The early stages of romantic attraction and romantic relationship development are defined by an array of physiological, psychological, and behavioral consequences (Carter, 1998; Fisher, 2000). This experience, commonly referred to as early-stage intense romantic love (Aron et al., 2005; Brand et al., 2007), falling in love, or passionate love, is hypothesized to have biological substrates that evolved as a core feature of the human mating system. Several lines of research support this hypothesis. For example, results from fMRI studies indicate that the experience of passionate love activates portions of the brain responsible for motivational drive-states (Aron et al., 2005; Bartels and Zeki, 2000). Further, passionate love is associated with changes in circulating levels of neurotrophins and stress hormones. Individuals who indicate that they think about their partner at least four hours a day and score high on a self-report measure of passionate love show increased levels of the neurotrophin nerve growth factor (NGF) relative to individuals neither romantically involved nor in long-term established romantic relationships (Emanuele et al., 2005). Importantly, upregulation of NGF can induce activation of the hypothalamic–pituitary–adrenocortical (HPA) axis of the endocrine system.
(Angelucci, 1994), which ultimately stimulates the adrenal cortex to secrete cortisol, the human body's primary glucocorticoid (Rabin, 1999). A more recent study suggests that this biological cascade may indeed occur. Individuals experiencing passionate love display significantly greater circulating levels of cortisol relative to control groups (Marazziti and Canale, 2004).

Although these studies, and others, have expanded knowledge considerably of passionate love's physiological consequences, extant work has ignored potentially key moderating variables that could impact passionate love's physical effects. The experience of passionate love is a significant interpersonal transition that requires individuals to adapt affectively (Nieder and Seiffge-Krenke, 2001), behaviorally (Kelley and Thibaut, 1978), and cognitively (Aron et al., 1995). Thus, any variable that affects individuals' psychological experience of falling in love may alter the physiological outcomes associated with this life transition.

Past work on this topic is built on the assumption that the number of hours individuals spend thinking about their partners is an important component of the passionate love experience (Emanuele et al., 2005; Marazziti and Canale, 2004). We chose to utilize a validated measure of relationship-focused cognition to determine if, indeed, individual differences in how much people think about their partners and romances alter HPA-axis activity. Broadly speaking, a host of individual dispositions moderate physiological reactivity and health outcomes (Contrada and Guyll, 2001; Ouellette and DiPlacido, 2001); however, the extent to which individual psychological differences may actually moderate the biological impact of passionate love has not received empirical attention. Given passionate love's effects on neural processes and attentiveness to environmental stimuli (Aron et al., 2005; Bianchi-Demicheli et al., 2006), we reasoned that individuals who demonstrate a tendency to think more about their relationships would be particularly susceptible to increased cortisol levels when in the throes of a passionate relationship. In other words, people who are cognitively more relationship-focused should show signs of being more affected by the experience of passionate love than individuals who are less relationship-focused.

To test this hypothesis, we employed an experimental design, which enabled us to rule out the effect of any unmeasured, potentially confounding variables. Specifically, we assessed acute shifts in salivary cortisol levels after participants, all of whom were experiencing passionate love, were asked to either reflect on their romantic partner or an opposite-sex friend. The use of an opposite-sex friend served as a control condition and follows the method employed in recent fMRI research on passionate love (Aron et al., 2005). Further, we focused our investigation on women because of the relatively profound role one-on-one relationships play in women's lives relative to men's (Gabriel and Gardner, 1999; Kiecolt-Glaser and Newton, 2001).

1. Methods

1.1. Participants

Twenty-nine women participated in a 2-h laboratory study. Participants had to be involved in a nonmarital romantic relationship of no more than 1-year duration and be in generally good health. The mean age of participants was 19.79 years (SD = 1.72; range = 18—25). The majority (52%) of participants self-identified as 'White' (24% Asian; 14% Latino or Hispanic; 10% other). Median relationship length was 17 weeks (M = 20.48, SD = 13.77).

1.2. Measures

1.2.1. Screening

Interested participants completed an online screening interview. Participants were excluded if they reported that (a) they were involved in a nonmarital relationship of more than 1-year duration, (b) they were not able to visit the laboratory during the week between the hours of 2 p.m. and 6 p.m., or (c) they would not be able to provide a picture of their partner and a friend. We also excluded participants reporting behaviors or conditions with known HPA-axis implications, including smoking, taking certain medications, having a history of hormone problems, having depression or anxiety, being currently pregnant, or working night shifts. Although the use of hormonal contraceptives is known to influence cortisol responses (Kirschbaum et al., 1999), we chose to not exclude women if they indicated taking a daily-dose or multiphasic form of birth control; rather, we included birth control use as a covariate in analyses (n = 11). This approach was motivated by our desire to assess cortisol reactivity in a sample of healthy, 'normal' individuals involved in a romantic relationship. Given the prevalence of birth control use amongst nonmarried women (Mosher et al., 2004), we believe excluding these women would have significantly reduced the generalizability of our findings.

Interested participants were also asked to complete a 15-item version of Hatfield and Sprecher's (1986)30-item Passionate Love Scale (PLS). All women were presented with the last 15 items of the published measure (e.g., "Sometimes my body trembles with excitement at the sight of my partner"); 1 (untrue) to 6 (true); a = 0.76; possible range = 15—90). Consistent with past work (Emanuele et al., 2005), only women scoring in the upper one third of the scale range were invited to participate in the study (M = 78.76, SD = 6.56; range = 67—90).

1.2.2. Passionate love—Second assessment

We believed it prudent to control for a more proximal measure of passionate love in our analysis to ensure that any observed effects for relationship-focused thinking (described below) were independent of individuals' passionate love experiences. Thus, the evening prior to their participation in the laboratory component of the study, we asked participants to complete the remaining 15 items of the PLS (a = 0.82; M = 76.52, SD = 7.39).

1.2.3. Relationship-focused thinking

To assess individuals' tendencies to think about romantic relationships, participants completed Cate and colleagues' (1995) 20-item relationship thinking scale (e.g., "I find myself at times drifting off and thinking about my relationship with my partner"); 1 (extremely unlike me) to 5 (extremely like me); a = 0.81; M = 78.76, SD = 9.75). Relationship-focused thinking was not significantly associated with the night before measure of passionate love, r(29) = 0.30, p > 0.10.
1.2.4. Salivary cortisol
To assess circulating levels of free cortisol, all participants were asked to provide a series of saliva samples via the Salivette (Sarstedt, Germany). Altogether, participants provided five saliva samples at standard intervals (approximately every 15 min; see below). To reduce participant reactivity to the sampling procedure, the first sample served as a practice sample and was discarded. Cortisol concentrations, reported in \( \mu \text{g/dL} \), were determined via Salimetrics\textsubscript{LLC} expanded range high sensitivity salivary cortisol enzyme immunoassay kit. As per kit instructions, all samples were frozen at \(-20^\circ \text{C}\) until assayed. Each participant’s samples were assayed in the same batch and high and low control samples provided by Salimetrics\textsubscript{LLC} were included in each batch to ensure reliability. As is standard practice, obtained cortisol values were subjected to a \( \log_{10} \) transformation prior to analyses to normalize their distribution (e.g., Bower et al., 2005; Diamond et al., 2008; Smyth et al., 1997).

1.3. Procedure

1.3.1. Recruitment
Participants responded to either an online ad (i.e., facebook.com) or flyers posted around the campus of a large university in the southwestern United States soliciting participants who were "madly, deeply in love." Prospective participants were directed to a secure website where they were presented with detailed information about the study including the study consent form. Interested participants completed an online screening form (described above); eligible participants were then scheduled to visit the first author’s laboratory. All participants were asked to bring (or e-mail us ahead of time) a photograph of their romantic partner and a "friend who is the same sex and about the same age as your dating partner, but someone with whom you are not romantically involved." Study sessions were conducted in the afternoon between the hours of 2 p.m. and 6 p.m. to control for diurnal patterns in cortisol secretion (Kirschbaum and Hellhammer, 1994); participants were instructed to not eat or drink anything at least 1 h prior to participation. Participants were paid US$ 20 for completion of the 2-h study. All procedures were approved by the university’s Institutional Review Board.

1.3.2. Night before survey
The evening prior to their scheduled laboratory session, participants were asked to complete a brief online survey that assessed the second portion of the PLS, relationship-focused thinking, and additional measures unrelated to the current analysis. We did not assess these relationship-focused measures during the laboratory session so as to prevent contaminating the thoughts of participants assigned to the ‘friend’ condition (see below).

1.3.3. Laboratory session and experimental manipulation
Upon arrival to the laboratory, consent was collected and participants were provided with basic instructions regarding the collection of salivary samples. At this point, the ‘practice’ saliva sample was administered. Participants were then asked to complete a brief survey and sit quietly for 15 min until the collection of the second saliva sample (i.e., baseline). Participants were given the option of looking through an emotionally neutral picture book while they waited for the 15 min to pass.

Next, participants were guided through a brief relaxation and guided imagery exercise. The experimenter first induced a state of relaxation in participants, following standard relaxation exercise protocols (e.g., deep breathing, eyes closed). Depending upon condition assignment, the experimenter then instructed participants to picture the face of either their partner or friend "and try to visualize all the details about him/her." (Prior to this point in the procedure, participants were not given any indication of why they were asked to provide a picture of their partner and a friend.) This began the guided imagery portion of the protocol, which continued for approximately 5 min (contact the first author for a detailed script of the procedure). Participants were asked to recall how they met their partner (or friend), when they first realized they were in love with their partner (or first realized they wanted to be friends with their friend), things they enjoy doing together, things they like about their partner (or friend), and their feelings for their partner (or friend). At no point did the verbal prompts in either condition reference a physical relationship (or lack thereof). We henceforth refer to the randomly assigned experimental conditions as the partner condition (n = 14) and friend condition (n = 15).

Importantly, as expected based on the random assignment to conditions, there were no differences between conditions on average participant levels of passionate love, relationship length, or relationship-focused thinking (all ps > 0.20).

Upon conclusion of the guided imagery protocol, participants were asked to talk into a tape recorder for 3 min "about all the things going through your head." Participants were then left alone with a digital recorder and the picture of their partner/friend (used to keep the image of the partner or friend clear in their minds). After 3 min, the experimenter returned, collected the recorder, and then instructed participants to write about their partner/friend for 10 min. Altogether, participants underwent approximately 5 min of guided imagery and an additional 13 min of partner/friend reflection. Participants then provided a third saliva sample (timed to tap individual reactions to the guided imagery manipulation).

Next, participants completed an additional questionnaire and sat quietly for 15 min. The fourth saliva sample was then collected (i.e., recovery), followed by an additional questionnaire and ‘quiet time’ for 15 min. The fifth saliva sample was collected after an additional 15 min. If participants completed any of the questionnaires early during the 15 min periods, they were provided with a book of landscapes without any text. Further, participants were asked to refrain from any other activities during the recovery period. Although the content of the remaining questionnaires is unrelated to the current analyses, it is important to note that none of the laboratory questionnaires contained questions about participants’ friendships or romances (i.e., friend and partner information was collected the night prior to the laboratory session). Following collection of the final saliva sample, participants were debriefed and paid.

2. Results
We tested our hypothesis with multilevel statistical models created in HLM (version 6.06) for Windows, allowing us to
We also assessed the significance of a number of potential covariates, including health behaviors known to affect cortisol (i.e., age, birth control use, waking up time that day, and alcohol consumption), as well as relationship length and night before PLS. Only age, relationship length, and night before PLS were significant control variables in analyses; these variables were retained in the final model. No other potential covariates were significant and were subsequently dropped from analyses.

To test our hypothesis, we also included an interaction term between relationship-focused thinking and condition (i.e., partner vs. friend), as well as their main effects. The within-individual level of the analysis allowed each participant’s cortisol level to be modeled as a function of time and the quadratic of time. The equation was as follows:

\[ C_{ij} = b_{0i} + b_{1i} T_{ij} + b_{2i} T_{ij}^2 + e_{ij} \]

where \( C_{ij} \) is the cortisol level for individual \( i \) at time \( j \); \( T_{ij} \) is the time of the cortisol measure; \( T_{ij}^2 \) is the quadratic component (time squared) and \( e_{ij} \) is a residual component specific to individual \( i \) at time \( j \). The coefficient \( b_{0i} \) is the regression intercept for individual \( i \) and represents cortisol level at baseline.

The between-individual level of the analysis estimated the random effects for the within-individual variables and allowed us to test whether individuals’ cortisol levels differed as a function of relationship-focused thinking and condition while controlling for covariates. The between-individual equation for the intercept was as follows:

\[ b_{0i} = \gamma_{00} + \gamma_{01} R_{Li} + \gamma_{02} R_{Ti} + \gamma_{03} A_i + \gamma_{04} PLS_i + \mu_{0i} \]

This model specifies that the intercept for individual \( i \) was a function of a grand mean intercept that is common across individuals (\( \gamma_{00} \)), adjusted to reflect the individual’s relationship length (\( \gamma_{01} R_{Li} \)), levels of relationship-focused thinking (\( \gamma_{02} R_{Ti} \)), age (\( \gamma_{03} A_i \)), night before levels of passionate love (\( \gamma_{04} PLS_i \)) and a residual component specific to individual \( i \). The between-individual equations for the effects of time and time squared were similar, but included two additional parameters: condition (\( \gamma_{06} C_0 \)) and the interaction between relationship-focused thinking and condition (\( \gamma_{06} C_i \)). Condition and the interaction between condition and relationship-focused thinking were excluded from the intercept because baseline measures of cortisol were taken prior to experimental manipulation. The

### Table 1: HLM results: effect of control variables, relationship-focused thinking, and experimental condition on salivary cortisol levels.

<table>
<thead>
<tr>
<th></th>
<th>( \beta )</th>
<th>SE</th>
<th>( t )</th>
<th>df</th>
<th>( p )-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>–1.745</td>
<td>0.468</td>
<td>-3.73</td>
<td>23</td>
<td>0.001</td>
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<tr>
<td>Relationship length</td>
<td>–0.009</td>
<td>0.004</td>
<td>-2.22</td>
<td>23</td>
<td>0.037</td>
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<tr>
<td>Age</td>
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<td>0.032</td>
<td>1.58</td>
<td>23</td>
<td>0.128</td>
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<tr>
<td>Night before PLS</td>
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<td>0.007</td>
<td>-0.87</td>
<td>23</td>
<td>0.394</td>
</tr>
<tr>
<td>RT</td>
<td>0.006</td>
<td>0.005</td>
<td>1.38</td>
<td>23</td>
<td>0.182</td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>0.157</td>
<td>0.376</td>
<td>0.42</td>
<td>21</td>
<td>0.680</td>
</tr>
<tr>
<td>Relationship length</td>
<td>–0.003</td>
<td>0.001</td>
<td>-1.87</td>
<td>21</td>
<td>0.076</td>
</tr>
<tr>
<td>Age</td>
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<td>0.012</td>
<td>1.44</td>
<td>21</td>
<td>0.165</td>
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<tr>
<td>Night before PLS</td>
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<td>0.004</td>
<td>2.12</td>
<td>21</td>
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<tr>
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<td>0.003</td>
<td>-4.52</td>
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<td>0.000</td>
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<tr>
<td>Condition*</td>
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<td>0.301</td>
<td>-3.03</td>
<td>21</td>
<td>0.007</td>
</tr>
<tr>
<td>RT ( \times ) condition*</td>
<td>0.011</td>
<td>0.004</td>
<td>3.03</td>
<td>21</td>
<td>0.007</td>
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<tr>
<td>Time squared</td>
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<td>Intercept</td>
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<td>0.755</td>
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<td>0.086</td>
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<td>0.008</td>
</tr>
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<td>0.001</td>
<td>4.74</td>
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<td>-3.88</td>
<td>21</td>
<td>0.001</td>
</tr>
</tbody>
</table>

PLS, Passionate Love Scale; RT, Relationship thinking.

* 1 = Partner, 0 = Friend
between-individual equations for time and time were as follows:

\[ b_{0i} = \gamma_{00} + \gamma_{01}RL_i + \gamma_{02}RT_i + \gamma_{03}AI_i + \gamma_{04}PLS_i + \gamma_{05}Ci \\
+ u_{0i} \]

Results are presented in Table 1. Consistent with extant work (Marazziti and Canale, 2004), relationship length was a significant predictor of baseline cortisol (i.e., the intercept), such that women in relationships of a shorter duration had higher baseline cortisol levels relative to women in longer relationships.

In addition to the significant controls noted above, there was a main effect of condition and relationship-focused thinking on changes in cortisol over time. As hypothesized, these main effects were qualified by a significant condition \( \times \) relationship-focused thinking interaction. Predicted levels of cortisol at each time point as a function of relationship-focused thinking (\( \pm 1 \) SD) and condition are displayed in Fig. 1. As can be seen, cortisol levels of high relationship-focused thinking women in the partner condition increased following the guided imagery exercise and continued to increase through the last saliva sample collected 45 min after the start of the manipulation. In contrast, cortisol levels of high relationship-focused thinking women in the friend condition and low relationship-focused thinking women in the friend condition generally declined throughout the procedure. Finally, low relationship-focused thinking women in the partner condition displayed an initial rise in cortisol during the guided imagery, but then steadily declined following the conclusion of the guided imagery exercise. Thus, cortisol responses is particularly pronounced and relatively long-lasting for those women who tend to engage in a high amount of relationship-focused thinking.

3. Discussion

The present study extends recent work on the hormonal consequences of falling in love (i.e., passionate love) by demonstrating that women who engage in more relationship-focused thinking experience acute increases in cortisol after simply being asked to reflect on their romantic relationship and partner. Interestingly, women with a lower tendency to engage in relationship-focused thinking also showed an initial rise in cortisol after reflecting on their partners, but the effect diminished shortly after our experimental manipulation concluded. These findings suggest that the HPA-axis activation seen in those experiencing passionate love is pronounced for some types of individuals relative to others.

Our work extends Marazziti and Canale’s (2004) recent study in which they found increased circulating levels of cortisol when individuals were experiencing early-stage passionate love relative to controls. Marazziti and Canale relied on a single blood sample for assessment of plasma cortisol; however, their study essentially involved a ‘partner condition’ for all participants. Thus, it is difficult to ascertain whether individuals experiencing passionate love demonstrate generalized hyperactivation of the HPA axis or simply showed cortisol elevations in response to the study protocol. In our study, although visual inspection of the predicted means (Fig. 1) could suggest that high relationship-focused thinking women may experience chronic increases in cortisol during early-stage passionate love, analyses indicate that relationship-focused thinking was not a significant predictor of baseline levels of salivary cortisol. Thus, we are inclined to believe that the observed elevated cortisol levels in both studies are apparent when individuals are focused on their romances, and that some individuals focus more on these relationships than others. Indeed, when we asked more
relationship-focused women to reflect on their relationship with a friend, their cortisol levels dropped throughout the study procedure, suggesting it is possible to ‘deactivate’ the physiological consequences associated with the passionate love experience.

It is important to consider the implications of these findings for women, who on average tend to be highly relationship-focused, independent of their passionate love state (Gabriel and Gardner, 1999). Do the increased cortisol responses we observed for high relationship-focused women imply that these individuals are more stressed when falling in love?

There are several reasons to think that this is not the case. All available evidence suggests that transitions into romantic relationships are associated with positive outcomes (Lee and Gramotnev, 2007), and that falling in love may procure particularly protective benefits for individuals (Esch and Stefano, 2005). Events such as “starting a love relationship” and ”begin to date” are considered positive life events in the stress and health literature (Reich and Zautra, 1981). Although the transition into a new romance does require adaptation on the part of the individual, any potential negative effects of this process are likely offset by the positive aspects of enjoyment that accompany positive life events (Davidson et al., 2006). Indeed, individuals in passionate love show increased positive emotions and favorable sleep patterns (Brand et al., 2007) and more quickly recognize positive feeling words when primed with their partners’ names (Bianchi-Demicheli et al., 2006). Additionally, life events individuals perceive as being ‘good’ (versus ‘bad’) have a beneficial effect on individual outcomes, including physical health (e.g., lymphocyte proliferation; Snyder et al., 1993). In other words, although both positive and negative life events may produce physiological arousal typically construed as “stress” (Rietveld and van Beest, 2007), whether that physiological arousal results in positive or negative health outcomes depends on the subjective interpretation of the event.

From a physiological perspective, mild to moderate physiological arousal is associated with, if not required for, social bonding (Diamond, 2001), and other outcomes that are concomitant with bonding actually reduce stress responses (e.g., production of oxytocin; Diamond, 2001). Passionate love also increases the prevalence of positive emotions (Kim and Hatfield, 2004); positive emotions protect individuals from negative physical and mental health outcomes by facilitating adaptation to stressful situations (Cohen and Hoberman, 1983; Folkman et al., 2007). Finally, as noted in the introduction, NGF levels also rise during the early developmental phase of romantic relationships. NGF upregulates the HPA axis (Angelucci, 1994), suggesting the increased cortisol levels may reflect a byproduct of increased NGF (Emanuele et al., 2005). Future work should explore this meditational path.

Although we suspect our pattern of responses do not wholly reflect a traditional stress response, per se, we cannot fully rule out such an interpretation. Recently, researchers have elucidated several mechanisms responsible for the HPA-axis reactivity observed during the Trier Social Stress Test (TSST), a widely used, standardized acute stress task (Kirschbaum et al., 1993); the identified mechanisms may provide additional insight into our findings. Specifically, the HPA axis is particularly responsive when individuals experience or suspect social rejection, such as is the case during the TSST, a task characterized by a high degree of ego involvement (Dickerson and Kemeny, 2004; Kajantie and Phillips, 2006). It is possible that priming women, who appear to be especially reactive to stressors containing a social rejection component, to focus on their passionate love experience renders more salient concerns of relationship dissolution. Put another way, perceptions of uncontrollability are key predictors of HPA-axis responses, especially when individual goals are threatened and attainment of these goals is not exclusively under the volitional control of the individual (Dickerson and Kemeny, 2004). The subjective passionate love experience may occur at the individual level, but the progression of any newly initiated romance to a more stable, committed form is dependent on the thoughts, behaviors, and actions of both individuals involved in the romance (Loving et al., in press). In other words, by having participants think about falling in love, we may have inadvertently caused them to think about the future of their budding romances, a future that is characterized by a high degree of uncontrollability given the interdependence that defines romantic relationships (Kelley and Thibaut, 1978). Altogether, it is clear that multiple mechanisms may underlie the hormonal consequences of falling in love; gaining a more complete understanding of how and why passionate love results in physiological outcomes requires that researchers consider the individual- and couple-level characteristics that define the experience.

The implications of our results need to be balanced against some study limitations. Our study sample was relatively small, although in line with past work on this topic, and the observed difference between salivary cortisol responses for women in the partner versus friend conditions suggests strong effect sizes. Additionally, because our analyses were limited to women, we cannot speak to whether relationship-focused thinking functions in a similar manner across sexes, but it is important to note that no sex differences have been found in past work (e.g., Aron et al., 2005; Marazziti and Canale, 2004). Further, although our experimental design helps to rule out potential confounding variables that may affect results between conditions, the design does not rule out potentially confounding variables within conditions, or, in our case, constructs that may covary with our relationship-focused thinking moderator. For example, we excluded participants reporting a current or past history of anxiety or depression, but we did not assess obsessive-compulsive tendencies (e.g., the Yale–Brown Obsessive Compulsive Scale; Goodman et al., 1989), as has been done in prior work (Marazziti and Canale, 2004). It is possible that our measure of relationship-focused thinking may share some conceptual overlap with obsessiveness. Although we believe the fact that women scoring higher on relationship-focused thinking demonstrated declines in cortisol when asked to focus on a nonromantic, opposite-sex friend minimizes this concern, future work would benefit from being able to definitively rule out this possibility. Perhaps more plausibly, the relationship-focused thinking measure may reflect underlying genetic factors linked to the experience of passionate love and formation of social attachments (Emanuele et al., 2007; Gillath et al., 2008). Given the relevance of the attachment system to the initiation and early development of romantic relationships (e.g., Eastwick and Finkel, 2008), it is possible...
that genetic factors at least partly account for individual differences in relationship-focused thinking.

These limitations notwithstanding, we believe a notable strength of our study is the employment of an imaginary task within an experimental design setting. Having participants recall specific social relationships and/or features of those relationships provides researchers with an opportunity to study how ‘real’ (vs. hypothetical or laboratory induced) relationships may affect biological outcomes (e.g., Bloor et al., 2004). Importantly, the administration of such tasks is relatively simple. By manipulating what individuals think about during the study session, we were able to develop a more nuanced understanding of how individual differences (i.e., relationship-focused thinking) influences the physiological outcomes associated with passionate love. This same design has the potential to provide researchers the ability to study an unlimited range of individual difference variables that may affect the physiological experiences associated with major life transitions. For example, the impact of past relationship experiences (e.g., prior exposure to falling in love), orientations towards relationships (e.g., adult attachment, implicit relationship theories; Diamond et al., 2008; Knee et al., 2003), or specific characteristics of the romances (e.g., self-expansion; Aron and Aron, 1997; Lewandowski et al., 2006) could all be studied with this design.

In conclusion, our study significantly expands extant work on the passionate love—cortisol link by isolating the impact of a specific psychological variable, relationship-focused thinking, on the physiological experience of falling in love. We believe our work highlights the advances that can be made when established work in the close relationships and neuroendocrine fields are integrated (Loving et al., 2006). As the two fields continue to merge, our understanding of how relationship initiation affects romantic partners physiological and health outcomes will benefit tremendously.

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Conflict of interest statement

There are no conflicts of interest.

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