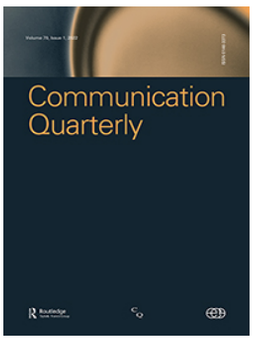

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**ABSTRACT**

Relational turbulence theory (RTT) articulates processes that explain why spouses evaluate their marriages as chaotic. Specifically, RTT predicts that relational uncertainty biases cognitive appraisals about the marriage and that partner interference with daily routines heightens negative emotions toward the spouse, both of which, culminate in relational turbulence. Our study confirmed these theoretical processes in marriage. However, by integrating attachment theory predictions into RTT to further inform these processes, we demonstrated that RTT's mechanisms were not the same for all spouses as they were dependent upon individuals' attachment dimensions. Results of a latent profile analysis with distal outcomes indicated that RTT's relationship parameters differed among spouses' attachment styles, and results of conditional process models revealed that spouses who were higher in both attachment avoidance and anxiety experienced the most relational turbulence through theorized processes. Because RTT's relationship parameters and processes differed by spouses' attachment, our results speak to the importance of considering the moderation of RTT's mechanistic pathways with particular emphasis on partners who vary in relationship security and interpersonal vulnerabilities

**KEYWORDS**

Relational turbulence theory; attachment theory; relational uncertainty; interdependence; marriage

Relational turbulence theory (RTT) explains how marriages evolve into unstable relational states. In particular, the theory explains how relational uncertainty and interdependence foster relational processes that "coalesce into an overall perception of the relationship as chaotic" (Solomon, Knobloch, Theiss, & McLaren, 2016, p. 508). RTT argues for distinctive processes through which relational uncertainty and partner interdependence bring about relational turbulence. As one of its predictions, RTT considers relational uncertainty (ambiguities about the nature of involvement in a relationship composed of self, partner, and relationship uncertainty) as a relationship parameter (propositions 1 & 5) that causes partners to form biased cognitive appraisals (distorted assessments) about the relationship. These biased cognitions, such as feelings of loneliness in a marriage (Goodboy, Bolkan, Brisini, & Solomon, 2021) or appraisals of relationship threat (the perceived damage to a relationship; Solomon & Knobloch, 2004), in

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turn leads to assessments of the relationship as more turbulent (chaotic and unstable; see Solomon et al., 2016). Additionally, RTT accounts for interdependence as another relationship parameter and makes the causal claim (propositions 2 & 5) that interference from a partner (the disruption of daily routines and activities), heightens emotional responses (negative affective arousal) to unwanted disruptions, which in turn, makes the relationship more turbulent (Solomon et al., 2016). Stated differently, RTT considers biased cognitive appraisals and negative emotions as experiences that mediate the effects of relational uncertainty and interdependence on relational turbulence .

Although relational turbulence scholars have historically modeled the effects of relational uncertainty and partner interference directly to turbulent experiences (i.e., relational turbulence model; Solomon & Knobloch, 2004; see Goodboy, Bolkan, Sharabi, Myers, & Baker, 2020, for a meta-analytic summary), the theory has evolved to specify the cognitive and emotional processes through which relationship parameters impact the experiences of specific relationship episodes culminating in chaotic and tumultuous relational states. RTT's processes have been confirmed by several researchers studying romantic relationships (e.g., Goodboy et al., 2021; Jones & Theiss, 2021; Knoster, Howard, Goodboy, & Dillow, 2020; Solomon & Brisini, 2019; Tian & Solomon, 2020), but whether these processes are uniform for all spouses, or if they vary for spouses who might hold different views toward marriage, has yet to be studied thoroughly.

In support of this contention, using meta-analysis, Goodboy et al. (2020, pp. 237–238) noted substantial variability in average effect sizes across decades of relational turbulence research concluding that "it is important for future researchers to theoretically identify and test for moderators of the indirect effects proposed by RTT (i.e., moderated mediation) to better understand this variation (e.g., for whom are these indirect effects different, or in what types of relationships?)." Goodboy et al. noted effect heterogeneity in relational turbulence findings which invites an investigation into possible differential effects proposed by RTT. Differential effects can be discovered using variable-centered approaches (i.e., regression interactions) and person-centered approaches (i.e., mixture modeling), both of which offer different insights into the data.

Although RTT offers unconditional theoretical processes to explain tumultuous relational states, these processes might also be conditional and more pronounced for spouses who hold negative views about marriage. Thus, an important goal of our study was to determine if RTT's predictions are moderated by relationship-relevant differences among husbands and wives that may make them more vulnerable to relational turbulence because of the biased cognitive appraisals they might hold and the intensified emotions they might feel in their marriages. To

accomplish this goal, our study was interested in differential effects in RTT and sought to determine: (1) if spouses' attachment insecurities yielded differences in RTT's relationship parameters, and more importantly, (2) if the processes that explain relational turbulence are different (and possibly more pronounced) for spouses higher in attachment avoidance and anxiety.

## Attachment differences in RTT relationship parameters

Because romantic and affectionate bonds occur as the result of an attachment process (Hazan & Shaver, 1987), attachment theory (Bowlby, 1973) provides an overarching perspective to test for differences in RTT's relationship parameters, and potentially, moderated processes that predict relational turbulence. By unifying aspects of attachment theory within the specifications of RTT, we reasoned that RTT's mechanistic propositions might differ systemically based on spouses' attachment security because it is known that attachment influences spouses' biased cognitions and negative emotions in marriages (Crowell, Treboux, & Waters, 2002; Kobak & Hazan, 1991; Mikulincer, Shaver, & Pereg, 2003), both of which are mediators in RTT (Solomon et al., 2016). Below we provide a brief overview of attachment and our rationale for incorporating attachment dimensions within RTT's relationship parameters and processes.

Attachment in adult relationships varies along two dimensions: anxiety and avoidance (Brennan, Clark, & Shaver, 1998). In adult romantic relationships, attachment anxiety is characterized by an intense desire for closeness due to the fear of abandonment or rejection, whereas attachment avoidance is characterized by a discomfort with interdependence and closeness due to viewing relationships as nonessential (Fraley & Shaver, 2000). Anxiety and avoidance dimensions reflect relatively stable expectations about relationships derived from prior attachment experiences (e.g., the availability and supportiveness of partners in previous relationships; Mikulincer & Shaver, 2013). In terms of Bartholomew's (1990) adult attachment typology, partners who are low in the anxiety and avoidance dimensions are typified as secure and those who are high in both dimensions are considered fearful. In contrast, partners who are high in anxiety but low in avoidance are labeled as preoccupied, whereas those low in anxiety but high in avoidance are considered to be dismissive (Feeney, 2016).

Research implies that spousal attachment styles might shape perceptions of RTT's relationship parameters within marriage (relational uncertainty and interdependence) for several reasons. First, volumes of research have indicated that individuals with attachment insecurities

(higher in anxiety, avoidance, or both dimensions) struggle more in their relationships than their secure counterparts, leading to their own and their partner's dissatisfaction (Candel & Turliuc, 2019). As Mikulincer and Shaver (2016b) summarized, "attachment insecurities interfere with the formulation, consolidation, and maintenance of lasting and satisfying couple relationships" (p. 326), with avoidance stifling "a progression of a relationship toward intimacy, commitment, and productive conflict resolution" and anxiety promoting "tension and ambivalence, suspicion and intrusiveness, and conflict escalation" (p. 326). Put simply, attachment experiences shape spouses' working models of relationships (Fraley & Shaver, 2000) and thus we argue that attachment security should inform RTT's relationship parameter of relational uncertainty.

Ultimately, attachment insecurity is theoretically and logically well-suited to explain individual differences in relational uncertainty about marriage because avoidant partners have more distrust regarding the goodwill of the marriage and anxious partners have more worries and doubts about the marriage than secure individuals (Mikulincer & Shaver, 2013). That is, individuals with attachment anxiety and/or avoidance may be more susceptible to heightened experiences of relational uncertainty. Indeed, previous research has found that dating partners' attachment anxiety and avoidance both exhibited moderate to strong associations with self, partner, and relationship uncertainty (Knobloch, Solomon, & Cruz, 2001). This is unsurprising as both attachment anxiety and avoidance dimensions have been linked to a higher global intolerance for uncertainty even after controlling for each attachment dimension's unique effects (Wright, Clark, Rock, & Coventry, 2017). Therefore, we used a person-centered approach to treat attachment styles as a latent categorical variable and examine differences in attachment styles among RTT parameters. Attachment researchers (e.g., Siegel, Levin, & Solomon, 2019; Vaillancourt-Morel, Labadie, Charbonneau-Lefebvre, Sabourin, & Godbout, 2021) who adopt a person-centered approach study configurations of attachment dimensions together to switch the focus to the person (i.e., those who have in common a particular attachment style). This approach is consistent with attachment theory, which allows attachment styles to be considered a categorical variable composed of two orthogonal dimensions of anxiety and avoidance (Brennan et al., 1998). This person-centered approach is one way to model heterogeneity in RTT. We offer our first hypothesis situating attachment theory within RTT's parameter of relational uncertainty

H1: Spouses with insecure attachment styles (preoccupied, dismissive, fearful) will experience more self uncertainty, partner uncertainty, and relationship uncertainty in their marriage, relative to spouses with a secure attachment style.

Likewise, attachment is inextricably linked to RTT's relationship parameter of interdependence because "relationship partners who promote attachment security mutually influence each other" (Arriaga & Kumashrio, 2021, p. 176). In other words, partners' attachment orientations shape the very nature and degree of their interdependence processes (Givertz, Woszidlo, Segrin, & Knutson, 2013; Mikulincer & Shaver, 2016b; Simpson, 1990). Indeed, both attachment anxiety and avoidance have demonstrated strong negative associations with commitment in marriages (i.e., personal commitment and dedication commitment; Givertz et al., 2013), which according to interdependence theory perspectives, is a key representation of the state of dependence (Rusbult & Buunk, 1993). Furthermore, previous research has positively linked secure attachment to interdependence in romantic relationships (e.g., love, dependency, self-disclosure) whereas anxious attachment was not significantly associated with interdependence and avoidant attachment was negatively associated with interdependence (Simpson, 1990). Simpson's (1990) finding is consistent with the notion of deactivating strategies employed by avoidant individuals (e.g., promoting distance from partners and self-reliance) due to their discomfort with closeness and dependence (Mikulincer & Shaver, 2016b). Because dismissive spouses avoid interdependence and strive to maintain behavioral independence within the marriage (Mikulincer & Shaver, 2013, 2016b; Simpson, 1990), these spouses should tolerate the lowest amount of interference and facilitation from their partners because they require marital distance, leading to our second person-centered hypothesis:

H2: Spouses with dismissive attachment styles will have the least amount of partner interdependence (interference, facilitation) in their daily routines, relative to secure, preoccupied, or fearful spouses.

## Attachment as a moderator of RTT processes

Beyond explaining differences in RTT relationship parameters, attachment is also well-suited to serve as a moderator of RTT's specified processes that might vary based on individual differences in spousal attachment security. By studying attachment in this manner, our project might offer additional insights into the conditions under which relationship parameters are associated with biased cognitive appraisals and negative affect, both of which are mediators of relational turbulence in RTT. Attachment avoidance and anxiety might serve as additive moderators of RTT's uncertainty and interdependence processes because spouses' internal working models of relationships shape cognitive and emotional responses to partners, and in general, attachment insecurity pervades marital

functioning (Mikulincer & Shaver, 2016b). More specifically, attachment should inform RTT's proposition 1 (relational uncertainty causes spouses to form more biased cognitive appraisals about the marriage due to limited comprehension of marital episodes; Solomon et al., 2016) because attachment anxiety and avoidance are linked to distorted cognitive appraisals about marriages.

Anxiously attached individuals are predisposed to engage in hyperactivation strategies such as "making catastrophic appraisals" and "amplifying the threatening aspects of even minor troubles" (Mikulincer & Shaver, 2016b, p. 191) which should intensify the effect of relational uncertainty on biased cognitive appraisals. In the case of avoidant individuals who are predisposed to enact deactivating strategies, it may seem intuitive that avoidant partners would be less likely to be affected by relational certainty. However, previous research has found that both anxious and avoidant attached individuals are prone to experiencing biased cognitions such as feeling loneliness within a marriage (i.e., lacking desired levels of intimacy; Givertz et al., 2013) or appraising their partners' behaviors as more threatening to the relationship (e.g., Radecki-Bush, Farrell, & Bush, 1993). These findings are in line with attachment scholars' notions that even though avoidant individuals engage in deactivation, they still possess a "need for security beneath their characteristic avoidant defenses" (Mikulincer & Shaver, 2016b, p. 295) which is challenging to obtain because of their interpersonal difficulties. Because spouses higher in attachment avoidance and anxiety often make more negative attributions and interpretations about their partners' behaviors (Gallo & Smith, 2001; Mikulincer, 1998; Mikulincer et al., 2003; Siegel et al., 2019), as a consequence, insecure spouses may have even stronger biased cognitive appraisals than secure spouses when uncertain about the marriage.

In addition, attachment should inform RTT's proposition 2 (interference from a partner is affectively arousing and causes spouses to experience more negative emotions; Solomon et al., 2016) because attachment anxiety and avoidance are closely tied to the experience of emotions and emotion regulation in romantic relationships (Mikulincer & Shaver, 2016a). Individuals with attachment anxiety and avoidance have reported greater experiences of negative affective states when facing stressful situations with their partners (e.g., Rholes, Simpson, & Oriña, 1999) and threats to their romantic relationships (e.g., Radecki-Bush et al., 1993). Studies support the notion that attachment security is associated with the regulation of negative affect, whereas attachment anxiety and avoidance are linked to the experience of negative emotions stemming from stressful events (Mikulincer et al., 2003). This is unsurprising as partners higher in attachment anxiety tend to use hyperactivating strategies in response to their partner's disruptive behaviors (Feeney, 2016). As Mikulincer and

Shaver (2005) explained, "anxiously attached individuals' tendencies to intensify the experience of negative emotions and ruminate on threat-related thoughts may help fuel intense and prolonged bouts of anger toward a relationship partner" (p. 155). In contrast, partners higher in avoidance tend to use deactivating strategies toward their partner's disruptive behavior that manifests as dysfunctional anger. In other words, partners high in avoidance have "a tendency to attribute hostility to a partner even when there were clear contextual cues about the partner's nonhostile intent" (Mikulincer & Shaver, 2005, p. 154). In short, relative to more secure individuals, research suggests that individuals who are higher in attachment avoidance and/or anxiety should experience more negative emotions as a reaction to their partner's interference of their daily goals or routines (Mikulincer & Shaver, 2016a).

Based on evidence that spouses higher in attachment avoidance and anxiety hold more threat appraisals toward their partner, and experience more negative emotions within the marriage, we predicted that attachment dimensions should dually moderate the effect of relational uncertainty on relationship threat appraisals (biased cognitive appraisals; proposition 1 of RTT); and also moderate the effect of interference from a partner on negative emotions toward the partner (proposition 2 of RTT), which in turn, should coalesce into a global evaluation of relational turbulence (proposition 5 of RTT). To examine conditional processes of RTT based on spousal attachment dimensions, we offer our third and

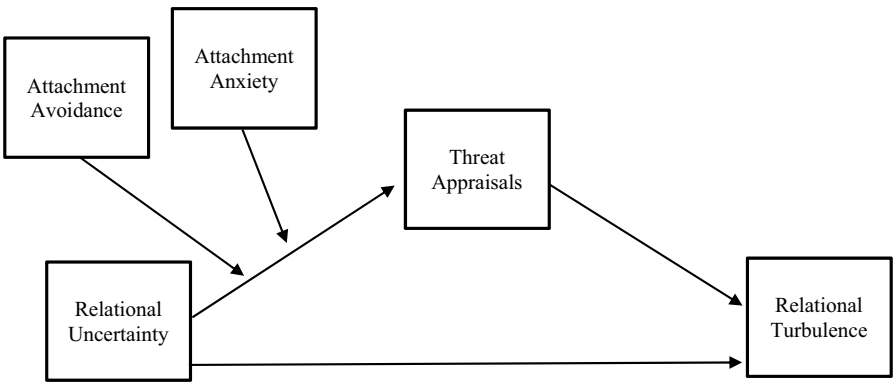


**Figure 1.** Conditional Process Model (First-Stage Additive Dual Moderated Mediation) with the Effect of Relational Uncertainty on Biased Cognitive Appraisals Moderated by Attachment Avoidance and Anxiety

Note. Relational uncertainty is a global factor score saved from a bifactor-ESEM controlling for residualized self uncertainty, partner uncertainty, and relationship uncertainty (see Goodboy et al., 2021 for this recommended measurement specification in testing RTT).

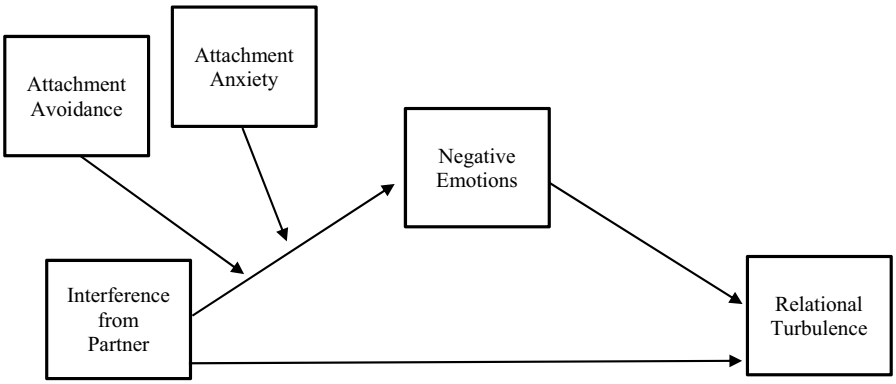


**Figure 2.** Conditional Process Model (First-Stage Additive Dual Moderated Mediation) with the Effect of Partner Interference on Negative Emotions Moderated by Attachment Avoidance and Anxiety.

fourth hypotheses as tests of first-stage additive dual moderated mediation (see Hayes, 2018). The conditional process models we specified for H3 and H4 are displayed in Figures 1 and 2, respectively.

H3: The indirect effect of relational uncertainty on relational turbulence through relationship threat appraisals will be stronger for spouses who are higher in attachment (a) avoidance, and independently, (b) anxiety.

H4: The indirect effect of interference from a spouse on relational turbulence through negative emotions will be stronger for spouses who are higher in attachment (a) avoidance, and independently, (b) anxiety.

## Method

### *Participants*

As part of a larger study and data collection reported by Goodboy, Bolkan, and Shin (2022), we received institutional review board acknowledgment and paid Qualtrics to collect a purposive sample of individuals in heterosexual marriages in the United States. The data underlying this article will be shared on reasonable request to the corresponding author. Our sample included 503 married individuals (236 wives, 267 husbands) with a mean age of 44 years and mean marriage length of 17 years. Participants identified their race as White ($n$ = 426), Black ($n$ = 32), Hispanic ($n$ = 26), Asian ($n$ = 12), mixed race ($n$ = 4) and Native American ($n$ = 3).

### Procedures and measures

Married individuals completed an online survey composed of the Brief Version of the Experiences in Close Relationships Scale (ECR-12; Lafontaine et al., 2016). In addition, we asked participants to respond to the Relational Uncertainty Scale (Solomon & Brisini, 2017), Interference from a Partner Scale (Solomon & Brisini, 2017), Facilitation from a Partner Scale (Solomon & Brisini, 2017), Appraisal of Relationship Threat Scale (Solomon & Knobloch, 2004), Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), and Relational Turbulence Scale (McLaren, Solomon, & Priem, 2011), along with demographic items. All measures used a 6-point Likert Scale response format ranging from (1) *strongly disagree* to (6) *strongly agree* with the exception being the 6-point semantic differential response format used for the Relational Turbulence Scale. Composite reliability for all scales was estimated using coefficient omega ($\omega$).

### Attachment

The ECR-12 is 12 items (6 items for each dimension) and measures attachment avoidance ($\omega$ = .801; $M$ = 2.247, $SD$ = .943) and attachment anxiety ($\omega$ = .919; $M$ = 3.522, $SD$ = 1.492) continuums as general orientations toward romantic relationships. A sample item for anxiety is "I worry about being abandoned." A sample item for avoidance is "I don't feel comfortable opening up to romantic partners."

### Relational Uncertainty

The Relational Uncertainty Scale is 18 items and measures three sources of relational uncertainty in a marriage: self uncertainty (6 items; $\omega$ = .953, $M$ = 3.181, $SD$ = 1.683), partner uncertainty (6 items; $\omega$ = .958, $M$ = 3.288, $SD$ = 1.673), and relationship uncertainty (6 items; $\omega$ = .950, $M$ = 3.296, $SD$ = 1.632). Sample items include "I am sometimes unsure how important my marriage is to me" (self), "I sometimes wonder whether or not my spouse wants the marriage to work out in the long run" (partner), and "I sometimes wonder whether or not my spouse loves me as much as I love him/her" (relationship). Given that the three sources (self, partner, relationship) of relational uncertainty share high correlations (Goodboy et al., 2020), bifactor exploratory structural equation modeling (bifactor-ESEM) is recommended to specify the measurement model (see Goodboy et al., 2021 for details) and retain an essentially unidimensional general factor of relational uncertainty at the theoretical level (i.e., a general factor score of relational uncertainty derived from the self, partner, and relationship uncertainty subscales; Berger & Bradac, 1982; Knobloch & Solomon, 1999). As previously reported by Goodboy et al. (2022), using robust maximum likelihood estimation, the bifactor-ESEM fit the data well (Y-B $\chi^2$ (87) = 218.307, $p$ < .001; CFI = .976; TLI = .957; SRMR =

.012; RMSEA = .055 [.046, .064]) with a well-defined and reliable factor ($\omega_H$ = .961), allowing us to save a standardized factor score of relational uncertainty ($M$ = 0, $SD$ = 1) to be used in subsequent analyses.

### *Interdependence*

The Interference from a Partner Scale is 5 items ($\omega$ = .939; $M$ = 3.139, $SD$ = 1.587) and measures partners' hindering of daily routines and activities. A sample item is "my spouse makes it harder for me to schedule my activities." The Facilitation from a Partner scale is 5 items and measures partners' helping of daily routines and activities ($\omega$ = .918; $M$ = 4.513, $SD$ = 1.207). A sample item is "my spouse helps me to use my time well."

### *Emotions, Appraisals, and Turbulence*

The Negative Affect Schedule is 10 items ($\omega$ = .971; $M$ = 2.556, $SD$ = 1.521) and measures negative emotions experienced toward the partner. Sample negative emotions include "afraid," "hostile," and "upset." The Appraisal of Relationship Threat Scale is 3 items ($\omega$ = .936; $M$ = 2.850, $SD$ = 1.649) and was used to operationalize biased cognitive appraisals toward a partner's behavior to stay consistent with past research on relational turbulence (e.g., Solomon & Knobloch, 2004) while also integrating biased cognitions (threat appraisals) linked to attachment anxiety and avoidance (e.g., Radecki-Bush et al., 1993). A sample item is "my spouse has behaved in ways that damage our marriage." The Relational Turbulence Scale is 4 items ($\omega$ = .935; $M$ = 2.361, $SD$ = 1.428) and measures the chaotic relational state of the marriage with adjectives such as "chaotic/stable."

## Results

Our first and second hypotheses predicted that the relationship parameters of RTT (relational uncertainty, interference, facilitation) differed among spouses' attachment styles (secure, preoccupied, dismissive, fearful), with secure spouses having lower relational uncertainty about the marriage, and dismissive spouses allowing the least amount of interference and facilitation from their partners (relative to the other attachment styles). Guided by attachment theory, we conducted a latent profile analysis (LPA) in Mplus 8.6 with robust maximum likelihood. To conduct an LPA, attachment researchers (e.g., Siegel et al., 2019; Vaillancourt-Morel et al., 2021) have used continuous scores from the anxiety and avoidance dimensions to uncover attachment profiles, which is expected to be a 4-class solution (secure, preoccupied, dismissive, fearful) based on attachment theory. Because factor scores are superior to scale scores for LPA with partial control of measurement error (Morin et al., 2017), we conducted a unidimensional confirmatory factor analyses (CFA) for the

anxiety and avoidance scales from the ECR-12. Results of a unidimensional CFA fit the data for avoidance (Y-B $\chi^2$ (9) = 15.216, $p$ = .085; CFI = .991; TLI = .985; SRMR = .019; RMSEA = .037 [.000, .068]) with acceptable correlation residuals, and likewise, for anxiety (Y-B $\chi^2$ (9) = 44.870, $p$ < .001; CFI = .967; TLI = .945; SRMR = .028; RMSEA = .089 [.064, .116]) with acceptable correlation residuals. Thus, we were able to save standardized factor scores ($M$ = 0, $SD$ = 1) for attachment avoidance and anxiety and use them as indicators for the LPA.

For class enumeration, we tested 1 to 7 profiles (5000 random start values, 200 final stage optimizations) by inspecting the Akaike Information Criteria (AIC), Consistent AIC (CAIC), Bayesian Information Criterion (BIC) Sample Size Adjusted BIC (ssBIC), Classification Likelihood Criterion (CLC), Integrated Completed Likelihood Criterion with BIC (ICL-BIC), Adjusted Lo-Mendell-Rubin Likelihood Ratio Test (LMR), and the Bootstrapped Likelihood Ratio Test (BLRT). We plotted the information criteria in an elbow plot for all profiles (see Figure 3) to search for a bend (Masyn, 2013). All class enumeration statistics are reported in Table 1.

Consistent with attachment theory, we retained four latent classes of attachment after observing a bend in the BIC (and AIC, CAIC, ssBIC) for a 4-class solution with minimal decreases in information criteria in 5 to 7 class solutions. Classification quality was adequate as entropy was .847 and average latent class probabilities for most likely latent class membership were .919 for profile 1 (Dismissive), .917 for profile 2 (Preoccupied), .945 for profile 3 (Secure), and .829 for profile 4 (Fearful).

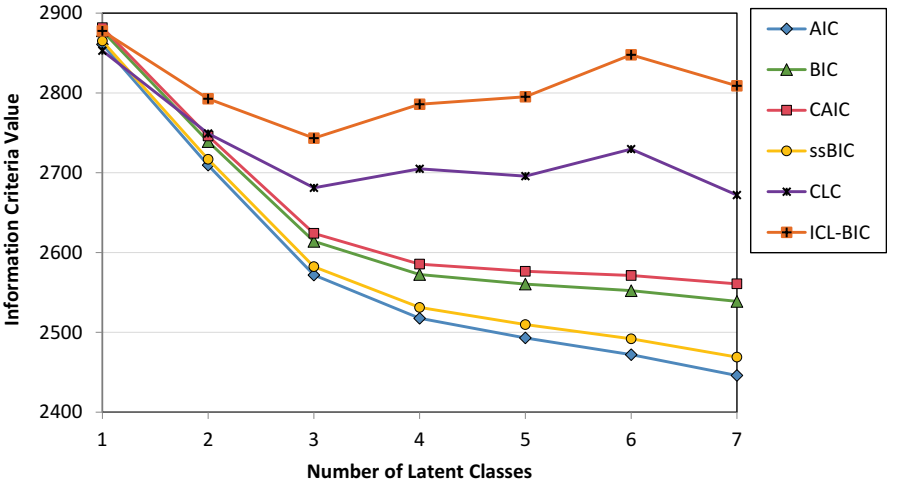


**Figure 3.** Elbow plot of information criteria values for all latent profile analysis models.
Note.Consistent with attachment theory, a 4-class model was retained.

**Table 1.** Latent profile analysis results with factor score indicators of attachment anxiety and avoidance.

| | | | | | Parsimony Criteria | | | Clustering Criteria | | | Both | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | LL | FP | SC | AIC | BIC | CAIC | ssBIC | CLC | NEC | Entropy | ICL-BIC | LMR | BLRT |
| 1 Profile | −1426.451 | 4 | 1.085 | 2860.902 | 2877.785 | 2881.784 | 2865.088 | 2852.902 | 1.00 | N/A | 2877.784 | N/A | N/A |
| 2 Profiles | −1347.773 | 7 | 1.033 | 2709.546 | 2739.090 | 2476.090 | 2716.872 | 2749.239 | .341 | .923 | 2792.783 | $p < .001$ | $p < .001$ |
| 3 Profiles | −1275.912 | 10 | 1.135 | 2571.824 | 2614.030 | 2624.030 | 2582.289 | 2681.133 | .429 | .883 | 2743.339 | $p < .001$ | $p < .001$ |
| 4 Profiles | −1245.811 | 13 | 1.172 | 2517.622 | 2572.490 | 2585.490 | 2531.227 | 2704.998 | .591 | .847 | 2785.865 | $p = .006$ | $p < .001$ |
| 5 Profiles | −1230.496 | 16 | 1.049 | 2492.992 | 2560.521 | 2576.521 | 2509.736 | 2695.761 | .599 | .855 | 2795.290 | $p = .031$ | $p < .001$ |
| 6 Profiles | −1217.017 | 19 | 1.072 | 2472.034 | 2552.225 | 2571.225 | 2491.918 | 2729.646 | .706 | .836 | 2847.837 | $p = .012$ | $p < .001$ |
| 7 Profiles | −1200.984 | 22 | 1.067 | 2445.969 | 2538.822 | 2560.821 | 2468.991 | 2672.115 | .599 | .862 | 2808.968 | $p = .029$ | $p < .001$ |

Note. LL = Loglikelihood; FP = Free Parameters; SC = Scaling Correction; AIC = Akaike Information Criterion; CAIC = Consistent AIC; BIC = Bayesian Information Criterion; ssBIC = Sample Size Adjusted BIC; CLC = Classification Likelihood Criterion; NEC = Normalized Entropy Criterion; ICL-BIC = Integrated Completed Likelihood Criterion With BIC; LMR = Adjusted Lo-Mendell-Rubin Likelihood Ratio Test; BLRT = Bootstrapped Likelihood Ratio Test.

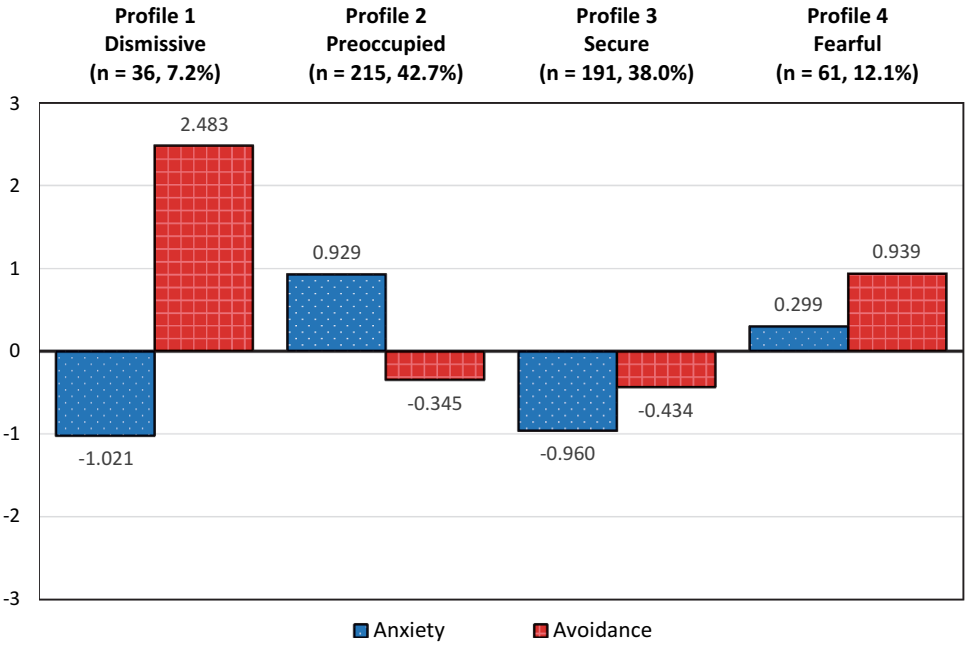


**Figure 4.** Latent profile analysis with attachment dimensions as indicators.
Note. Factor score indicators have a mean of 0 and standard deviation of 1. Variances are .209 for anxiety and .325 for avoidance (equal across profiles).

Factor score means (z scores) are displayed in Figure 4 for the four attachment style profiles that were consistent with attachment theory (Feeney, 2016). Profile 1 ($n$ = 36, 7.2%) was characterized by low anxiety (−1.021) and very high avoidance (2.483), which is a *dismissive* attachment style. Profile 2 ($n$ = 215, 42.7%) was characterized with high anxiety (.929) and low avoidance (−.345), which is a *preoccupied* attachment style. Profile 3 ($n$ = 191, 38.0%) was characterized by low anxiety (−.960) and low avoidance (−.434), which is a *secure* attachment style. Profile 4 ($n$ = 61, 12.1%) was characterized by high anxiety (.299) and high avoidance (.939), which is a *secure* attachment style. Because we hypothesized that *secure* spouses would be in the most stable marriages indexed by RTT's relationship parameters (lowest self, partner, relationship uncertainty; lowest interference from a partner, highest facilitation from a partner), this profile served as the referent class for distal outcome analyses.

Upon retaining the four-class solution, we examined RTT's relationship parameters as distal outcomes resulting from our latent categorical variable distinguishing among four attachment styles characterized by anxiety and avoidance. To avoid shifting in class due to auxiliary variables, we used the BCH procedure which is recommended for continuous outcomes (Bakk & Kuha, 2021); BCH is a weighted groups analysis that accounts for

the measurement error in the categorical latent variable (Asparouhov & Muthén, 2021). Results of the distal outcome analyses revealed differences in self uncertainty [$\chi^2$ (3) = 283.409, $p$ < .001], partner uncertainty [$\chi^2$ (3) = 413.304, $p$ < .001], relationship uncertainty [$\chi^2$ (3) = 363.806, $p$ < .001], interference [$\chi^2$ (3) = 182.220, $p$ < .001], and facilitation [$\chi^2$ (3) = 139.152, $p$ < .001]. Differences in RTT relationship parameters across the four spousal attachment profiles are reported in Table 2.

As displayed in Table 2, hypothesis one was confirmed: secure spouses had the lowest self, partner, and relationship uncertainty, followed by dismissive spouses, then fearful spouses, and finally, preoccupied spouses who reported the most uncertainty (all were significantly different across all attachment styles). The same pattern was found for interference stemming from partners (secure < dismissive < fearful < preoccupied). Secure and preoccupied individuals reported having spouses who offered the highest facilitation (not significantly different from each other), with significantly less facilitation reported by fearful spouses, and even less facilitation reported by dismissive spouses.

**Table 2.** Equality tests of means across 4 attachment style classes using the BCH procedure.

| | Self Uncertainty | | Partner Uncertainty | | Relationship Uncertainty | | Partner Interference | | Partner Facilitation | |
|---|---|---|---|---|---|---|---|---|---|---|
| Latent Profile | Mean | SE | Mean | SE | Mean | SE | Mean | SE | Mean | SE |
| Dismissive | 2.894[a] | .275 | 2.552[a] | .251 | 2.728[a] | .230 | 2.798[a] | .233 | 2.676[abc] | .226 |
| Preoccupied | 4.242[a] | .112 | 4.528[a] | .097 | 4.502[a] | .098 | 4.034[a] | .112 | 4.852[b] | .083 |
| Secure | 1.862[a] | .095 | 1.866[a] | .092 | 1.953[a] | .093 | 2.065[a] | .101 | 4.826[c] | .080 |
| Fearful | 3.677[a] | .182 | 3.747[a] | .187 | 3.565[a] | .189 | 3.502[a] | .159 | 3.592[abc] | .142 |

Note. Means with the same superscripts are significantly different from one another ($p$ < .05).

**Table 3.** OLS path analysis coefficients: first stage moderated by avoidance and anxiety attachment dimensions.

| Models | B | SE | $t$ | $p$ | LLCI | ULCI |
|---|---|---|---|---|---|---|
| *Threat Appraisals* | | | | | | |
| $F(5, 497) = 111.020$, $p < .001$, $R^2 = .528$ | | | | | | |
| Constant | 2.698 | .069 | 39.125 | <.001 | 2.563 | 2.834 |
| Relational Uncertainty | 1.193 | .080 | 14.825 | <.001 | 1.035 | 1.351 |
| Avoidance | .307 | .060 | 5.092 | <.001 | .188 | .425 |
| Relational Uncertainty x Avoidance | .142 | .061 | 2.325 | .020 | .022 | .262 |
| Anxious | −.026 | .053 | −.483 | .629 | −.130 | .079 |
| Relational Uncertainty x Anxiety | .114 | .039 | 2.886 | .004 | .036 | .191 |
| *Relational Turbulence* | | | | | | |
| $F(2, 500) = 53.580$, $p < .001$, $R^2 = .176$ | | | | | | |
| Constant | 1.379 | .150 | 9.175 | <.001 | 1.084 | 1.674 |
| Relational Uncertainty | .030 | .082 | .369 | .712 | −.130 | .191 |
| Threat Appraisals | .345 | .049 | 7.077 | <.001 | .249 | .440 |

Note. The moderators that define the interactions are mean centered for interpretation. $\Delta R^2$ due to both interactions = .012; $F(2, 497) = 6.538$, $p = .002$.

Hypothesis two was partially confirmed as dismissive spouses reported receiving the lowest facilitation, but the next to lowest interference (secure spouses reported the lowest interference). Using a person-centered approach to model attachment, we found that RTT's relationship parameters of relational uncertainty (self, partner, relationship) and interdependence (interference, facilitation) differed meaningfully among spouses with attachment insecurity.

Before testing our next two hypotheses, we wanted to ensure that we found evidence for mediation based on RTT predictions of the processes resulting in relational turbulence. Therefore, in an unconditional mediation model, we examined the effect of relational uncertainty on relational turbulence through relationship threat appraisals. In another mediation model, we examined the effect of relational uncertainty on relational turbulence in a marriage mediated relationship threat appraisals. We used PROCESS 4.0 (Hayes, 2022) to conduct an ordinary least squares path analysis using 5000 percentile bootstrap samples to estimate a 95% confidence interval for the indirect effect. Relational uncertainty (derived from a general factor score using bifactor-ESEM) was associated with more appraisals of relationship threat toward the spouse ($a$ = 1.184 [1.079, 1.288]), and the increase in appraisals of relationship threat, in turn, was associated with more relational turbulence ($b$ = .345 [.249, .440]). Evidence for mediation was found ($ab$ = .408) with a bootstrap confidence interval excluding zero [.286, .536]. There was no evidence of a direct effect of relational uncertainty on relational turbulence controlling for appraisals of relationship threat ($c'$ = .030 [−.130, .191]).

Interference from a spouse was associated with more negative affect toward the spouse ($a$ = .642 [.579, .704]), and an increase in negative affect, in turn, was associated with more relational turbulence ($b$ = .523 [.428, .618]). Evidence for mediation was found ($ab$ = .336) with a bootstrap confidence interval excluding zero [.226, .410]. There was no evidence of a direct effect of interference on relational turbulence controlling for negative emotion ($c'$ = −.054 [−.145, .037]). After establishing the importance of attachment as an individual difference situated in RTT, and after confirming the mediated theoretical processes articulated by RTT, hypotheses three and four extended these tests as conditional process models by incorporating attachment dimensions (avoidance, anxiety) as first-stage dual moderators (see Figures 1 and 2 for the conceptual model). We predicted that the indirect effects on relational turbulence would be stronger for spouses higher in attachment avoidance, and independently, anxiety, which is a test of partial moderated mediation for each attachment dimension (Hayes, 2018).

To test hypotheses three and four, we examined two conditional process models using PROCESS 4.0 specifying first-stage additive dual moderation (Hayes, 2022). In the first conditional process model we predicted that the

**Table 4.** OLS path analysis coefficients: first stage moderated by avoidance and anxiety attachment dimensions.

| Models | B | SE | *t* | *p* | LLCI | ULCI |
|---|---|---|---|---|---|---|
| *Negative Emotions* | | | | | | |
| $F(5, 497) = 101.370$, $p < .001$, $R^2 = .505$ | | | | | | |
| Constant | 2.437 | .059 | 41.561 | <.001 | 2.322 | 2.552 |
| Interference | .527 | .040 | 13.286 | <.001 | .449 | .604 |
| Avoidance | .381 | .055 | 6.934 | <.001 | .273 | .489 |
| Interference x Avoidance | .107 | .035 | 3.052 | .002 | .038 | .176 |
| Anxious | .140 | .041 | 3.397 | .001 | .059 | .221 |
| Interference x Anxiety | .059 | .021 | 2.746 | .006 | .017 | .101 |
| $F(2, 500) = 95.285$, $p < .001$, $R^2 = .270$ | | | | | | |
| Constant | 1.023 | .135 | 7.584 | <.001 | .758 | 1.289 |
| Interference | −.054 | .046 | −1.164 | .245 | −.145 | .037 |
| Negative Emotions | .523 | .048 | 10.833 | <.001 | .428 | .618 |

Note. The moderators that define the interactions are mean centered for interpretation. $\Delta R^2$ due to both interactions = .015; $F(2, 497) = 7.730$, $p < .001$.

effect of relational uncertainty on relationship threat appraisals would be stronger for spouses higher in attachment avoidance, and independently, attachment anxiety, which would indirectly explain greater relational turbulence in the marriage. Likewise, in the second conditional process model, we predicted that the effect of interference on negative emotions would be stronger for spouses higher in attachment avoidance, and independently, attachment anxiety, which would indirectly explain greater relational turbulence. Path model coefficients for both conditional process models, including the two two-way statistical interactions that defined the conditional indirect effects, are reported in Tables 3 and 4.

Although both two-way interactions were significant in each conditional process model revealing a multiple additive moderated path of relational uncertainty on threat appraisals, and separately, interference on negative emotions, the test of moderated mediation with two moderators is formally derived from the index of partial moderated mediation (Hayes, 2018). As Hayes (2018) explained for moderated mediation with two moderators, this index quantifies "how much the indirect effect of *X* on *Y* through *M* changes as that moderator changes by one unit when the other moderator is held fixed" (p. 12). Therefore, the index of partial moderated mediation serves as a statistical test of moderated mediation by one moderator controlling for the other moderator. In our analyses, this index determined if the indirect effects differed systematically for spouses who were higher in attachment avoidance (but who have the same level of attachment anxiety), and independently, for spouses higher in attachment anxiety (but who have the same level of attachment avoidance). Using 5000 percentile bootstrap samples, we found evidence that both attachment dimensions, avoidance (index of partial moderated mediation = .049 [.004, .100]) controlling for anxiety, and anxiety (index of partial moderated mediation = .039 [.013, .070]) controlling for avoidance, independently moderated the indirect effect of relational uncertainty on relational turbulence through threat

appraisals. Likewise, we found evidence that avoidance (index of partial moderated mediation = .056 [.014, .101]) controlling for anxiety, and anxiety (index of partial moderated mediation = .031 [.007, .055]) controlling for avoidance, independently moderated the indirect effect of spousal interference on relational turbulence through heightened negative emotions. To probe partial moderated mediation in both models, conditional indirect effects were estimated at values of avoidance and anxiety together.

As can be seen in Table 5, increases in attachment avoidance, and independently, attachment anxiety, produced stronger indirect effects on relational turbulence as theorized through biased cognitive appraisals. Taking into account both attachment dimensions together, the conditional process model revealed that for spouses relatively lower in avoidance and anxiety (more secure) the indirect effect of relational uncertainty on relational turbulence through threat appraisals was smaller ($\theta ab$ = .306 [.189, .440]) compared to spouses relatively higher in avoidance and anxiety (more fearful) who indirectly experienced the most relational turbulence from this process ($\theta ab$ = .515 [.358, .682]).

As can be seen in Table 6, increases in attachment avoidance, and independently, attachment anxiety, also produced stronger indirect effects on relational turbulence through emotional experiences as theorized. The conditional process model revealed that for spouses relatively lower in avoidance and anxiety (more secure) the indirect effect of spousal interference on relational turbulence through negative emotions was weaker ($\theta ab$ = .177 [.104, .255]) compared to spouses relatively higher in avoidance and anxiety (more fearful) who indirectly experienced the most relational turbulence from this emotional process ($\theta ab$ =

**Table 5.** Conditional indirect effects (relational uncertainty → threat appraisals → relational turbulence) dually moderated by attachment dimensions.

| | *θab* | *SE* | LLCI | ULCI |
|---|---|---|---|---|
| *Values of Additive Moderators* | | | | |
| Low Avoidance/Low Anxiety | .306 | .064 | .189 | .440 |
| Low Avoidance/Avg Anxiety | .365 | .063 | .247 | .495 |
| Low Avoidance/High Anxiety | .423 | .069 | .293 | .563 |
| Avg Avoidance/Low Anxiety | .352 | .065 | .231 | .486 |
| Avg Avoidance/Avg Anxiety | .411 | .065 | .286 | .543 |
| Avg Avoidance/High Anxiety | .469 | .072 | .331 | .618 |
| High Avoidance/Low Anxiety | .399 | .074 | .258 | .546 |
| High Avoidance/Avg Anxiety | .457 | .075 | .314 | .608 |
| High Avoidance/High Anxiety | .515 | .082 | .358 | .682 |

Note: Low Avoidance = 1.304, Average Avoidance = 2.247, High Avoidance = 3.189. Low Anxiety = 2.029, Average Anxiety = 3.522, High Anxiety = 5.014. All values of the indirect effects at any value of Avoidance selected are significantly different from each other, regardless of the value of Anxiety. Likewise, all values of the indirect effects at any value of Anxiety are significantly different from each other, regardless of the value of Avoidance. To interpret partial moderated mediation, it is useful to interpret significant differences of indirect effects at low (−1 *SD*), average (*M*), and high values (+1 *SD*) of one moderator, but at the mean of the second moderator, and vice versa (see Hayes, 2018). Confidence intervals are generated from 5000 percentile bootstrap samples.

**Table 6.** Conditional indirect effects (interference from a partner → negative emotions → relational turbulence) dually moderated by attachment dimensions.

| | *θab* | *SE* | LLCI | ULCI |
|---|---|---|---|---|
| *Values of Additive Moderators* | | | | |
| Low Avoidance/Low Anxiety | .177 | .039 | .104 | .255 |
| Low Avoidance/Avg Anxiety | .223 | .035 | .159 | .295 |
| Low Avoidance/High Anxiety | .269 | .040 | .194 | .351 |
| Avg Avoidance/Low Anxiety | .230 | .037 | .159 | .306 |
| Avg Avoidance/Avg Anxiety | .276 | .035 | .210 | .344 |
| Avg Avoidance/High Anxiety | .321 | .041 | .242 | .405 |
| High Avoidance/Low Anxiety | .282 | .046 | .191 | .375 |
| High Avoidance/Avg Anxiety | .328 | .045 | .241 | .419 |
| High Avoidance/High Anxiety | .374 | .051 | .276 | .479 |

Note: Low Avoidance = 1.304, Average Avoidance = 2.247, High Avoidance = 3.189. Low Anxiety = 2.029, Average Anxiety = 3.522, High Anxiety = 5.014. All values of the indirect effects at any value of Avoidance selected are significantly different from each other, regardless of the value of Anxiety. Likewise, all values of the indirect effects at any value of Anxiety are significantly different from each other, regardless of the value of Avoidance. To interpret partial moderated mediation, it is useful to interpret significant differences of indirect effects at low (−1 *SD*), average (*M*), and high values (+1 *SD*) of one moderator, but at the mean of the second moderator, and vice versa (see Hayes, 2018). Confidence intervals are generated from 5000 percentile bootstrap samples.

.374 [.276, .479]). Thus, hypotheses three and four received support for partial moderated mediation as RTT's processes were independently moderated by spousal attachment avoidance and anxiety.

## Discussion

This study integrated predictions from two theories, attachment theory and RTT, with a twofold purpose. First, we sought to determine if the relationship parameters specified in RTT varied systematically among married individuals with different attachment styles. Second, we sought to verify that the marital processes purported by RTT (based on propositions 1, 2, & 5; Solomon et al., 2016), including the indirect effect of relational uncertainty on relational turbulence through biased cognitive appraisals (relationship threat) and the indirect effect of spousal interference on relational turbulence through heightened negative emotions, were dependent upon spouses' attachment avoidance and anxiety. Consistent with predictions from attachment theory, RTT's relationship parameters of relational uncertainty (self uncertainty, partner uncertainty, relationship uncertainty) and interdependence (partner interference, partner facilitation) differed substantially and meaningfully among secure and insecure spouses (preoccupied, dismissive, fearful). Predictions of uncertainty were consistent with attachment theory as secure spouses reported the lowest uncertainty about their marriages and preoccupied spouses reported the highest uncertainty. Likewise, patterns of interdependence were also consistent with attachment theory as dismissive souses reported low interference and low facilitation whereas preoccupied spouses experienced relatively more interdependence from their partners. Our findings also

confirmed that RTT's processes were supported at relatively high and low levels of attachment anxiety and avoidance; that is, conditional indirect effects were discovered at low and high values of attachment security/insecurity. Ultimately, our findings demonstrate the importance of considering spouses' relational histories and how they predict RTT's exogenous parameters that explain relational turbulence.

Building on tests of RTT's propositions, our mediation models confirmed its theoretical processes to the extent that biased cognitive appraisals (relationship threat) served as a mediator between relational uncertainty and relational turbulence, and negative emotions served as a mediator between interference from partners and relational turbulence. However, conditional process models provided further clarification with evidence of moderated mediation. That is, relational turbulence as the consequent of RTT's processes was greater for spouses who were higher in attachment avoidance, and uniquely, attachment anxiety. There are theoretical implications to be gleaned from the moderated processes uncovered here.

In this study, relational turbulence due to relational uncertainty and spousal interference, and the subsequent biased cognitive appraisals and accompanying negative emotions that followed, were greater for insecurely attached partners. Generally speaking, this may have been the case because partners with more anxious or avoidant attachments tend to have less satisfying and stable relationships than partners with secure attachments (Feeney, 2016). Moreover, across studies of romantic partners, meta-analytic scholarship (Li & Chan, 2012) has revealed an average positive correlation between negative emotional indicators with attachment anxiety ($r$ = .27) as well as attachment avoidance ($r$ = .23). Therefore, evidence suggests that compared to secure spouses, insecure spouses (higher in either anxiety or avoidance) will have more globally turbulent marriages, which associates with more biased appraisals of the marriage and more intense negative affect.

More specifically, we found that attachment dimensions are linked to how information is cognitively encoded and appraised from a spouse, and how emotions are experienced and regulated as well. Pertaining to spouses' biased cognitive appraisals due to relational uncertainty, it is important to note that spouses higher in anxiety and avoidance hold a more negative view of their partners; as Mikulincer and Shaver (2016b) summarized "there is extensive evidence that insecure people tend to describe specific friends and romantic partners in negative terms and also hold negative views of humanity in general" (p. 173). Mikulincer and Shaver (2016b) noted that appraisals of partners tend to be biased from individuals higher in anxiety and avoidance because of their lack of true acceptance for their spouse (negative working model of others) including lower ratings of their partner's dependability, responsiveness, authenticity, and faithfulness. Likewise, insecure partners tend to report more variation in the daily appraisals of their partners; that is,

partner evaluations tend to be unstable (Alfasi, Gramzow, & Carnelley, 2010). Although speculative, relational uncertainty, then, may bother insecurely attached spouses more because they are biased toward their partners to begin with, thus exacerbating their preexisting negative mental representations of their spouses who serve as their adult attachment figures.

According to RTT, spouses experience intensified negative emotions due to interference from partners. Having said that, it is important to note that routine disruptions provoke intense negative responses for more anxious or avoidant spouses (Feeney, 2016). Recall that spouses higher in attachment anxiety, who are worried about being rejected in the marriage and therefore desire more closeness, tend to respond to partners' disruptions with dysfunctional anger and resentment (Mikulincer & Shaver, 2005). Spouses higher in attachment avoidance however, have a disdain for closeness in relationships and might find interference to be incongruent with emotional distancing which may lead to resentment and hostility (Mikulincer & Shaver, 2005). Independently then, heightened negative affect might be expected for anxious and avoidant spouses who react emotionally to negative partner behaviors (Davila, Bradbury, & Fincham, 1998). Taking into account both attachment dimensions together, spouses higher in both avoidance and anxiety (more fearful) had the most intense emotional reactions to routine disruptions and as a consequence, experienced the most relational turbulence. Why should this be?

Fearful-avoidant spouses have a negative working model of themselves (i.e., they feel unworthy of love) and their spouses (i.e., they might get hurt by them), and so they may be hesitant to get close in the marriage because they are afraid of being rejected (Bartholomew, 1990; Bartholomew & Horowitz, 1991). Given that fearful spouses remain distant because they worry that their partners might not care enough about them, it could be the case that these spouses view interference as communicating a lack of caring which may lead to more intense emotional reactions. Simpson and Rholes (2002) pointed out that fearful individuals have a disorganized attachment pattern and, in response to a relational stressor, may vary in their enactment of both hyperactivating and deactivating strategies to the extent that they "enact both strategies in a haphazard, confused, and chaotic manner" (p. 225). Thus, these spouses appear to be prone to chaotic relational states to begin with and they may engage in contradictory approach or avoidance behaviors with their spouse when upset (Simpson & Rholes, 2002). Ultimately, fearful spouses appear to experience the most pronounced relational turbulence processes impacted by their prior working models of relationships which may be shaped by unresolved fear and/or rejection stemming from past or current relationship experiences. It is likely that

fearful spouses have experienced hurt and have been injured by relationships in the past (Mikulincer & Shaver, 2016b), thus making relational turbulence processes more salient or difficult for them.

On the contrary, the negative indirect effect of partner interference on relational turbulence through negative emotions was less pronounced for secure spouses (lower in both anxiety and avoidance) as these spouses experienced less severe negative emotions in response to daily disruptions. This was likely the case because secure individuals are better at regulating their emotions; that is, they are known to "reappraise situations, construe events in relatively benign terms, symbolically transform threats into challenges, maintain an optimistic sense of self-efficacy, and attribute undesirable events to controllable, temporary, or context-dependent causes" (Mikulincer & Shaver, 2016b, p. 189). Because of this, secure spouses may not suffer from the same interpersonal vulnerabilities as their insecure counterparts (Bühler, Weidmann, Wünsche, Burriss, & Grob, 2020), which might make interference from a partner be viewed as a minor irritation that does not produce an intense emotional reaction.

Our findings offer theoretical implications for RTT. The first implication is that the theory's specifications were consistent with our data as we found evidence for RTT's cognitive and emotional processes. RTT processes were confirmed from low to high estimated values of spouses' attachment dimensions and its propositions held for all spouses including those who were relatively high or low in attachment anxiety and/or avoidance (i.e., there was moderated mediation for all spouses). This speaks to the predictive utility of RTT as it "worked" for all spouses to the extent that biased cognitive appraisals and negative emotions served as mediators for individuals who were more or less secure in their romantic attachments. At the same time however, RTT parameters differed among spouses with insecure attachment styles, and more importantly, the indirect effects were stronger among spouses who were more avoidant, and independent of that, more anxious. Therefore, a second theoretical implication is that the mechanistic propositions of RTT should continue to be confirmed by tests of mediation, but that relational histories and individual differences should be tested as moderators of RTT's processes. In other words, RTT's predictions and processes were further substantiated as indirect effects held up for romantic partners ranging from low to high values of an individual difference (moderator). If RTT processes work for all types of people (but vary in magnitude), this speaks to the robustness of the theory but also the need to acknowledge that differential effects are possible. Moving forward, the consideration of moderators might involve studying how emotions and appraisals (embedded in RTT proposition 1 and 2) are dependent upon partners' emotional regulation strategies such as reappraisal and suppression. To this point, Gross and John (2003)

showed that partners who engage in the emotional regulation strategy of reappraisal (as opposed to suppression) optimistically reinterpreted stressors and experienced and expressed less negative emotions, compared to those who engaged in suppression (Gross & John, 2003). Thus, modeling individual differences in how partners make appraisals of relationship events and attend to and evaluate their emotional cues, might further fine tune mechanistic tests of RTT.

Although RTT articulates the causal processes modeled and confirmed in our study (Solomon et al., 2016), we recognize our limitations including that our cross-sectional data cannot offer causal evidence – longitudinal data are better for modeling RTT processes (Goodboy et al., 2020). Another limitation of our study is that we switched from a person-centered approach in testing H1-H2 (attachment styles as a categorical latent variable from mixture modeling) to variable-centered approach in testing H3-H4 (treating attachment dimensions as additive moderators). We would have preferred to use a person-centered approach throughout, but even with a large sample size we did not have large subgroups of spouses with a dismissive ($n$ = 36) or fearful ($n$ = 61) attachment style. Then again, we conducted an indirect application of mixture modeling to estimate attachment styles using standardized factor scores, and these factor means may not map on directly to conventional cutoffs for high/low attachment classifications. Thus, we left attachment anxiety and avoidance as continuous moderators in the conditional process model because of these small class sizes. Van Horn et al. (2015) noted that effect heterogeneity can be modeled using variable-centered (e.g., interactions terms in regression as we did) or person-centered approaches (i.e., regression mixture model), which often give similar results but may provide additional insights.

Considering our study is limited in the complexity of its model specifications, researchers should more comprehensively test RTT in larger models with more complete sets of theorized variables to determine if other RTT processes are (or are not) moderated by the types of romantic partners involved in the relationships (Goodboy et al., 2020). It is important for RTT scholarship to continue to test its processes by recasting a greater focus on who partners are in their relationships and how their individual differences (e.g., their personality traits, relationship histories, vulnerabilities, preferences, beliefs, and so forth) intersect with the theory's mechanisms. Likewise, dyadic studies are needed to model RTT's processes shared by mutual partners in interdependent relationships who impact each other over time (Knobloch, Knobloch-Fedders, Yorgason, Wehrman, & Monk, 2021).

In conclusion, we have preliminary evidence to suggest that merging attachment theory predictions into RTT offers a symbiotic theoretical perspective informed by the working relationship models that spouses bring to their marriages. Through this merged theoretical perspective, it is possible to differentiate among RTT's relationship parameters and demonstrate how its theoretical processes may be moderated by attachment avoidance and anxiety. Downstream in our conditional process models, we found that relational turbulence is indirectly more pronounced for spouses who are higher in attachment avoidance or anxiety (or both) due to more biased cognitive appraisals and more intense negative emotions originating from relational uncertainty and partner interference. Ultimately, attachment security appears to somewhat, but not completely, buffer against relational turbulence processes. Therefore, it seems prudent to consider that RTT's effects depend upon spouses' attachment (in) security[1].

## Note

1. We also considered the possibility that avoidance and anxiety served as second-stage moderators (i.e., moderating the effect of threat appraisals on relational turbulence and the effect of negative emotions on relational turbulence). Joint interaction terms revealed no evidence second-stage additive moderation ($\Delta R^2$ due to both interactions = .003; $F(2, 496) = .984$, $p = .374$) of threat appraisals on relational turbulence controlling for relational uncertainty. Joint interaction terms also revealed no second-stage moderation ($\Delta R^2$ due to both interactions = .007; $F(2, 496) = 2.440$, $p = .088$) of the effect of negative emotions on relational turbulence controlling for partner interference. Therefore, we retained our original conditional process models specifying first-stage additive moderated mediation.

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