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Partner similarity matters for the insecure: Attachment orientations moderate the association between similarity in partners' personality traits and relationship satisfaction

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ABSTRACT

A longitudinal sample of romantic couples was used to examine whether attachment security moderates the association between partners' personality-trait-similarity to each other and their relationship satisfaction. Replicating previous research, there were no bivariate associations between trait-similarity and satisfaction. However, partners' perceptions of personality-similarity were associated with satisfaction. Attachment styles also moderated the curvilinear associations between partners' trait-similarity and satisfaction. People with high attachment avoidance and low attachment anxiety (dismissing attachment) seemed to have an optimal level of similarity in which satisfaction was maximized at moderate levels of similarity. People with low avoidance and high anxiety (preoccupied attachment) exhibited the opposite pattern, expressing higher levels of satisfaction if their partner was highly similar or dissimilar to them.

1. Introduction

Previous research suggests that people are attracted to and initiate romantic relationships with prospective partners who are similar to themselves across a wide array of personal characteristics, including age, religion, political orientation, markers of intelligence, and some personality traits (Botwin, Buss, & Shackelford, 1997; Houts, Robins, & Huston, 1996; Montoya, Horton, & Kirchner, 2008; Watson et al., 2004). But do romantic partners who are similar to each other have more satisfying relationships? Studies examining this question have produced mixed findings. Although several studies have found positive correlations between partner similarity and relationship satisfaction (Caspi & Herbener, 1990; Gonzaga, Campos, & Bradbury, 2007; Karney & Bradbury, 1995; Luo et al., 2008; Markey & Markey, 2007; Mehrabian, 1989), many other studies have found that highly similar partners do not necessarily have more satisfying relationships (e.g., Altmann, Sierau, & Roth, 2013; Barelds & Barelds-Dijkstra, 2007; Gattis, Berns, Simpson, & Christensen, 2004; Luo, 2009; Neyer & Voigt, 2004; Robins, Caspi, & Moffitt, 2000; Watson et al., 2004).

A major purpose of the present study, therefore, was to help clarify the association between partner similarity and relationship satisfaction. Beyond this, this study makes three novel contributions that help explain when and how similarity between partners' personality traits might predict increased relationship satisfaction. First, we examined quadratic associations between partner-similarity and relationship satisfaction (Luo & Klohnen, 2005). Several researchers have argued that both similarity and complementarity with one's partner may be beneficial (e.g., Markey & Markey, 2007). As such, the fact that previous research has found inconsistent linear links between partner-similarity and relationship satisfaction may be indicative of underlying quadratic trends, where there is an "optimal level" of similarity vs. complementarity (i.e., relationship satisfaction is maximized at moderate levels of similarity).

Second, we tested whether people's attachment security with their romantic partner might moderate the link between partners' similarity to each other and their relationship satisfaction. Theoretically, attachment styles affect the characteristics people seek in romantic relationships – from intense intimacy and interdependence to cool distance and counter-dependence (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). As such, whether similarity has a positive, negative, or negligible association with feelings of satisfaction with the relationship may depend on people's attachment styles.

Finally, this study explored the association between similarity and relationship satisfaction within-persons. The majority of research to-date has focused on how between-person differences in similarity might be related to relationship satisfaction. However, a growing body of research indicates that the same person may

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vary considerably in his or her relationship satisfaction across time (e.g., Rafaeli, Cranford, Green, Shrout, & Bolger, 2008). Moreover, research also indicates that there is considerable variance in people's personality traits on a daily basis (Fleeson, 2001). This raises the possibility that within-person variation in the extent to which people experience similarity with their partners might be associated with within-person variation in satisfaction. To the best of our knowledge, this idea has not been previously examined.

2. Do similar partners have more satisfying relationships?

One of the challenges inherent to examining the links between partner-similarity and relationship satisfaction is that there is a potentially infinite number of ways in which people can differ from one another. Some researchers have studied within-couple similarities with respect to basic demographic variables (e.g., Watson et al., 2004). Other researchers have examined similarity with respect to attitudes and interests (e.g., Luo, 2009). Others still have focused on partners' similarity in personality traits (e.g., Altmann et al., 2013; Barelds & Barelds-Dijkstra, 2007; Botwin et al., 1997; Caspi & Herbener, 1990; Gattis et al., 2004; Luo, 2009; Luo & Klohnen, 2005; Luo et al., 2008; Markey & Markey, 2007; Montoya et al., 2008; Neyer & Voigt, 2004; Rammstedt & Schupp, 2008; Robins et al., 2000; Watson et al., 2004).

In the present paper we operationalized similarity using the big five personality traits. There were two reasons for this choice. First, there is a growing consensus among individual-differences researchers that the big five framework provides a parsimonious way of organizing the multitude of ways in which people can differ from one another (Goldberg, 1993). Although we appreciate the fact that the model does not capture every important individual difference factor (e.g., masculinity–femininity), it provides a reasonably inclusive framework for considering couple similarity. Second, when people describe the qualities they like or dislike about their partners, they often refer to attributes that can be organized within the big five model – such as being irresponsible (i.e., low conscientiousness), insensitive (i.e., disagreeableness), or too inflexible (i.e., low openness) (Felmlee, 1995). As such, the big five framework provides a reference for the kinds of attributes that people deem important and naturally use to characterize themselves and their relationship partners.

Previous research has found that personality traits tend to be moderately correlated within couples (Neyer & Voigt, 2004; Rammstedt & Schupp, 2008; Watson et al., 2004). One potential explanation for this finding is that people tend to be attracted to others who are similar to themselves (Montoya et al., 2008). In fact, people often describe their ideal partner as one who has personality characteristics similar to their own (Botwin et al., 1997; Markey & Markey, 2007).

But do couples who share similar personalities have more satisfying relationships? The existing literature provides an unclear answer to this question. On one hand, several studies have found evidence that partners who share similar personality traits may have more satisfying relationships. For example, one study found that married couples with similar personality traits tended to stay together longer than those with dissimilar personality traits (Rammstedt & Schupp, 2008). Along these lines, other studies have found that relationship satisfaction is related to similarity in partner's big five personality traits (Gonzaga et al., 2007), California Q-Sort scores (Caspi & Herbener, 1990), and various other qualities, such as warmth (Markey & Markey, 2007), masculinity/femininity (Gaunt, 2006), dependability (Barelds & Barelds-Dijkstra, 2007; Luo et al., 2008), and social potency (Luo et al., 2008).

In contrast to these findings, other studies have found no link between similarity in partner's personality traits and relationship satisfaction (Altmann et al., 2013; Gattis et al., 2004; Luo, 2009; Neyer & Voigt, 2004). For example, Barelds and Barelds-Dijkstra (2007) found that, among the big five factors, only similarity with respect to conscientiousness predicted relationship satisfaction. Similarly, Robins et al. (2000) found that, although each partner's individual traits predicted relationship satisfaction (e.g., neurotic wives had unhappy husbands), the couple's traits did not interact to predict relationship quality (as such, both partners being jointly high or low on a trait [i.e., similar] did not predict relationship satisfaction beyond the main effects of the partners' individual scores on the trait).

Taken as a whole, the existing literature suggests that researchers have yet to resolve the question of whether highly similar partners have more satisfying relationships. The present study examines two potential explanations for the mixed findings in the existing literature. First, it may be the case that moderate levels of similarity are optimal. Second, people's attachment styles may moderate whether similarity is associated with relationship satisfaction.

2.1. Are moderate levels of similarity best?

It is possible that the inconsistent link between similarity in partners' personality traits and their relationship satisfaction is due to an underlying curvilinear association between similarity and satisfaction (Luo & Klohnen, 2005). Specifically, several scholars have argued that, in addition to similarity, complementarity with respect to certain attributes may be beneficial for couples (Bohns et al., 2013; Klohnen & Mendelsohn, 1998; Luo & Klohnen, 2005; Markey & Markey, 2007). There are several reasons this may be true. First, complementarity may help couples diversify their strengths and compensate for each other's weaknesses. For example, one study found that when partners differed in their goal pursuit strategies – with one person utilizing eager (extraverted) strategies and the other using vigilant (conscientious) strategies – their well-being was higher than when both partners shared similar strategies (Bohns et al., 2013). Second, similarity with respect to some personality traits (e.g., dominance) may lead to conflict (e.g., both partners trying to take control). Supporting this notion, several studies have found that *dissimilarity* with respect to dominance predicts increased satisfaction in interactions (Dryer & Horowitz, 1997) and relationships (Markey & Markey, 2007). Beyond these factors, having a partner who is too identical to oneself may simply breed boredom and stagnation.

However – barring a few exceptions – previous research has not clearly articulated for which traits similarity vs. complementarity should be beneficial. Beyond this, it may be the case that even for a single trait, both similarity and complementarity are beneficial, such that well-being is maximized at moderate levels (Luo & Klohnen, 2005). Despite these complexities, Luo and Klohnen (2005) reasoned that if similarity and complementarity (with respect to unspecified traits) both have positive impacts on romantic relationships, we might expect an inverted-U shaped association between overall similarity and relationship quality, such that satisfaction is maximized at moderate levels of similarity. However, Luo and Klohnen found only mixed support for this proposition – similarity with respect to only some personality domains was quadratically related to satisfaction for husbands, but not for wives. To the best of our knowledge, the idea that similarity is curvilinearly related to relationship satisfaction has not been examined further.

2.2. Does attachment moderate the similarity-satisfaction link?

Drawing from attachment theory (Bowlby, 1969; Mikulincer & Shaver, 2007), we hypothesized that people's attachment

orientations in their romantic relationships might moderate the link between partners' similarity and their relationship satisfaction. In adulthood, attachment styles or orientations are typically conceptualized as varying along two dimensions: anxiety and avoidance. Individuals high in attachment anxiety have negative *self-relevant* beliefs, or *self-relevant working models* (Bartholomew & Horowitz, 1991). For example, anxious people frequently worry that they will lose their partners' love, and feel inadequate in comparison to other people (Fraley, Waller, & Brennan, 2000). This results in increased activation of the attachment system, where highly anxious individuals constantly monitor others for signs of approval, availability, and rejection (e.g., Fraley, Niedenthal, Marks, Brumbaugh, & Vicary, 2006). In order to assuage their anxieties, such persons desire intense closeness – even to merge completely – with their partners (e.g., Collins & Read, 1990; Hazan & Shaver, 1987). In contrast, individuals high in attachment avoidance hold negative *others-relevant* working models – they believe other people will not be responsive to their relational needs (Bartholomew & Horowitz, 1991). Theoretically, this produces *decreased* activation of the attachment system (Mikulincer & Shaver, 2007), and results in desires to avoid intimacy, feelings of nervousness when partners get too close, unease in depending on others, and a desire for *counter-dependence* (Fraley, Davis, & Shaver, 1998). Prototypically secure individuals are low in both anxiety and avoidance.

How might attachment styles moderate the link between a couple's similarity with respect to personality and their relationship satisfaction? There are several possibilities. For highly *anxious* individuals, we might expect a positive association between similarity and relationship satisfaction. There are at least two reasons to expect such an association. People high in attachment anxiety relentlessly seek (1) supportive behavior from and (2) a feeling of closeness with partners (Bartholomew & Horowitz, 1991; Collins & Read, 1990). With respect to the former, receiving support and care from romantic partners is especially impactful in influencing anxious individuals' perceptions of their relationships (e.g., Campbell, Simpson, Boldry, & Kashy, 2005), and research suggests that people exhibit increased caretaking behaviors (e.g., compassion) toward others who are similar to themselves (Oveis, Horberg, & Keltner, 2010). With respect to the latter, highly anxious people report a heighted desire to be close and intimate with others, and merging experiences – such as intimate sex – have been linked to increased wellbeing for highly anxious people (especially those who are low in avoidance) (Birnbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006). Thus, similarity may facilitate a satisfying sense of oneness with one's partner.

For highly *avoidant* individuals, we might expect a negative curvilinear relationship between similarity and relationship satisfaction such that satisfaction is maximized at moderate levels of similarity. Namely, given avoidant people's desires for autonomy and self-reliance (Bartholomew & Horowitz, 1991) and their unease with closeness, overly high levels of similarity might be associated with *reduced* relationship satisfaction. Similarity may promote interdependent behaviors (e.g., compassion; Oveis et al., 2010) and a sense of connectedness and intimacy, which may be threatening to highly avoidant individuals. Despite this, however, it seems inappropriate to assume that people high in avoidance would desire partners who are the *polar opposite* of themselves (i.e., a simple negative linear relationship between similarity and relationship satisfaction). For example, previous research suggests that avoidant individuals are attracted to others with at least some qualities similar to their own (e.g., Holmes & Johnson, 2009). As such, combining these ideas together, we hypothesized that relationship satisfaction would be maximized at moderate levels of similarity for people with high levels of avoidance.

Importantly, although attachment can be studied as a global construct that reflects people's feelings about close relationships in general, people's attachment styles can also be assessed with respect to specific relationships (e.g., working models that specifically pertain to one's current romantic partner) (Collins & Read, 1994; Sibley & Overall, 2008). One consequence of this idea is that is possible for an individual to be securely attached to his or her romantic partner, for example, even though that same individual has an insecure general attachment style. In the present study, we examined people's attachment security specifically with respect to their romantic partner, as these types of romantic-partner-specific working models should be more influential in shaping satisfaction in the romantic relationship than should be more general types of attachment representations (Collins & Read, 1994; Hudson, Fraley, Brumbaugh, & Vicary, 2014).

3. Overview of the present study

The present analyses are based on data from a longitudinal sample of 174 college-aged, dating or engaged couples who provided data up to 5 times over the course of a year. At each wave, each individual self-reported their own personality traits *and also* provided observer-reports of their partner's personality traits. These data allowed us to (1) supplement the existing literature with an additional estimate of the linear association between partners' personality trait-similarity and their relationship satisfaction; (2) determine whether there are curvilinear associations between similarity and relationship satisfaction (Luo & Klohnen, 2005); and (3) examine whether people's attachment security with respect to their romantic partner moderates the link between trait-similarity to their partner and relationship satisfaction.

Previous research suggests that overall personality similarity is more predictive of relationship outcomes than is similarity with respect to individual traits (Tidwell, Eastwick, & Finkel, 2013). As such, in this study, we operationalized similarity as partners' overall personality trait similarity to each other, averaging across the big five personality traits. Because partners rated their own personality traits *and* each other's traits, we examined both trait-similarity between partners (i.e., the similarity between partners' self-reported traits) and, as a post hoc analysis, their *perceived*-trait-similarity (i.e., the similarity between an individual's self-reported traits and *that same person's* ratings of their partner's traits).

With respect to *perceived* similarity, previous research has found that partners' *perceptions* of similarity are only moderately correlated with actual similarity (Montoya et al., 2008). That is, partners can *perceive* themselves to be more or less similar to each other than they actually are. Moreover, it is possible that *actual*-similarity and *perceived*-similarity may differ in their associations with relationship satisfaction. For example, one possibility is that it may be beneficial for partners to *believe* they are similar to each other, irrespective of their actual levels of similarity. Alternatively, it is possible that partners' perceptions of their similarity to each other may be unrelated to relationship satisfaction. Importantly, *actual* similarity may foster relationship quality, even if partners are unaware (i.e., do not perceive) that the similarity exists. Actual similarity may promote interdependent behaviors (e.g., compassion; Oveis et al., 2010), which might facilitate relationship well-being, even if the couple is unaware of the factors that give rise to the interdependent behaviors (e.g., actual similarity). To evaluate these ideas, a small number of studies have examined whether partners' *perceptions* of their similarity to each other are more predictive of relationship well-being than is their *actual* similarity. These studies have largely found inconsistent links between perceived similarity and relationship satisfaction (Decuyper, De

Bolle, & De Fruyt, 2012; Lutz-Zois, Bradley, Mihalik, & Moorman-Eavers, 2006). Moreover, interpreting the associations between *perceived* similarity and relationship quality is complicated by the fact that perceptions of similarity may be contaminated by relationship quality (Morry, Kito, & Ortiz, 2011). For example, when correlations have been observed between perceived similarity and relationship well-being in previous studies, it has been unclear whether perceptions of similarity lead to high satisfaction, or whether highly satisfied partners are motivated to see themselves as similar. For these reasons, we did not make any *a priori* hypotheses regarding links between *perceived*-trait-similarity and relationship satisfaction. Nevertheless, it is important to emphasize that *actual* similarity may foster relationship quality, even if partners are unaware (i.e., do not perceive) that the similarity exists.

Finally, given the repeated-measures nature of the data, we were also able to examine both *between-persons* and *within-persons* associations between similarity and relationship satisfaction. Although both relationship satisfaction and personality traits vary considerably within persons across time (Fleeson, 2001; Rafaeli et al., 2008), to the best of our knowledge, the link between similarity and relationship satisfaction has been studied exclusively on a between-persons level. Examining within-persons associations between these variables affords valuable insight into how individual persons may be affected by experiences of similarity or dissimilarity with their partners. It is possible, for example, that even if similar couples are not generally happier (a between-persons effect), that individual persons feel most satisfied in their relationships on occasions when they experience greatest similarity to their partners.

4. Method

4.1. Participants

Couples in exclusive romantic relationships were recruited from the Champaign-Urbana community via university announcements, newspaper ads, and e-mail listservs. We scheduled initial in-person, laboratory sessions with our research participants to establish rapport, obtain a set of basic measurements (e.g., demographic variables, detailed information about the nature of their relationships), and to ensure that participants understood the project and were committed to completing it.

Couples participated in a broad battery of assessments 5 times over the course of 12 months, approximately once every 2 months. At Time 1, the sample was composed of a total of 368 individuals, 348 of whom were in a romantic relationship and who were both available to visit our lab, yielding 174 couples. This sample size afforded greater than 80% power to detect averaged-sized zero-order correlations ($r \sim .21$; Richard, Bond, & Stokes-Zoota, 2003) for couple-level analyses, and greater than 98% power for individual-level analyses.[1] Couples were predominantly heterosexual – one gay couple and one lesbian couple were included in analyses. Seventy-four percent of the sample was Caucasian and the ages ranged from 18 to 25 ($M = 20.37$, $SD = 1.61$). Ninety-three percent of the couples described themselves as being in exclusive dating relationships, and 3.3% of the couples described themselves as being engaged ($n = 6$). The remainder of the sample described their relationships as "casual." Relationship length at the beginning of the study ranged from less than a month to 7 years ($M = 16.90$ months, $SD = 15.56$ months). Participants were paid approximately 10% of their total stipend up-front and were paid $100 total if they completed the study. Participants who dropped out of the study received prorated payment.

Of the 174 couples sampled at Time 1, 89 (51%) provided data for both partners at Time 2. At Times 3 through 5, 79 (45%), 71 (41%), and 62 (36%) couples provided data for both partners, respectively. Attrition analyses revealed that extraverted individuals (as measured at Time 1) tended to complete fewer waves ($r = -.16$, 95% confidence interval [CI] [−.30, −.01]). None of the other Time-1 variables were related to total number of waves completed, all $|r|s \leqslant .08$.[2]

4.2. Measures

4.2.1. Relationship satisfaction

At each time point, participants completed the Investment Model Scale (IMS; Rusbult, Martz, & Agnew, 1998). The IMS has four subscales to measure satisfaction, commitment, investment, and quality of alternatives with respect to the romantic relationship. Relationship satisfaction was measured using the 5-item satisfaction subscale. A sample items is, "I feel satisfied with our relationship." Participants rated each item on a scale from "strongly agree" (7) to "strongly disagree" (1). Items were averaged to form a composite (Time-1 $\alpha = .85$).

4.2.2. Self- and partner-personality traits

At each wave, each partner independently rated their own personality traits *as well as* their partner's personality traits using the NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992) (i.e., each partner rated themselves *and* their partner, for a total of 4 ratings per couple). The NEO-FFI contains five 12-item subscales that measure extraversion, agreeableness, conscientiousness, emotional stability (the opposite of neuroticism), and openness to experience, respectively. Participants rated each item on a scale from "strongly disagree" (1) to "strongly agree" (7). Items were averaged to form composites (at Time-1, αs ranged from $\alpha = .74$ [agreeableness] to $\alpha = .88$ [emotional stability]).

4.2.3. Attachment security with one's romantic partner

Participants reported their attachment security *with their romantic partner* using the 9-item romantic-partner subscale of the Experiences in Close Relationships-Relationship Structures questionnaire (ECR-RS; Fraley, Heffernan, Vicary, & Brumbaugh, 2011). The ECR-RS is a self-report measure of attachment derived from the Experiences in Close Relationships-Revised inventory (ECR-R; Fraley et al., 2000), that is designed to measure attachment security within specific relationships. The romantic-partner subscale contains 3 items to measure partner-specific attachment anxiety, and 6 items to measure partner-specific attachment avoidance. A sample item for anxiety is, "I'm afraid that my partner may abandon me." A sample item for avoidance is, "I don't feel comfortable opening up to my partner." A prototypically secure person is low on both of these dimensions. All items were rated on a scale from "strongly disagree" (1) to "strongly agree" (7) and then averaged to form composites (Time-1 αs $\geqslant .78$).

The dimensions of anxiety and avoidance can be used to capture the theoretical prototypes that are traditionally discussed in the attachment literature. For example, security is conceptualized as low anxiety and low avoidance, whereas its conceptual opposite, fearful-avoidance, is represented as high anxiety and high avoidance. The dimension running from security to fearful-avoidance

[1] Our analyses use multilevel-modeling (MLM), which makes computing a-priori power significantly more difficult. Nonetheless, we hope these zero-order power analyses will give the reader a sense of the effect sizes that our study could reasonably detect.

[2] Data from this study have been reported elsewhere. Namely, Hudson et al. (2014) examined the coordination between romantic partners' changes in partner-specific attachment representations across time. The analyses reported here have not been previously reported.

is a simple, 45-degree rotation of the anxiety and avoidance dimensions. Similarly, the linear combination of high anxiety and low avoidance produces the dimension running from prototypical preoccupied attachment and dismissing attachment. In short, the theoretical prototypes are linear combinations of anxiety and avoidance and, in certain contexts, rotating those dimensions can facilitate interpretation (see Fraley, 2006; Fraley & Shaver, 2000).

5. Results

5.1. Similarity indices

To examine the associations between partners' personality trait-similarity and their relationship satisfaction, we computed two similarity indices. The first index, *trait-similarity*, was defined as the average absolute difference between partners' self-reported scores for each personality dimension. That is, we subtracted one person's extraversion, agreeableness, conscientiousness, emotional stability, and openness scores from their partner's self-reported scores on each respective dimension; we then averaged the absolute differences for all 5 dimensions together. This index was reversed such that higher numbers indicated that partners' independent self-report ratings of their own personality traits were similar to each other's.[3] When standardized, a trait-similarity z-score of 2.76 corresponded to perfect similarity (i.e., both partners had identical scores on all five dimensions). Conversely, a z-score of −30.57 corresponded to polar opposite dissimilarity (e.g., one partner scored 7 on all dimensions; the other partner scored 1 on all dimensions).

The second index, *perceived-trait-similarity*, was defined as the average absolute difference between each individual's self-ratings of their *own* traits and that same person's ratings of their *partner's* traits. As such, this index captured the extent to which each individual *perceived* him- or herself as similar or dissimilar to his/her partner (independent of the partner's ratings of the partner's traits). This index was reversed such that higher numbers indicated that individuals perceived themselves as similar to their partners. When standardized, a perceived-trait-similarity z-score of 2.35 represented perfect perceived-similarity (i.e., a person gave themselves and their partner identical ratings on all 5 dimensions). Conversely, a z-score of −24.58 corresponded to polar-opposite dissimilarity (e.g., a person rated themselves 7 on *every* dimension and rated their partner 1 on *every* dimension).

5.2. Overview of analyses

The descriptive statistics and intercorrelations for all study variables can be found in Table 1. We used multilevel modeling (MLM) to examine how similarity between partners and their attachment styles interacted to predict relationship satisfaction – both *between-persons* and *within-persons*. To accomplish this, all variables were standardized,[4] and then the predictors were centered within persons.[5] The person-centered predictors, as well as each person's mean level for each predictor across time, were included in the model. For example, a simple model examining relationship satisfaction based on trait-similarity would be:

$$\begin{aligned}(\text{Satisfaction})_{tpc} = {} & \beta_0 + \beta_1(\text{Trait Similarity})_{tc} \\ & + \beta_2(\text{Trait Similarity}^2)_{tc} \\ & + \beta_3(\text{Average Trait Similarity})_{c} \\ & + \beta_4(\text{Average Trait Similarity}^2)_{c} \\ & + \beta_{5-16}(\textit{Control Variables})_{c} + U_p + U_c + \varepsilon_{tpc}\end{aligned}$$

In this equation, satisfaction at time t for person p in couple c is a function of the person's average trait-similarity to their partner across time (β_3, β_4), the person's centered trait-similarity to their partner at each time-point (β_1, β_2), and a random intercept for the person (U_p) and the couple (U_c) to control for within-person and within-couple dependencies in the data. The coefficients for average trait-similarity across time (β_3, β_4) represent *between-persons* effects of trait-similarity on relationship satisfaction (e.g., "to what extent, if any, do partners who are more similar to each other have more satisfying relationships?"). In contrast, the person-centered trait-similarity variables (β_1, β_2) represent *within-persons* (i.e., occasion-by-occasion) effects of trait-similarity on satisfaction (e.g., "to what extent, if any, do people feel more satisfied on *occasions* when they are more similar to their partners?"). We also controlled for each partner's actual level of each big five personality trait (and perceived partner personality traits, when appropriate), relationship length, and assessment wave ("time") in all of our analyses. These variables are represented in the equation simply as "control variables" to keep the equation simple; the various estimates for the control variables are reported in the tabled results, however.[6]

Even though the between-persons and within-persons effects were estimated using the same models, for sake of clarity, we will discuss the between-persons and within-persons effects separately. Within each level of analysis, we will present (1) the association between trait-similarity and relationship satisfaction, (2) the link between *perceived*-trait-similarity and satisfaction, and (3) analyses examining whether attachment moderates these effects.

Table 1
Descriptive statistics and correlations for all study variables.

	M	*SD*	Correlations				
			1	2	3	4	5
1. Relationship satisfaction	5.81	1.11	–				
2. Trait-similarity	6.42	0.21	.02	–			
3. Perceived-trait-similarity	6.39	0.26	**.12**	**.47**	–		
4. Anxiety	2.18	1.46	−.**36**	.01	.00	–	
5. Avoidance	1.89	1.09	−.**56**	.01	−.06	**.42**	–

Note: 95% confidence intervals for correlations in **boldface** do not contain .00.

5.3. Between-persons findings

5.3.1. Trait-similarity and relationship satisfaction

In our first series of analyses we examined the associations between trait-similarity (similarity between partners' independently self-reported personality traits) and relationship satisfaction. We did not find a significant linear association between trait-similarity and relationship satisfaction, $\beta = -.06$, 95% CI

[3] We opted to use the average absolute difference between partners' individual traits – instead of profile correlations or the Euclidean distance between their profiles plotted in 5-dimensional space (e.g., Cronbach & Gleser, 1953) – because we reasoned that similarity with respect to each individual trait is a simpler, more straightforward and intuitive operationalization of what it means for partners to be "similar" than are profile correlations or the geometric distance between two points plotted in 5D-space.

[4] As such, all reported effects are standardized βs.

[5] Since partners share identical trait-similarity scores at each time point, the trait-similarity scores are effectively centered within-couples. However, for the sake of simplicity, we discuss the model as a 2-level one, rather than a 3-level one. Notably, the perceived-trait-similarity scores *can* (and do) differ between partners.

[6] Controlling baseline personality traits is necessary because traits themselves are linked to relationship quality (Donnellan, Assad, Robins, & Conger, 2007; Robins et al., 2000), and large dissimilarities between partners necessarily indicates that one partner is low and the other is high. Controlling for traits ensures that any associations found between *similarity* and well-being are not due to partners' baseline traits.

Table 2
Parameter estimates from multilevel model predicting relationship satisfaction from partners' similarity with respect to individual traits.

	Relationship satisfaction			
			95% CI	
Predictor	β	*SE*	LB	UB
Intercept	−.07	.11	−.29	.14
Between-persons effects				
Extraversion-similarity	.02	.07	−.12	.17
Extraversion-similarity^2	.02	.05	−.07	.12
Agreeableness-similarity	**.16**	.08	.01	.31
Agreeableness-similarity^2	.08	.05	−.03	.18
Conscientiousness-similarity	−.02	.07	−.17	.12
Conscientiousness-similarity^2	−.02	.05	−.10	.07
Neuroticism-similarity	−.14	.07	−.28	.00
Neuroticism-similarity^2	**−.16**	.06	−.28	−.05
Openness-similarity	−.07	.07	−.22	.07
Openness-similarity^2	.11	.06	.00	.22
Self extraversion	**.08**	.04	.01	.16
Self agreeableness	.02	.04	−.06	.10
Self conscientiousness	.06	.04	−.01	.14
Self neuroticism	**−.19**	.04	−.27	−.11
Self openness	−.01	.04	−.09	.07
Partner extraversion	−.03	.04	−.11	.05
Partner agreeableness	−.07	.04	−.14	.01
Partner conscientiousness	.00	.04	−.08	.07
Partner neuroticism	**−.12**	.04	−.20	−.05
Partner openness	.03	.04	−.05	.11
Relationship length	.03	.05	−.07	.12
Time	**−.17**	.03	−.22	−.12
Within-persons effects				
Extraversion-similarity	.01	.04	−.07	.09
Extraversion-similarity^2	.02	.04	−.07	.10
Agreeableness-similarity	−.01	.04	−.10	.08
Agreeableness-similarity^2	−.03	.06	−.14	.08
Conscientiousness-similarity	−.02	.04	−.10	.06
Conscientiousness-similarity^2	−.03	.05	−.13	.07
Neuroticism-similarity	−.05	.04	−.13	.03
Neuroticism-similarity^2	.00	.05	−.10	.10
Openness-similarity	.00	.05	−.10	.09
Openness-similarity^2	−.01	.06	−.13	.11

Note. CI = confidence interval; LB = lower bound; UB = upper bound; 95% CIs for coefficients in **boldface** do not contain .00.

[−.18, .06].[7] As such, our findings are in agreement with previous literature demonstrating no link between partner similarity and relationship satisfaction, on average (e.g., Altmann et al., 2013; Barelds & Barelds-Dijkstra, 2007; Decuyper et al., 2012; Gattis et al., 2004). Building on prior research (Luo & Klohnen, 2005), we also tested for a quadratic association between trait-similarity and relationship satisfaction. In line with the linear findings, we found no quadratic association between trait-similarity and relationship satisfaction, β = .00, 95% CI [−.12, .12]. Collectively, these findings suggest that trait-similarity, on average, does not predict relationship satisfaction.

Although overall similarity did not predict relationships satisfaction, as an exploratory follow-up analysis, we examined whether there were any associations between partners' similarity with respect to each individual big five personality trait and their satisfaction with the relationship. To do so, relationship satisfaction was modeled as a function of the absolute difference between partners' scores on each of the big five personality traits, as well as each partner's actual levels of each trait. As can be seen in Table 2, controlling for each person's traits, partners tended to have higher relationship satisfaction if they were similar to each other with respect to agreeableness (β_{linear} = .16, 95% CI [.01, .31]; $\beta_{quadratic}$ = .08, 95% CI [−.03, .18]) or moderately similar with respect to neuroticism (β_{linear} = −.14, 95% CI [−.28, .00]; $\beta_{quadratic}$ = −.16, 95% CI [−.28, −.05]). In contrast, similarity with respect to extraversion, conscientiousness, and openness was not statistically significantly associated with relationship satisfaction, all $|\beta|$s $\leqslant$ .11. Collectively, these findings suggest that, even though overall partner similarity may not bolster relationship satisfaction, similarity with respect to agreeableness and moderate similarity with respect to emotional stability may foster relationship well-being.

5.3.2. Perceived-trait-similarity and relationship satisfaction

For our next series of analyses we explored the associations between *perceived*-trait-similarity (the extent to which individual persons rate themselves similar to how they rate their partner) and relationship satisfaction. Perceived-trait-similarity was positively related to relationship satisfaction, β_{linear} = .06, 95% CI [−.04, .16]; $\beta_{quadratic}$ = .09, 95% CI [.03, .15]. This suggests that, although actual trait-similarity is unrelated to relationship quality, people who *perceive* that they share similar personalities with their partner *are* more satisfied in their relationships.

5.3.3. Attachment, trait-similarity, and relationship satisfaction

For our next series of analyses, we tested whether people's attachment orientations moderate the links between trait-similarity and relationship satisfaction. For example, people who are highly avoidant may prefer moderate levels of similarity, and may be less satisfied with partners who are extremely similar to themselves. As can be seen in Table 3, the association between trait similarity and relationship satisfaction was moderated by both partner-specific anxiety (β_{linear} = .07, 95% CI [−.03, .17]; $\beta_{quadratic}$ = .18, 95% CI [.08, .28]) and avoidance (β_{linear} = −.06, 95% CI [−.18, .06]; $\beta_{quadratic}$ = −.19, 95% CI [−.31, −.07]).

Fig. 1 depicts the model-predicted associations between trait-similarity and satisfaction for people who were high (1 *SD* above the mean), average, and low (0.80 *SD* below the mean – approximately the lowest observed score in the sample)[8] in anxiety (left-panel) or avoidance (right-panel). With respect to the anxiety, simple slope analyses revealed that there was a positive quadratic association between trait similarity and relationship satisfaction among people who were 1 *SD* above the mean in anxiety (simple β_{linear} = .02, 95% CI [−.12, .16]; $\beta_{quadratic}$ = .18, 95% CI [.04, .32]). In short, for highly anxious individuals, high levels of similarity were increasingly related to higher satisfaction. Unexpectedly, low levels of similarity also appeared to predict increased satisfaction for highly anxious individuals. This finding is difficult to interpret, but may suggest that high levels of dissimilarity might promote *reliant dependence* on one's partner to compensate for one's weaknesses (Bohns et al., 2013) – which may be satisfying for highly anxious individuals.[9]

Almost directly mirroring the high-anxiety findings, there was a *negative* quadratic (inverted U-shaped) association between trait-similarity and relationship satisfaction for people who were 1 *SD* above the mean in avoidance (simple β_{linear} = −.10, 95% CI [−.26, .06]; $\beta_{quadratic}$ = −.19, 95% CI [−.35, −.03]). This trend is consistent

[7] 95% confidence intervals that do not contain 0.00 are statistically significant, $p < .05$.

[8] The lowest observed scores for anxiety and avoidance were z = −0.81 and −0.82, respectively.

[9] Simple slopes analyses also indicated that there was a negative quadratic association between trait-similarity and satisfaction for people low (0.80 *SD* below the mean) in anxiety, β_{linear} = −.10, 95% CI [−.23, .03]; $\beta_{quadratic}$ = −.15, 95% CI [−.26, −.03]. This finding indicates that people with low levels of anxiety preferred partners with moderate levels of similarity (and high or low levels of similarity were associated with decreases in satisfaction). As we elaborate later, we interpret this to reflect a preoccupied-dismissing effect. That is, when projected onto the preoccupied-dismissing dimension, low anxiety (z = −0.80) and average avoidance (z = 0.00) corresponds to moderate levels of dismissing-avoidance.

Table 3
Parameter estimates from multilevel model predicting relationship satisfaction from attachment × *actual* similarity interactions.

	Relationship satisfaction			
			95% CI	
Predictor	β	*SE*	LB	UB
Intercept	−.07	.07	−.20	.07
Between-persons effects				
Similarity	−.04	.05	−.14	.06
Similarity^2	.00	.04	−.08	.08
Anxiety	−.**18**	.06	−.30	−.06
Avoidance	−.**48**	.07	−.62	−.34
Similarity × Anxiety	.07	.05	−.03	.17
Similarity × Avoidance	−.06	.06	−.18	.06
Similarity^2 × Anxiety	.**18**	.05	.08	.28
Similarity^2 × Avoidance	−.**19**	.06	−.31	−.07
Self extraversion	.03	.03	−.04	.10
Self agreeableness	−.02	.03	−.09	.04
Self conscientiousness	.06	.03	−.01	.12
Self neuroticism	−.**14**	.03	−.21	−.07
Self openness	−.01	.03	−.08	.06
Partner extraversion	−.01	.03	−.08	.06
Partner agreeableness	−.03	.03	−.09	.03
Partner conscientiousness	.02	.03	−.05	.08
Partner neuroticism	−.06	.03	−.12	.01
Partner openness	.03	.03	−.04	.10
Relationship length	−.03	.04	−.11	.04
Time	−.**12**	.02	−.17	−.08
Within-persons effects				
Similarity	.02	.04	−.06	.10
Similarity^2	−.02	.05	−.11	.07
Anxiety	−.**14**	.05	−.24	−.04
Avoidance	−.**48**	.07	−.57	−.35
Similarity × Anxiety	.04	.08	−.11	.19
Similarity × Avoidance	.14	.09	−.03	.32
Similarity^2 × Anxiety	−.03	.07	−.17	.10
Similarity^2 × Avoidance	−.07	.11	−.28	.14

Note. CI = confidence interval; LB = lower bound; UB = upper bound; 95% CIs for coefficients in **boldface** do not contain .00.

with the idea that highly avoidant individuals have an optimal level of trait-similarity, such that they are most satisfied when they share average levels of trait-similarity with their partners; if they are too similar or too dissimilar from their partners, they feel dissatisfied.[10]

It is important to note that the moderating effects of anxiety and avoidance were almost entirely mirror opposite each other. As such, for individuals with roughly equal levels of anxiety and avoidance (including prototypically secure individuals, who are low in *both* anxiety *and* avoidance), the moderating effects of both variables mutually canceled when linearly combined, such that similarity was unrelated to satisfaction, simple β_{linear} = −.04, 95% CI [−.14, .06]; $\beta_{quadratic}$ = .00, 95% CI [−.08, .08]).[11] Stated differently, for people with roughly equal anxiety and avoidance, the positive quadratic coefficient for anxiety (β = .18) was canceled out by the negative quadratic coefficient for avoidance (β = −.19; see the similarity^2 × attachment coefficients in Table 3).

The fact that the moderating effect of anxiety was positive and the moderating effect of avoidance was negative indicates that the moderation of attachment on the similarity-satisfaction association can be understood most simply as *dismissing-avoidance* vs. *preoccupied* effect. As can be seen in Fig. 2, attachment scholars have noted that the anxiety and avoidance dimensions can be rotated 45 degrees to produce an "attachment system activation" dimension that runs continuously from preoccupation (i.e., high anxiety and low avoidance – hyperactivation of the attachment system; Fraley et al., 2006) to dismissing avoidance (i.e., low anxiety and high avoidance – deactivation of the attachment system; Fraley et al., 1998) (Bartholomew & Horowitz, 1991). Rotating the axes in this way can facilitate the interpretation of findings when anxiety and avoidance have opposing associations with outcomes (Fraley, 2006). Thus, we organize our interpretation of the previous findings within this framework. As illustrated in the right-hand panel of Fig. 2, when preoccupation was higher (i.e., anxiety was higher and avoidance was lower), people reported the greatest levels of well-being with partners who were very similar to themselves (as well as with partners who were dissimilar). This finding is consistent with the idea that having a highly similar partner may foster a sense of oneness that is satisfying for preoccupied individuals. The unexpected finding that low levels of similarity were also related to increased satisfaction for preoccupied persons may reflect a process whereby dissimilarity promotes dependence on one's partner to compensate for one's weakness (Bohns et al., 2013), which may also be satisfying for preoccupied individuals. In contrast, when dismissing-avoidance was higher (i.e., anxiety was lower and avoidance was higher), people were most satisfied with partners who are moderately similar to themselves, and excess similarity was associated with decreased satisfaction.[12]

5.3.4. Attachment security, perceived-trait-similarity, and relationship satisfaction

For our next series of analyses, we examined whether attachment moderated the associations between *perceived*-trait-similarity and relationship satisfaction. In earlier analyses, we found perceived-trait-similarity was associated with higher relationship satisfaction. As can be seen in Table 4, partner-specific attachment did not moderate the links between perceived-trait-similarity and relationship satisfaction, all $|\beta|$s ⩽ .03, 95% CIs ranged from [−.15, .17] to [−.08, .08].

5.3.5. Summary of between-persons findings

Taken together, the between-persons findings suggest that attachment style is a potentially important moderator of whether trait-similarity predicts relationship satisfaction. Consistent with prior research (e.g., Altmann et al., 2013; Barelds & Barelds-Dijkstra, 2007; Decuyper et al., 2012; Gattis et al., 2004), trait similarity was irrelevant to relationship quality for people with relatively secure attachment styles (i.e., low avoidance, low anxiety). We found that, among highly preoccupied (i.e., high anxiety, low avoidance) individuals, relationship satisfaction was highest when

[10] Simple slopes analyses also indicated that, for individuals low in avoidance, there was a positive quadratic association between trait-similarity and relationship satisfaction, β_{linear} = .00, 95% CI [−.13, .14]; $\beta_{quadratic}$ = .15, 95% CI [.03, .27].

[11] This was true across the spectrum – irrespective of whether anxiety and avoidance were *both* high (β_{linear} = −.04, 95% CI [−.20, .12]; $\beta_{quadratic}$ = −.01, 95% CI [−.17, .15]), *both* low (β_{linear} = −.05, 95% CI [−.18, .08]; $\beta_{quadratic}$ = .01, 95% CI [−.10, .12]), or *both* average (β_{linear} = −.04, 95% CI [−.14, .06]; $\beta_{quadratic}$ = .00, 95% CI [−.08, .08]).

[12] As a series of follow-up analyses, we examined whether attachment orientations moderated the links between partners' similarity with respect to each individual big five personality factor and relationship satisfaction. In contrast to the overall similarity analyses, neither anxiety nor avoidance moderated the association between partners' similarity with respect to any individual trait and relationship satisfaction, all $|\beta|$s ≤ .13. How might we explain the fact that attachment orientations moderated the link between *overall* similarity and relationship satisfaction, but did not moderate the links between similarity with respect to individual traits and satisfaction? As mentioned above, theoretically, it is the general sense of oneness that should bolster relationship satisfaction for highly anxious individuals, and the generalized sense of being "too similar" to one's partner that might induce dissatisfaction among highly avoidant persons. As such, we might not expect highly avoidant individuals, for example, to be dissatisfied with the relationship simply because their partner is similar to them with respect to one trait, like extraversion. Rather, it is the generalized sense of overall similarity that may feel threatening to them. This idea dovetails with previous research which had found that overall similarity is more predictive of relational wellbeing than are any individual traits (Tidwell et al., 2013).

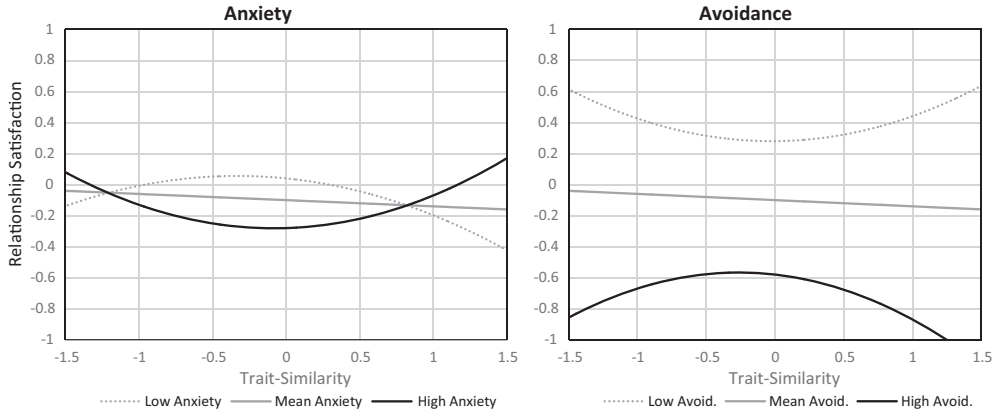

Fig. 1. Between-persons links between trait-similarity and relationship satisfaction by partner-specific attachment security. A z-score of 2.76 represents *identical* scores on all big-five dimensions, whereas a z-score of −30.57 represents polar opposite scores on all dimensions. "High" values for each dimension are 1 *SD* above the mean. "Low" values are the lowest observed score in the sample ($z = -0.80$).

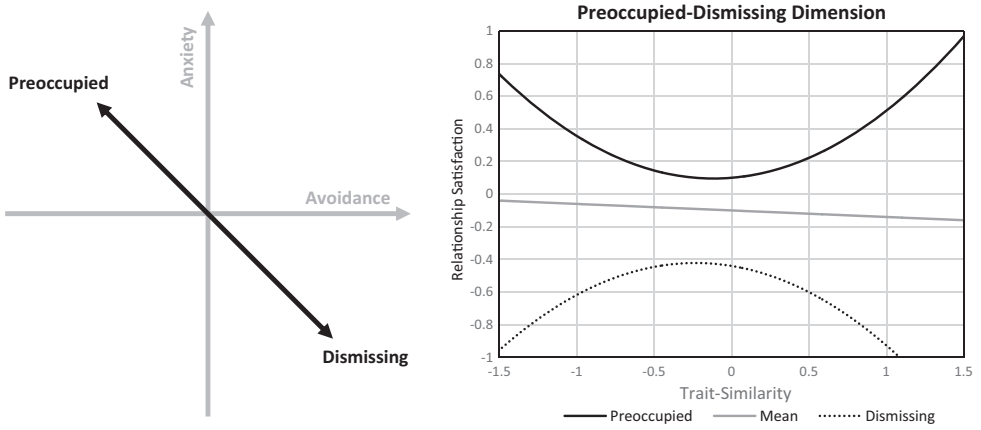

Fig. 2. The preoccupied-dismissing dimension is a 45 degree rotation of the anxiety and avoidance dimensions. This preoccupied-dismissing dimension moderates the association between trait-similarity and relationship quality. The "preoccupied" line is plotted at +1 *SD* anxiety and −0.80 *SD* avoidance (lowest observed score in sample); the "dismissing" line is plotted at +1 *SD* avoidance and −0.80 *SD* anxiety.

partners were highly dissimilar to or similar to their partners with respect to their personality traits. The reverse pattern emerged for individuals who were highly dismissing (low anxiety, high avoidance). Highly dismissing individuals, while being relatively unsatisfied in their relationships in general, were most dissatisfied when their partners were highly dissimilar to or similar to themselves. In contrast to actual trait-similarity, perceived-trait-similarity was positively related to satisfaction. Attachment style did not moderate the links between perceived-trait-similarity and relationship satisfaction.

Importantly, the patterns of results for trait-similarity remained intact, even when controlling for perceived-trait-similarity (and vice versa) – in fact, the coefficients tended to incrementally *increase* when perceived-trait-similarity was controlled (and vice versa). This suggests that, even though trait-similarity and perceived-trait-similarity are highly correlated ($r = .47$), they are distinct constructs that independently predict relationship satisfaction. As we elaborate in greater detail in the discussion, this may be due to a dissociation in which *actual* similarity promotes interdependent behaviors (Oveis et al., 2010) irrespective of whether the similarity is accurately perceived. In contrast, *perceived* similarity has more ambiguous theoretical links to relationship satisfaction, and may actually be a *result* of relationship quality, rather than an antecedent of it (Morry et al., 2011).

5.4. Within-persons analyses

In contrast to the between-persons analyses which examined whether *people* who are more similar to their partners have more satisfying relationships, the within-persons analyses examine whether individuals' feelings of satisfaction in their relationships fluctuate simultaneously with their similarity or perceived-similarity to their partners from *occasion to occasion*.[13] Stated differently, the within-persons analyses examine questions such as, "on measurement occasions when people feel more similar to their partners, do they also rate the quality of their relationship higher?" Importantly, the within-persons effects were estimated in the same models as the between-persons effects. As such, these results control for mean differences between persons in all of the variables.

5.4.1. Trait-similarity and relationship satisfaction

Mirroring the between-persons findings, within-persons, we did not find any links between trait-similarity and relationship quality, all $|\beta|s \leqslant .04$, 95% CI LBs [−.12, −.11], UBs [.04, .09]. This indicates that fluctuations in similarity to one's partner were not

[13] Importantly, there was within-person variability in attachment orientations (anxiety intraclass correlation [ICC] = .57, avoidance ICC = .44), actual similarity (ICC = .56), and perceived similarity (ICC = .58).

Table 4
Parameter estimates from multilevel model predicting relationship satisfaction from attachment × *perceived* similarity interactions.

	Relationship satisfaction			
			95% CI	
Predictor	*β*	*SE*	LB	UB
Intercept	−.17	.05	−.26	−.07
Between-persons effects				
Perceived-similarity	.07	.05	−.03	.17
Perceived-similarity^2	.06	.03	.00	.12
Anxiety	−.07	.05	−.17	.03
Avoidance	**−.58**	.06	−.70	−.46
Perceived-similarity × Anxiety	.03	.06	−.09	.15
Perceived-Similarity × Avoidance	.01	.08	−.15	.17
Perceived-similarity^2 × Anxiety	.00	.05	−.10	.10
Perceived-Similarity^2 × Avoidance	.00	.04	−.08	.08
Self extraversion	.01	.03	−.05	.08
Self agreeableness	−.06	.03	−.12	.01
Self conscientiousness	.04	.03	−.03	.10
Self neuroticism	**−.10**	.03	−.17	−.03
Self openness	−.02	.03	−.09	.05
Perceived partner extraversion	**.09**	.04	.01	.16
Perceived partner agreeableness	.06	.04	−.02	.13
Perceived partner conscientiousness	**.20**	.04	.12	.27
Perceived partner neuroticism	−.01	.04	−.08	.06
Perceived partner openness	**.10**	.04	.02	.18
Actual partner extraversion	−.03	.04	−.10	.04
Actual partner agreeableness	−.06	.04	−.13	.01
Actual partner conscientiousness	−.05	.04	−.12	.02
Actual partner neuroticism	**−.08**	.04	−.15	−.01
Actual partner openness	−.03	.04	−.10	.05
Relationship length	−.02	.04	−.09	.06
Time	**−.11**	.02	−.16	−.07
Within-persons effects				
Perceived-similarity	**.12**	.04	.04	.20
Perceived-similarity^2	**.12**	.05	.02	.22
Anxiety	**−.15**	.05	−.25	−.05
Avoidance	**−.40**	.05	−.50	−.29
Perceived-similarity × Anxiety	−.01	.07	−.15	.13
Perceived-Similarity × Avoidance	.09	.05	−.02	.19
Perceived-similarity^2 × Anxiety	.01	.07	−.12	.14
Perceived-similarity^2 × Avoidance	.01	.03	−.04	.07

Note: CI = confidence interval; LB = lower bound; UB = upper bound; 95% CIs for coefficients in **boldface** do not contain .00.

systematically related to fluctuations in relationship satisfaction. Taken together with the between-persons findings, this suggests that, on average, trait-similarity is unrelated to relationship satisfaction – both between- and within-persons.

5.4.2. Perceived-trait-similarity and relationship quality

Previously, we found that between-persons variation in *perceived*-trait-similarity predicted relationship satisfaction. Paralleling those findings, on the within-person level, perceived-trait-similarity was also significantly related to satisfaction, β_{linear} = .16, 95% CI [.08, .24]; $\beta_{quadratic}$ = −.03, 95% CI [−.11, .05]. These associations suggest that, within-persons, people feel more satisfied on occasions when they feel more similar to their partners. Taken together with the between-subjects results, these findings indicate that on both the between-subjects *and* within-subjects levels, partners who *perceive* themselves as similar have more satisfying relationships.

5.4.3. Attachment as a moderator

On a within-persons level, attachment generally moderated neither the associations between trait-similarity and relationship satisfaction nor the associations between perceived-similarity and relationship quality, all $|\beta|$s $\leqslant$ .14, 95% CI LBs [−.29, −.01], UBs [.11, .32]. These findings suggest that within-person fluctuations in attachment orientations generally did not interact with fluctuations in people's similarity to their partner to predict deviations in relationship satisfaction.

5.4.4. Summary of within-persons findings

On a within-person level, trait-similarity was unrelated to relationship satisfaction. In contrast, within-person fluctuations in *perceived*-trait-similarity were positively associated with fluctuations in satisfaction. On a within-persons level, attachment did not moderate any of these findings.

6. Discussion

Previous research examining links between romantic partners' personality trait-similarity to each other and relationship satisfaction has produced mixed findings (Altmann et al., 2013; Barelds & Barelds-Dijkstra, 2007; Caspi & Herbener, 1990; Gattis et al., 2004; Gonzaga et al., 2007; Luo, 2009; Luo et al., 2008; Markey & Markey, 2007; Rammstedt & Schupp, 2008; Robins et al., 2000). The present study (1) provided an additional estimate of the linear relationship between partner-similarity and relationship satisfaction, (2) tested curvilinear associations between partners' trait similarity and their relationship satisfaction (Luo & Klohnen, 2005), and (3) examined whether people's attachment orientations moderated the link between partner-similarity and satisfaction.

With respect to the first point, consistent with previous research (Altmann et al., 2013; Gattis et al., 2004; Luo, 2009; Neyer & Voigt, 2004; Robins et al., 2000), we found no linear associations between partners' overall personality trait-similarity to each other and their relationship satisfaction. Beyond this, there were also no quadratic associations between partners' overall trait-similarity and their relationship satisfaction (Luo & Klohnen, 2005). As exploratory follow-up analyses, we also examined whether similarity with respect to each individual big five personality trait predicted relationship satisfaction. Similarity with respect to agreeableness and moderate similarity with respect to emotional stability predicted higher levels of relationship satisfaction. However, similarity with respect to extraversion, conscientiousness, and openness was not associated with relationship satisfaction. Taken together, these results suggest that, in general, partners who share similar personality traits do not necessarily have more satisfying relationships.

6.1. Does attachment moderate the similarity-satisfaction link?

Drawing from contemporary adult attachment theory (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987), we expected attachment styles to moderate the link between partners' trait-similarity to each other and their relationship satisfaction. Consistent with this idea, we found interactions between partner-specific attachment and trait-similarity in predicting relationship satisfaction. Because both anxiety and avoidance moderated the association between similarity and satisfaction (in mirror-opposite directions), we summarize the results with respect to a 45-degree rotation of the dimensions, which runs from "preoccupation" (i.e., high anxiety and low avoidance – hyperactivation of the attachment system; Fraley et al., 2006) to "dismissing avoidance" (i.e., high avoidance and low anxiety – deactivation of the attachment system; Fraley et al., 1998) (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2007) (see Fig. 2).

For those with a highly preoccupied attachment style (i.e., high anxiety, low avoidance), partner-similarity was positively associated with relationship satisfaction. One potential explanation for this finding is that highly preoccupied people crave (1) attention and affection from-, and (2) a sense of closeness with their partners

(Bartholomew & Horowitz, 1991; Collins & Read, 1990). With respect to the former, trait-similarity may facilitate interdependent, caretaking behaviors (Oveis et al., 2010) between partners, which should theoretically increase highly anxious individuals' positivity toward the relationship (Campbell et al., 2005). With respect to the latter, preoccupied individuals seem to desire to maximize the sense of oneness they experience with their partners (Slotter & Gardner, 2012), and intimate experiences appear to be deeply satisfying for them (Birnbaum et al., 2006). As such, similarity may catalyze a satisfying sense of connectedness with their partners. Unexpectedly, very low levels of similarity were also related to increased relationship satisfaction for highly preoccupied individuals. Such a finding might suggest that high levels of dissimilarity may promote *reliant dependence* on one's partner to compensate for one's weaknesses (Bohns et al., 2013). For example, romantic partners may distribute tasks, such as paying the bills, between each other in a way that plays to their respective strengths. Given discrepancies in partners' personality traits, the more conscientious partner may manage finances, whereas the more extraverted partner may orchestrate the couple's social life. This type of interdependence, which might be facilitated by partners possessing dissimilar traits, may be perceived as satisfying by highly preoccupied individuals for at least two reasons. First, this type of interdependence may increase preoccupied individuals' sense of being cared for by their partners. Second, one of the concerns that highly preoccupied individuals have is that they are not valued by their loved ones (Bartholomew & Horowitz, 1991). To the extent that preoccupied individuals perceive that their partners are reliant upon *them* (e.g., due to compensatory strengths and weaknesses), their fears of being unvalued may be assuaged. Of course, this explanation is ultimately speculative, and future research should test it more directly.

People with high levels of dismissing-avoidance (i.e., high avoidance, low anxiety) exhibited a negative quadratic – upside-down U-shaped – association between partner trait-similarity and relationship satisfaction, such that these persons were most satisfied with their romantic relationships when they experienced moderate levels of similarity with their partners. This may reflect two opposing psychological dynamics. First, highly dismissing individuals tend to desire *counter-dependence* from their romantic partners (Bartholomew & Horowitz, 1991). That is, too much interdependence or intimacy is undesirable for them (Fraley et al., 2000; Hazan & Shaver, 1987). As such, to the extent that similarity promotes interdependent behaviors (e.g., compassion; Oveis et al., 2010) or a sense of oneness and intimacy, it may be undesirable for highly avoidant people. However, this point must be balanced by previous research showing that even avoidant individuals are attracted to others with at least some qualities similar to their own (e.g., Holmes & Johnson, 2009). These opposing tendencies may cause highly dismissing-avoidant people to feel most satisfied with their relationships when similarity is at moderate, non-extreme levels.

6.2. Attachment styles, perceived similarity, and relationship satisfaction

We also examined links between partners' *perceived* similarity to each other and their relationship satisfaction. In contrast to actual similarity, perceived similarity was linked to increased relationship satisfaction. Unlike actual similarity, however, people's attachment styles did not moderate this association.

Why would attachment moderate the effects of *actual* similarity, but not *perceived* similarity? There are several possible potential explanations for this phenomenon. For one, although similarity has been linked to certain types of interdependent, caretaking behaviors (Oveis et al., 2010), partners' perceptions of how similar they are to each other do not necessarily reflect how similar they *actually* are to each other (Montoya et al., 2008). For example, in the present study, perceived similarity was only correlated about $r = .50$ with actual similarity. One consequence of this is that actually being similar to one's partner may carry benefits for individuals high in attachment anxiety (e.g., increased compassion, support) (Oveis et al., 2010) that are independent of *perceptions* of that similarity. Stated differently, the results of similarity (e.g., compassion) can foster relationship quality, even if the partners do not realize that the similarity exists and/or is responsible for those boons.

A second possible, related explanation for the finding that attachment moderates the effect of *actual* but not *perceived* similarity is that partners' perceptions of their similarity to each other may be a *consequence* of relationship quality, rather than an antecedent of it. That is, perceived similarity to one's partner may be partially a function of perceptions of the quality of one's relationship (Morry et al., 2011). For example, partners who are deeply satisfied with their relationship may be motivated to see themselves as more similar to each other. In contrast, people who are dissatisfied with their romantic partner may have reason to perceive their partner as being quite different from themselves.

6.3. Within-persons analyses

Finally, previous research suggests that people can vary significantly from day-to-day in terms of their personality traits (Fleeson, 2001), attachment styles (Baldwin & Fehr, 1995; Pierce & Lydon, 2001), and relationship satisfaction (Rafaeli et al., 2008). As such, we explored whether romantic partners experienced greater relationship satisfaction (1) on occasions when they exhibited greater similarity to each other in their personality traits or (2) on occasions when they *perceived* more similarity between themselves. With respect to the former, partners did not experience higher relationship satisfaction on occasions when their personality traits were most similar to each other. With respect to the latter, however, partners *did* experience higher relationship satisfaction on occasions when they *perceived* themselves as more similar to each other. As we have mentioned above, this finding is ambiguous, and could mean that experiences of perceived similarity lead to greater satisfaction. Alternatively, this finding could suggest that experiences of high relationship quality bias people toward perceiving greater similarity with their partners than actually exists (Morry et al., 2011).

6.4. Limitations and future directions

The present research suggests that people's attachment styles may play an important role in influencing whether partners' personality-trait-similarity to each other predicts satisfaction with the relationship. Theoretically, this is because similarity may encourage interdependent behaviors (e.g., compassion; Oveis et al., 2010) and/or a sense of connectedness, which may be perceived as positive or negative to highly anxious or highly avoidant people, respectively. One limitation of the current study is that we used an existing dataset that contained neither measures of the frequency of positive/supportive and negative/unsupportive interactions that couples experienced, nor assessments of partners' construal of themselves as interdependent vs. independent/counter-dependent. Future studies should explicitly explore whether supportive/caretaking behaviors and/or partners' construal of their interdependence mediate the association between attachment $\times$ similarity and relationship satisfaction.

A second limitation of the present study is that the sample was composed entirely of young, dating couples. It may be the case that other relationship factors, including relationship status

(e.g., married vs. dating), relationship length, or other factors, like age may affect the links between partner similarity and relationship quality. For example, the positive or negative effects of (dis)similarity might take considerable time to manifest. Alternatively, it is possible that life transitions (e.g., the transition to parenthood) might augment the importance of similarity to relationship well-being – or perhaps even how people with different attachment orientations respond to partners that are more or less similar to themselves. Future research should use more heterogeneous samples to explore the generalizability of our findings.

6.5. Conclusion

Are people more satisfied in relationships when their partners are similar to themselves in their personality traits? The present research suggests that the answer to this question depends on people's attachment styles. For people who are relatively preoccupied in their attachment orientation, satisfaction is greatest when the partner is highly similar or dissimilar to the self. For people who are relatively dismissing in their attachment style, a moderate amount of personality similarity seems optimal for relationship satisfaction.

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