target's perceived appeasement emotions and an agent's appeasement emotions as a predictor of the couple's relationship quality (left) and the target's motivation to change (right). In the bag plots, the inner polygon contains 50% of the data points, and the outer polygon contains most of the remaining data points (points beyond the outer polygon are outliers). See Figure 1 for an explanation of the key components of the response-surface plot.

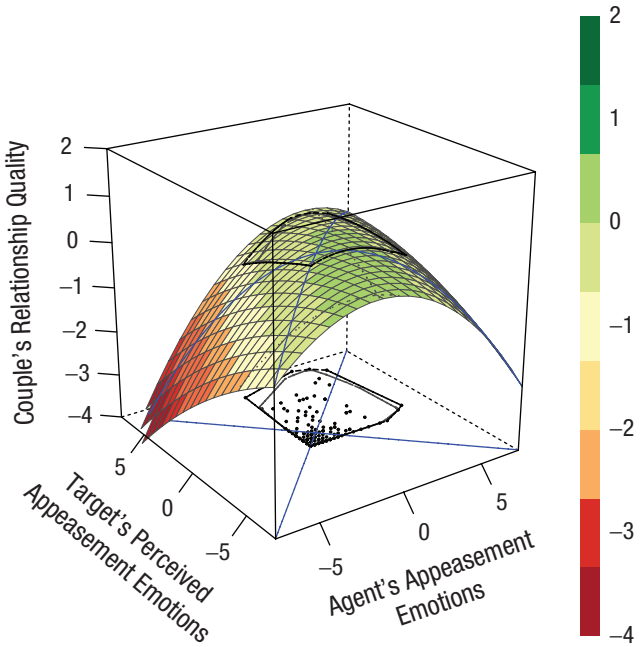

Fig. 5. Response-surface plot depicting the multilevel models assessing a target's empathic accuracy for an agent's appeasement emotions. The plots depict the congruence effect involving a target's perceived appeasement emotions and an agent's appeasement emotions as a predictor of the couple's relationship quality after analyses accounted for issue severity. In the bag plots, the inner polygon contains 50% of the data points, and the outer polygon contains most of the remaining data points (points beyond the outer polygon are outliers). See Figure 1 for an explanation of the key components of the response-surface plot.

nonsignificant, *p*s > .173). This effect was explained by a negative association between the agent's dominance emotions and the couple's relationship quality (X_w: b = –0.072, SE = 0.031, p = .021). Again, relationship quality may be driven by the experience of dominance emotions rather than the accurate detection of these emotions.

We explored the robustness of these results after accounting for the control variables. The negative slope along the LOC remained significant ($\hat{\alpha}_1$ = –.078, SE = .040, p = .048; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, $\hat{\alpha}_5$ were nonsignificant, *p*s > .142), with an agent's felt dominance emotions continuing to predict lower relationship quality in the couple (X_w: b = –0.074, SE = 0.031, p = .018) after analyses accounted for the couple's baseline relationship quality. The negative slope of the LOC dropped to nonsignificance after accounting for issue severity ($\hat{\alpha}_1$ = –.066, SE = .042, p = .121; $\hat{\alpha}_2$, $\hat{\alpha}_3$, $\hat{\alpha}_4$, $\hat{\alpha}_5$ were nonsignificant, *p*s > .223), with an agent's felt dominance emotions continuing to predict lower relationship quality in the couple (X_w: b = –0.062, SE = 0.032, p = .052). Results for a target's motivation to change remained the same after analyses accounted for couple's baseline relationship quality and issue severity.

Discussion

Requesting partner change is an important yet challenging endeavor for couples seeking to resolve problems

Table 4. Multilevel Polynomial and Response-Surface Coefficients for an Agent's Empathic Accuracy for a Target's Dominance Emotions

	Couple's relationship quality			Target's change motivation		
Parameter	*b*	*SE*	*p*	*b*	*SE*	*p*
Response-surface coefficients						
$\hat{\alpha}_1$	–0.103	0.035	.003	0.120	0.121	.322
$\hat{\alpha}_2$	0.000	0.009	.977	–0.043	0.030	.160
$\hat{\alpha}_3$	–0.062	0.050	.208	–0.295	0.170	.082
$\hat{\alpha}_4$	0.028	0.027	.298	0.027	0.073	.713
$\hat{\alpha}_5$	0.006	0.012	.603	0.059	0.037	.112
Multilevel polynomial coefficients						
Intercept	–0.127	0.075	.093	5.542	0.146	.000
X_w	–0.083	0.031	.010	–0.088	0.108	.421
Y_w	–0.020	0.029	.489	0.208	0.100	.040
X_w^2	0.010	0.011	.352	0.026	0.031	.413
XY_w	–0.014	0.014	.297	–0.035	0.037	.353
Y_w^2	0.004	0.008	.617	–0.033	0.024	.171
X_b	–0.133	0.080	.100	0.049	0.167	.769
Y_b	–0.192	0.078	.015	–0.350	0.160	.030
X_b^2	0.102	0.051	.046	–0.030	0.095	.752
XY_b	–0.094	0.063	.138	0.025	0.118	.832
Y_b^2	0.027	0.032	.407	0.085	0.061	.166

Note: For the multilevel polynomial coefficients, *X* refers to the target's reported dominance emotions, and *Y* refers to the agent's perception of the target's dominance emotions; w subscripts denote person-level effects, and b subscripts denote couple-level effects. All $\hat{\alpha}$ values were derived from the person-level multilevel coefficients. The $\hat{\alpha}_1$ to $\hat{\alpha}_5$ parameters were key to our hypotheses.

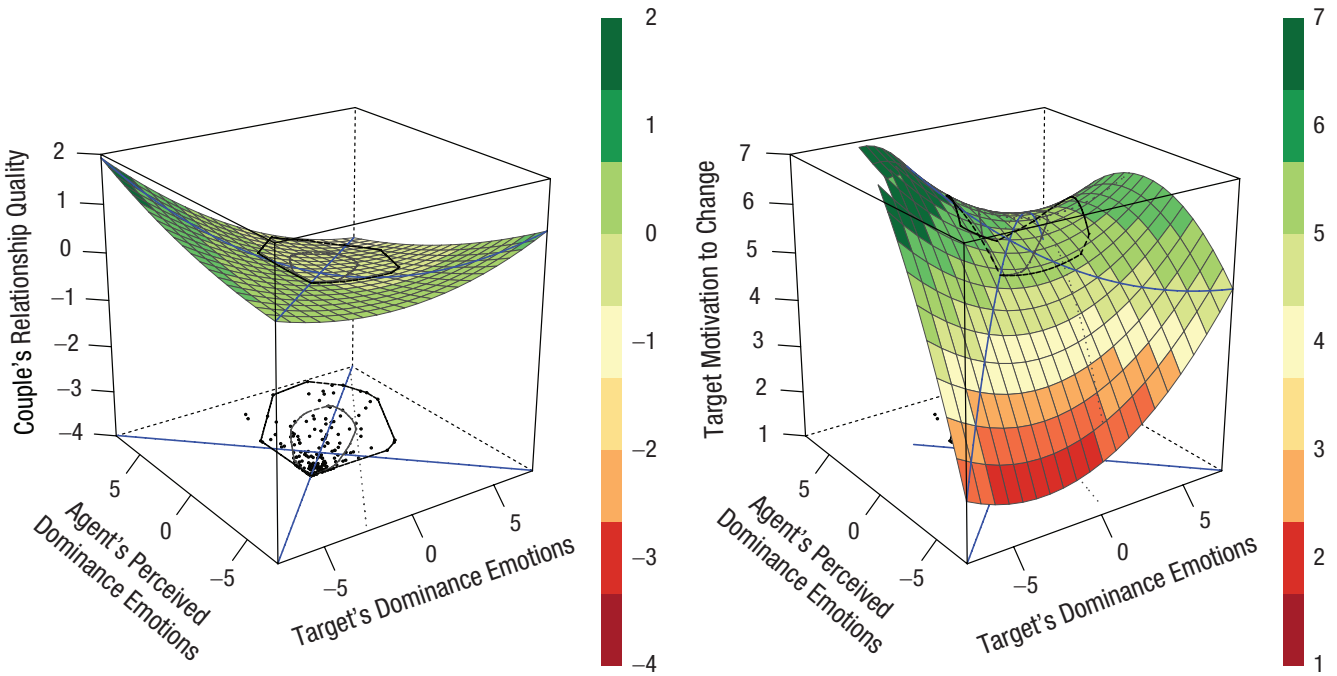

Fig. 6. Response-surface plots depicting the multilevel models assessing an agent's empathic accuracy for a target's dominance emotions. The plots depict the congruence effect involving an agent's perceived dominance emotions and a target's dominance emotions as a predictor of the couple's relationship quality (left) and the target's motivation to change (right). In the bag plots, the inner polygon contains 50% of the data points, and the outer polygon contains most of the remaining data points (points beyond the outer polygon are outliers). See Figure 1 for an explanation of the key components of the response-surface plot.

Table 5. Multilevel Polynomial and Response-Surface Coefficients for a Target's Empathic Accuracy for an Agent's Dominance Emotions

	Couple's relationship quality			Target's motivation to change		
Parameter	*b*	*SE*	*p*	*b*	*SE*	*p*
Response-surface coefficients						
$\hat{\alpha}_1$	–0.081	0.040	.043	0.129	0.135	.339
$\hat{\alpha}_2$	0.006	0.010	.532	–0.062	0.034	.068
$\hat{\alpha}_3$	–0.064	0.047	.174	0.081	0.157	.604
$\hat{\alpha}_4$	–0.021	0.027	.429	0.116	0.083	.162
$\hat{\alpha}_5$	0.004	0.015	.796	–0.047	0.045	.292
Multilevel polynomial coefficients						
Intercept	–0.018	0.067	.790	5.423	0.132	.000
X_w	–0.072	0.031	.021	0.105	0.105	.317
Y_w	–0.008	0.031	.790	0.024	0.102	.816
X_w^2	–0.002	0.010	.847	–0.010	0.031	.740
XY_w	0.014	0.013	.280	–0.089	0.040	.028
Y_w^2	–0.006	0.012	.636	0.037	0.035	.299
X_b	–0.136	0.070	.055	–0.149	0.152	.330
Y_b	–0.173	0.069	.014	–0.203	0.147	.170
X_b^2	–0.075	0.036	.042	0.103	0.075	.173
XY_b	0.048	0.067	.475	–0.076	0.137	.583
Y_b^2	0.046	0.041	.260	0.089	0.083	.289

Note: For the multilevel polynomial coefficients, *X* refers to the agent's reported dominance emotions, and *Y* refers to the target's perception of the agent's dominance emotions; w subscripts denote person-level effects, and b subscripts denote couple-level effects. All $\hat{\alpha}$ values were derived from the person-level multilevel coefficients. The $\hat{\alpha}_1$ to $\hat{\alpha}_5$ parameters were key to our hypotheses.

or attain relationship growth. Our results indicate that a greater ability to read a partner's appeasement emotions predicts higher relationship quality. As we theorized, because of the socially constructive function of appeasement emotions (e.g., showing concern for a partner, acknowledging a personal shortcoming), accuracy for such emotions was associated with more satisfying relationships.

For dominance emotions, however, our results suggest that the experience, but not the accurate perception, of these emotions undermined relationship quality. Although we had expected accuracy for dominance emotions to predict lower relationship quality, we found that feeling dominance emotions—independent of accuracy—predicted lower relationship quality in couples. These results suggest that the mere presence of socially destructive dominance emotions among agents or targets may signal intentions of one partner blaming, attacking, or reacting defensively, which may compromise relationship quality regardless of whether a partner detects these emotions. Taken together, the results suggest that when seeking to have productive change discussions, partners may benefit most from tracking the other partner's appeasement emotions while minimizing their own dominance emotions.

We did not find any evidence that empathic accuracy for appeasement and dominance emotions was associated with a target's motivation to change. Although it will be useful to follow up on these findings in high-powered studies using multi-item measures of change, it is possible that the best route to partner change is through direct communication rather than emotion perception. Previous work has indicated that direct communication—both positive (e.g., rational reasoning) and negative (e.g., autocratic demands)—is more likely than indirect communication to elicit change in partners in the longer term (Overall et al., 2009). Perhaps accurately understanding a partner's emotions alone is not sufficient to elicit change, and couples need direct cues and communication to propel intentions to change behavior.

The current study had some limitations that could be fruitfully addressed in future research. Future research using preregistration and response-surface analysis may include high-fidelity theory and hypotheses concerning the potential effects of empathic

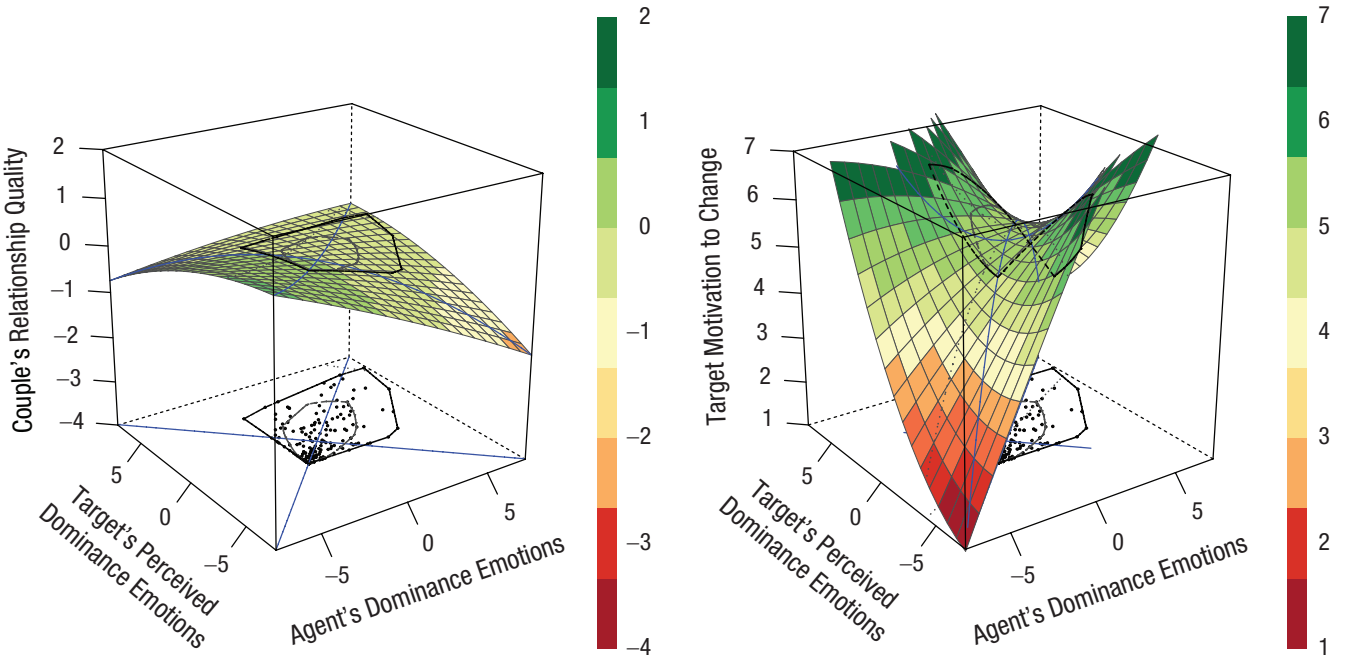

Fig. 7. Response-surface plots depicting the multilevel models assessing a target's empathic accuracy for an agent's dominance emotions. The plots depict the congruence effect involving a target's perceived dominance emotions and an agent's dominance emotions as a predictor of the couple's relationship quality (left) and the target's motivation to change (right). In the bag plots, the inner polygon contains 50% of the data points, and the outer polygon contains most of the remaining data points (points beyond the outer polygon are outliers). See Figure 1 for an explanation of the key components of the response-surface plot.

accuracy at different levels of emotion intensity. Further, in future work, researchers would benefit from examining the generalizability of the current findings. For example, it would be interesting to test whether detecting a romantic partner's appeasement emotions increases relationship quality in multiple contexts. While it may be more likely that accuracy for appeasement emotions is linked with benefits across situations, accuracy for dominance emotions may be more sensitive to context. For instance, it is possible that accurately detecting a partner's dominance emotions toward a person or situation that has caused you pain would predict relationship benefits, because this may signal that a partner empathizes with one's pain or acknowledges a potential wrongdoing by others.

Discussing change can be an emotional and threatening experience for romantic couples. Results from this study help to disentangle how accurately perceiving appeasement and dominance emotions may shape important discussions about change. Previous meta-analytic work has shown that accuracy for negative emotions is linked to higher quality relationships (Sened et al., 2017). The current findings build on this previous work to underscore the limits of accuracy for certain types of negative emotions in predicting relationship quality. When people accurately track their partner's appeasement emotions, couples feel more satisfied after discussing important changes. However, the mere presence of dominance emotions may undermine the quality of relationships.

Transparency

Action Editor: Eddie Harmon-Jones
Editor: D. Stephen Lindsay
Author Contributions

All of the authors contributed to the study design. Data were collected by B. M. Le, J. Stellar, and E. A. Impett. B. M. Le analyzed the data. B. M. Le drafted the manuscript, and S. Côté, J. Stellar, and E. A. Impett provided critical revisions. All authors approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

Funding

This research was supported by a Social Sciences and Humanities Research Council (SSHRC) Banting Postdoctoral Fellowship awarded to B. M. Le and by SSHRC Insight Grants awarded to S. Côté and E. A. Impett.

Open Practices

Materials, data-analysis scripts, and supplemental material for this study have been made publicly available via the Open Science Framework and can be accessed at https://

osf.io/d9syw/. Data for this study have not been made publicly available. The design and analysis plans were preregistered at https://osf.io/dx82y/. All changes to the preregistration are reported here or in the supplemental material. The complete Open Practices Disclosure for this article can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797620904975. This article has received the badges for Open Materials and Preregistration. More information about the Open Practices badges can be found at http://www.psychologicalscience.org/publications/badges.

ORCID iD

Bonnie M. Le https://orcid.org/0000-0002-1857-6716

Acknowledgments

We thank Sarah Humberg, Paul Stillman, the Rochester Relationships Lab, and the Relationships and Well-being Lab for their invaluable feedback on this article.

Notes

1. The term *empathic accuracy* has been used to refer to the correct perception of both thoughts and emotions (Ickes, 2011). Our investigation focused only on the latter, and thus the findings should not be generalized to empathic accuracy for thoughts.
2. Participants also completed a background survey, two other lab conversations (e.g., involving a time of distress and partner gratitude), a 14-day daily experience study, and a 2-week follow-up. The only other data analyzed for this study were the demographic variables in the background survey.
3. As shown in Table S2 at https://osf.io/r8bjx/, results from a separate data set support the reliability and validity of this measure.
4. For information about the exploratory analyses outlined in the preregistration, see Tables S8 to S10, Figures S6 and S7, and Appendix B at https://osf.io/r8bjx/. Empathic accuracy for positive emotions predicted neither relationship quality nor the motivation to change.

References

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1). doi:10.18637/jss.v067.i01

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). San Francisco, CA: Jossey-Bass.

Driver, J., Tabares, A., Shapiro, A., Nahm, E. Y., & Gottman, J. M. (2003). Interactional patterns in marital success and failure: Gottman laboratory studies. In F. Walsh (Ed.), *Normal family processes: Growing diversity and complexity* (pp. 493–513). New York, NY: Guilford Press.

Edwards, J. R. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes*, *58*(1), 51–100. doi:10.1006/obhd.1994.1029

Feinberg, M., Willer, R., & Keltner, D. (2012). Flustered and faithful: Embarrassment as a signal of prosociality. *Journal of Personality and Social Psychology*, *102*, 81–97. doi:10.1037/a0025403

Fischer, A. H., & Manstead, A. S. R. (2016). Social functions of emotion and emotion regulation. In L F. Barrett, M. Lewis, & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (4th ed., pp. 424–439).New York, NY: Guilford Press.

Fischer, A. H., & Roseman, I. J. (2007). Beat them or ban them: The characteristics and social functions of anger and contempt. *Journal of Personality and Social Psychology*, *93*, 103–115. doi:10.1037/0022-3514.93.1.103

Fritz, H. L., Nagurney, A. J., & Helgeson, V. S. (2003). Social interactions and cardiovascular reactivity during problem disclosure among friends. *Personality and Social Psychology Bulletin*, *29*, 713–725. doi:10.1177/0146167203251520

Heerdink, M. W., Van Kleef, G. A., Homan, A. C., & Fischer, A. H. (2014). Emotional expressions as social signals of rejection and acceptance: Evidence from the Affect Misattribution Paradigm. *Journal of Experimental Social Psychology*, *56*, 60–68. doi:10.1016/j.jesp.2014.09.004

Hodges, S. D., Lewis, K. L., & Ickes, W. (2015). The matter of other minds: Empathic accuracy and the factors that influence it. In P. Shaver, M. Mikulincer, J. A. Simpson, & J. Dovidio (Eds.), *APA handbook of personality and social psychology. Vol. 3: Interpersonal relations* (pp. 319–348). Washington, DC: American Psychological Association. doi:10.1037/14344-012

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLOS Medicine*, *7*(7), Article e1000316. doi:10.1371/journal.pmed.1000316

Hutcherson, C. A., & Gross, J. J. (2011). The moral emotions: A social-functionalist account of anger, disgust, and contempt. *Journal of Personality and Social Psychology*, *100*, 719–737. doi:10.1037/a0022408

Ickes, W. (2011). Everyday mind reading is driven by motives and goals. *Psychological Inquiry*, *23*, 200–206. doi:10.1080/1047840X.2011.561133

Ickes, W., & Hodges, S. D. (2013). Empathic accuracy in close relationships. In J. Simpson & L. Campbell (Eds.), *The Oxford handbook of close relationships* (pp. 373–846). Oxford, England: Oxford University Press. doi:10.1093/oxfordhb/9780195398694.013.0016

Impett, E. A., Gordon, A. M., Kogan, A., Oveis, C., Gable, S. L., & Keltner, D. (2010). Moving toward more perfect unions: Daily and long-term consequences of approach and avoidance goals in romantic relationships. *Journal of Personality and Social Psychology*, *99*, 948–963. doi:10.1037/a0020271

Impett, E. A., Javam, L., Le, B. M., Asyabi-Eshghi, B., & Kogan, A. (2013). The joys of genuine giving: Approach and avoidance sacrifice motivation and authenticity. *Personal Relationships*, *20*, 740–754. doi:10.1111/pere.12012

Keltner, D., & Buswell, B. N. (1997). Embarrassment: Its distinct form and appeasement functions. *Psychological Bulletin*, *122*, 250–270. doi:10.1037/0033-2909.122.3.250

Keltner, D., & Haidt, J. (1999). Social functions of emotions at four levels of analysis. *Cognition & Emotion*, *13*, 505–522. doi:10.1080/026999399379168

Kubany, E. S., Bauer, G. B., Muraoka, M. Y., Richard, D. C., & Read, P. (1995). Impact of labeled anger and blame in intimate relationships. *Journal of Social and Clinical Psychology*, *14*, 53–60. doi:10.1521/jscp.1995.14.1.53

Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest package: Tests in linear mixed effects models. *Journal of Statistical Software*, *82*(13). doi:10.18637/jss.v082.i13

Laurenceau, J. P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, *74*, 1238–1251. doi:10.1037/0022-3514.74.5.1238

Lemay, E. P., Overall, N. C., & Clark, M. S. (2012). Experiences and interpersonal consequences of hurt feelings and anger. *Journal of Personality and Social Psychology*, *103*, 982–1006. doi:10.1037/a0030064

Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology*, *1*, 86–92. doi:10.1027/1614-2241.1.3.86

Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist*, *63*, 503–517. doi:10.1037/0003-066X.63.6.503

McNulty, J. K. (2016). Should spouses be demanding less from marriage? A contextual perspective on the implications of interpersonal standards. *Personality and Social Psychology Bulletin*, *42*, 444–457. doi:10.1177/0146167216634050

Nestler, S., Humberg, S., & Schönbrodt, F. D. (2018, September 3). *Multilevel response surface analysis*. Retrieved from osf.io/jhyu9

Nestler, S., Humberg, S., & Schönbrodt, F. D. (2019). Response surface analysis with multilevel data: Illustration for the case of congruence hypotheses. *Psychological Methods*, *24*, 291–308. doi:10.1037/met0000199

Overall, N. C., Fletcher, G. J. O., & Simpson, J. A. (2006). Regulation processes in intimate relationships: The role of ideal standards. *Journal of Personality and Social Psychology*, *91*, 662–685. doi:10.1037/0022-3514.91.4.662

Overall, N. C., Fletcher, G. J. O., Simpson, J. A., & Sibley, C. G. (2009). Regulating partners in intimate relationships: The costs and benefits of different communication strategies. *Journal of Personality and Social Psychology*, *96*, 620–639. doi:10.1037/a0012961

Overall, N. C., & McNulty, J. K. (2017). What type of communication during conflict is beneficial for intimate relationships? *Current Opinion in Psychology*, *13*, 1–5. doi:10.1016/j.copsyc.2016.03.002

R Core Team. (2019). *R: A language and environment for statistical computing*. Retrieved from https://www.r-project.org/

Schönbrodt, F. D. (2017). RSA: An R package for response surface analysis (Version 0.9.11). Retrieved from https://cran.r-project.org/package=RSA

Sened, H., Lavidor, M., Lazarus, G., Bar-Kalifa, E., Rafaeli, E., & Ickes, W. (2017). Empathic accuracy and relationship satisfaction: A meta-analytic review. *Journal of Family Psychology*, *31*, 742–752. doi:10.1037/fam0000320

Simpson, J. A., Oriña, M. M., & Ickes, W. (2003). When accuracy hurts, and when it helps: A test of the empathic accuracy model in marital interactions. *Journal of Personality and Social Psychology*, *85*, 881–893. doi:10.1037/0022-3514.85.5.881

Steegen, S., Tuerlinckx, F., Gelman, A., & Vanpaemel, W. (2016). Increasing transparency through a multiverse analysis. *Perspectives on Psychological Science*, *11*, 702–712. doi:10.1177/1745691616658637

Storaasli, R. D., & Markman, H. J. (1990). Relationship problems in the early stages of marriage. A longitudinal investigation. *Journal of Family Psychology*, *4*(1), 80–98. doi:10.1037/0893-3200.4.1.80

Sznycer, D. (2019). Forms and functions of the self-conscious emotions. *Trends in Cognitive Sciences*, *23*, 143–157. doi:10.1016/j.tics.2018.11.007

Tangney, J. P. (1999). The self-conscious emotions: Shame, guilt, embarrassment and pride. In T. Dalgleish & M. J. Power (Eds.), *Handbook of cognition and emotion* (pp. 541–568). Hoboken, NJ: Wiley. doi:10.1002/0470013494.ch26

Van Kleef, G. A. (2016). Social effects of emotions in close relationships. In K. Oatley & A. Manstead (Eds.), *The interpersonal dynamics of emotion: Toward an integrative theory of emotions as social information* (pp. 81–100). Cambridge, England: Cambridge University Press. doi:10.1017/cbo9781107261396.006

Van Kleef, G. A., De Dreu, C. K. W., & Manstead, A. S. R. (2010). An interpersonal approach to emotion in social decision making: The emotions as social information model. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 42, pp. 45–96). San Diego, CA: Academic Press. doi:10.1016/S0065-2601(10)42002-X

Weidmann, R., Schönbrodt, F. D., Ledermann, T., & Grob, A. (2017). Concurrent and longitudinal dyadic polynomial regression analyses of Big Five traits and relationship satisfaction: Does similarity matter? *Journal of Research in Personality*, *70*, 6–15. doi:10.1016/j.jrp.2017.04.003

Zou, C., Schimmack, U., & Gere, J. (2013). The validity of well-being measures: A multiple-indicator-multiple-rater model. *Psychological Assessment*, *25*, 1247–1254. doi:10.1037/a0033902