Shared Immorality and Romantic Relationships: The Potentially Positive Effects of Breaking the Rules

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Abstract

We explored the possibility that the romance glorified in popular media of Bonnie and Clyde may have been strengthened through the duo’s shared criminal acts. Based on notions of group morality, we predicted that romantic couples sharing a moral transgression would report higher levels of closeness, commitment, and passion in comparison to those who did not. We also predicted that the association between a shared moral transgression and increased attraction would be mediated by increased physiological arousal. To examine these hypotheses, 29 romantic couples were randomly assigned to either cheat together on an anagram task or not. Physiological arousal was measured throughout the experiment, and closeness, commitment, passion, and relationship satisfaction were measured following the anagram task. A series of multilevel models revealed no significant differences between the conditions on any of the variables of interest. Moderation analyses, however, highlighted a few individual factors that might influence the effect of cheating on relationship outcomes. Future directions of research include improving experimental designs for shared moral transgressions, as well as exploring the individual differences that may lead to differential outcomes as a result of shared immorality.

Keywords: shared immorality, misattribution effect, closeness, commitment, passion
In acclaimed American rapper Jay Z’s (2002) single, “03 Bonnie and Clyde,” he proclaims “All I need in this life of sin is me and my girlfriend,” while R & B star Beyoncé, now Jay-Z’s wife, responds, “Down the ride to the very end it’s me and my boyfriend.” Although relating to an infamous romance more than seventy years old, Jay-Z and Beyoncé’s lyrics reflect American pop culture’s obsession with a criminal couple that captivated America’s attention while on the run, and continues to do so in music, movies and literature. Bonnie Parker and Clyde Champion Barrow first met in January 1930 in Texas; Bonnie was nineteen years old and married to an incarcerated murderer, while Clyde was a twenty-one-year-old single man with a well-developed criminal history (Federal Bureau of Investigation, 2009). Immediately, Bonnie and Clyde fell in love, and their criminal tendencies quickly surfaced. Over the course of three years, the couple was linked to over thirteen murders and dozens of robberies until Louisiana and Texas police officers cornered the pair on May 23, 1934. Although Bonnie and Clyde tried to escape, the police opened fire on their vehicle, and the outlaw couple died together (Federal Bureau of Investigation, 2009).

Throughout Bonnie and Clyde’s terrorization of America, newspapers consistently portrayed the couple enamored with one another on front-page photographs. To this day, popular culture continues to portray the criminal couple in love amidst all of the violence. Scientifically, Bonnie and Clyde’s romance presents an interesting question previously unexplored in psychology. Although it may be possible that Bonnie and Clyde were simply two criminals attracted to one another, the present study examines an alternative, surprising explanation: is it possible that Bonnie and Clyde’s romance was strengthened and enhanced through their criminal acts? Indeed, we suspect that the relationship between Bonnie and Clyde may have actually
benefitted from shared immoral acts. Moreover, we hypothesize that these benefits may extend to less notorious modern day romantic relationships—one need not be a serial killer or bank robber to benefit from a shared moral transgression.

Defining Unethical Behaviors and Their Established Role within Romantic Couples

Although individuals may vary greatly in what they consider unethical or immoral, we adopt a definition proposed by Ruedy, Moore, Gino, and Schweitzer (2013) that encompasses several behaviors widely deemed as unethical. Intertwining both philosophical and psychological frameworks, unethical behaviors are defined “as acts that violate widely held moral principles (such as honesty or fairness)” (Ruedy et al., 2013, p. 2). Such a definition certainly allows for a wide range of behaviors to fall under the label of unethical. Indeed, Gray, Young, and Waytz (2012) acknowledge that “the full set of ‘immoral acts’ is undeniably complex, and includes murder, cheating, theft, disobedience, and disrespect, to name only a few” (p. 101). In their framework, an immoral act consists of an agent (i.e. the wrongdoer) and a patient (i.e. the sufferer); the patient does not need be readily apparent, but rather can be perceived by the wrongdoer. In this perspective, regardless of the actual or perceived patient, such acts are ultimately deemed immoral because of the harm they create (Gray et al., 2012).

Within the context of a romantic couple, one can easily conceive of instances in which one partner (the agent) inflicts harm on the other (the patient). Infidelity is one such example that has been a focus of relationships researchers for decades. While some research has focused on factors that might predict increased likelihood of infidelity (e.g., gender, marital satisfaction, religiosity, opportunity, previous divorce history, education, income, age of marriage; Atkins, Baucom, & Jacobson, 2001); other research has examined the effects of infidelity on romantic

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1 Shared immoral acts/behaviors, moral transgressions, and unethical behaviors are used interchangeably to discuss the topic at hand.
relationships. One study surveying couples therapists found that therapists overwhelmingly indicate affairs as one of the most damaging problems to relationships, and also one of the most difficult obstacles to a successful treatment outcome (Whisman, Dixon, & Johnson, 1997). Blow and Hartnett (2005) provide a comprehensive review documenting fifty-five studies examining infidelity and relevant measures for the phenomenon. Yet, while moral transgressions committed by one partner against the other have been extensively covered in the literature, no studies exist exploring the effects of shared moral transgressions, whereby both romantic partners jointly engage in an immoral action. To address this empirical void, the current examination focuses on shared moral transgressions, whereby the couple as a unit (i.e., both partners) acts as the agent inflicting harm on an outside patient. Whereas moral transgressions against one’s partner have been shown repeatedly to weaken relationships, we hypothesize that moral transgressions with one’s partner might actually strengthen the relationship. Research in the area of group morality provides an underlying basis for the present study.

Effects of Shared Immorality on Group and Dyadic Outcomes

Although there is no previous research on shared moral transgressions within romantic relationships specifically, connections between the present study and findings related to group affiliation and loyalty provide a greater understanding of the expected effects of a shared moral transgression. Research has shown that group members often make choices benefitting their own group even when such choices come at the expense of others. For example, unacquainted participants in groups made choices in prisoners’ dilemma games favoring their fellow group members at the expense of another purported participant group (Wildschut, Insko, & Gaertner, 2002). Based on the in-group favoring norm, the researchers suggested that in-group members are far more likely to support actions with outcomes favorable to their in-group than actions
favorable to any out-group. Similarly, an analysis of extant data gathered by ethnographers revealed that societies were more likely to value out-group violence rather than in-group violence, and this valuation was further amplified by stronger reports of in-group loyalty (Cohen, Montoya, & Insko, 2006). Similar effects have been found in a controlled laboratory setting. When manipulated to feel greater in-group loyalty, individuals respond more competitively in prisoners' dilemma games resulting in potentially adverse consequences for an out-group (Cohen et al., 2006). Moreover, individuals perceive interpersonal interactions as "pleasant" and inter-group interactions to be "abrasive," suggesting that individuals' attitudes toward interacting with an out-group might fuel the competitive behaviors that in turn solidify group boundaries (Hoyle, Pinkley, & Insko, 1989). Although relevant mainly to inter-group competition, this research demonstrates that notions of in-group loyalty ultimately induce group members to make decisions favorable to their in-group often at an expense to outsiders. Moreover, groups seem to establish standards of right and wrong that guide their behavior and decision-making (Cohen et al., 2006; Jacobs & Campbell, 1961; Wildschut et al., 2002). In the context of the romantic dyad, romantic partners are likely to act in ways that advance their joint outcomes. In a competitive situation, they may do so even if the action is immoral. If so, such behaviors may lead to strengthened in-group loyalty within the dyad, suggesting that romantic partners sharing a moral transgression should feel more committed to one another after the act.

Central to such effects may be the process of social categorization as set forth by Tajfel, Billig, Bundy, and Flament (1971), whereby the importance of in-groups pervades everyone's life from a very young age, and such groups guide individual behavior. The researchers demonstrated that the plain act of in-group formation, uninfluenced by other variables, consistently leads individuals to act in accord with in-group membership and inter-group
categorization, even when experimental conditions made the strategy of benefitting all rather than just one’s in-group optimal. Similarly, Brewer’s (1999) notion of obligatory interdependence suggests that in-groups form for purposes of survival, as cooperation among members allows for the sharing of requisite resources, and thus in-group members are psychologically more attracted toward one another causing them to act in favor of one another, and in accord with established group standards. Moreover, Brewer (1999) sets forth the optimal model of distinctiveness of a social identity, whereby in-group association is produced through competing components of a need for inclusion and distinction from others, and such conditions are optimally obtained when a group is smaller and particularly distinct. Ultimately, the propositions set forth by Tajfel et al. (1971) and Brewer (1999) suggest that social categorization leads individuals to consistently make decisions favoring their in-group even when such actions may negatively effect an out-group, and the undertaking of such behaviors leads to strengthening of the in-group. Extended to the context of the romantic dyad, whereby the in-group is particularly small and relatively distinct, engaging in actions beneficial to the dyad serves as reinforcement of partners’ commitment and loyalty toward one another.

The aforementioned theoretical propositions have also been demonstrated empirically. One study found that participants who witnessed an in-group member (i.e., wearing school pride t-shirt) cheat, cheated significantly more than after witnessing an out-group member (i.e., wearing school rival’s t-shirt) cheat; in fact, individual cheating behavior actually decreased significantly after witnessing an out-group member cheat relative to the in-group cheating condition and the control condition (Gino, Ayal, & Ariely, 2009). Thus, actions of in-group members influence other members of the group, including when such actions involve immorality. In the context of the present study, based on the notions of in-group membership
within the romantic dyad, romantic partners are likely to behave in accord with the interests of one another at the potential expense of others.

The theoretical propositions and empirical evidence that has been laid out all provide the potential bases upon which group members become closer, or more solidified within their group, and also document the potential for moral transgressions to foster further in-group loyalty or closeness. This literature provides reasonable grounds for the present study’s exploration of such effects within romantic relationships. Bonnie and Clyde engaged in rampant crime-sprees, leaving numerous victims at their peril; however, as they were portrayed in the media, their love seemed to only grow in the face of the harm they inflicted upon others. Essentially, it appears that Bonnie and Clyde’s immoral actions toward the rest of society truly fostered a relationship construct of “us” versus “them,” and by creating such a construct through shared immorality, their love purportedly grew stronger. As presented above, the psychological literature supports this possibility. Specifically, that sharing immoral experiences with one’s romantic partner will positively influence each partner’s momentary feelings of commitment and closeness toward one another.

Aside from the predicted effects of a shared moral transgression increasing a romantic pair’s commitment and closeness, we also propose that it may increase attraction to one another. Empirical evidence supporting this predicted effect stems from a study in which unacquainted, mixed-sex pairs played a game of cards against one another. In one of the conditions, participant pairs were instructed to communicate using their feet under the table without letting the competing pair know of their secret strategy (Wegner, Lane, & Dimitri, 1994). Under our adopted definition, such a behavioral advantage amounts to unethical behavior, as it directly harms the competing pair’s chances of winning the game. The results indicated that pairs in this
“cheating” condition in turn rated their partners as more attractive in comparison to pairs who did not communicate unfairly (Wegner et al., 1994).

The aforementioned theoretical propositions and empirical evidence provide support for our predictions that romantic couples who engage in a shared moral transgression will report feeling closer, more committed, and more passionate toward one another. But exactly why might this change occur? That is, what is it about behaving immorally together that leads individuals to feel greater closeness, commitment, and attraction toward their in-group? Here, we turn again to the existing research for some guidance toward potential mechanisms.

Mechanisms of Shared Immorality’s Effects on Group and Dyadic Outcomes

As with the majority of modern psychological phenomena, there are likely cognitive as well as emotional mechanisms underlying shared immorality’s relational effects. For some understanding and theoretical framework of how these two systems operate independently and interactively, it is helpful to consider Bazerman, Tenbrunsel, and Wade-Benzoni’s (1998) distinction between the “want” and “should” selves. Whereas the “want” self relates to one’s emotional or affective preferences, the “should” self centers on the rational or cognitive aspects of the decision-maker. Although individuals experience the feeling that they should engage in behaviors that serve their long-term interests, they often want to engage in behaviors that produce immediate benefits. The “want” self also tends to dominate in situations where decision-making relates to a binary outcome (e.g., to cheat or not to cheat), while the “should” self commands when decisions involve many potential outcomes (e.g., multiple job offers to choose from). Furthermore, the “want” self plays a particularly powerful role when a decision approaches (Bazerman et al., 1998). As Loewenstein (1996) notes, visceral factors, such as cravings associated with a variety of behaviors (e.g., drug addiction, hunger, etc.) often cause
individuals to act in a manner inconsistent with their long-term behaviors in order to fulfill short-term interests. Essentially, individuals often engage in actions producing short-term benefits regardless of their long-term interests. Expanding on the temporal nature of ethical decision-making, Tenbrunsel, Dickmann, Wade-Benzoni, and Bazerman (2010) propose that the "want" dictates during the action, while the "should" prevails during preceding thoughts and reflections. Thus, in a situation where individuals are posed with the opportunity to cheat, as they are in the present study, although the "should" self promotes acting in a moral way, the "want" self promotes taking the short-term monetary rewards of cheating. Ultimately, the underlying mechanisms related to unethical behaviors may involve cognitive, emotional, and physiological factors.

Cognition as Mechanism

Two potential cognitive properties underlying the effect of unethical behavior on group or pair bonding are preoccupied thoughts surrounding unethical behaviors and cognitive dissonance. The former refers to individuals’ tendency to constantly think about behaviors they are restricted from engaging in leading to an increased likelihood of engagement because of persistent thoughts, while the latter involves the classic theory in social psychology whereby individuals attempt to reduce negative feelings resulting from contradictory cognitions. Both perspectives provide insight into the potential explanations of why individuals partake in unethical behaviors, and why they may experience positive benefits as a result of doing so.

First proposed by Lewis (1992) and expanded upon by Fishbach (1999), the Forbidden Fruit hypothesis suggests that individuals, when faced with a behavior that is either forbidden by rules, or by society, experience increased cognitions and desires to partake in that behavior, may be more likely to engage in it, and that actual engagement should lead to positive feelings based
on excitement. Empirically, Lewis’ (1992) proposed connection has been supported (e.g., adolescents viewing movie scenes with smoking; Pechmann & Shih, 1999; dieters restricted from eating appetizing foods; Alberts, Mulkens, Smeets, & Thewissen, 2010; Mann & Ward, 2001). Similarly, Wegner et al. (1994) explained their findings of increased attraction between partners sharing a secret advantage in a card game through obsessive preoccupation, which proposes a cyclical cognitive pattern in which individuals suppress thoughts of their actions, leading to increased thoughts about the actions and the co-conspirator, resulting in the increased attraction. In the context of the present study, romantic partners who attempt to suppress thoughts about their unethical behaviors, may be led to think about their actions and their partner more, thus resulting in an increased attraction toward their partner.

Another potential cognitively based explanation underlying unethical behavior and its impact on relationships relates to the well-supported psychological phenomenon of cognitive dissonance. According to Aronson’s (1969) conception of the theory, dissonance is characterized as a negative drive state that results when an individual simultaneously maintains two psychologically contradictory cognitions (e.g., beliefs or opinions). Because such conflicting cognitions produce an unpleasant feeling, individuals attempt to reduce dissonance by altering either one or both of the cognitions in order to re-shape them into more congruent cognitions, thus reducing unpleasant feelings. Bandura (1990) asserts that the drive to reduce dissonance stems from socialization processes that individuals undergo at a young age, where guiding standards of appropriate and inappropriate behavior are instilled. Consequently, individuals strive to view themselves as honest and upstanding individuals (Greenwald, 1980; Tsang, 2002). To uphold such standards, individuals maintain internal mechanisms of praise and condemnation for appropriate and inappropriate behaviors, respectively (Bandura, 1990).
Such standards, however, do not hold steadfast, and can be *morally disengaged* from immoral actions through mechanisms such as re-construing conduct, diminishing their personal causality, misperceiving negative consequences of actions, or blaming the victims of such actions (Bandura, 1990). According to Bandura (1990), in the face of strong external pressures, several methods of moral discengagement relevant to the study at hand may ensue, including moral justification (i.e., cognitive re-interpretation of immorality serving a valuable purpose), diffusion of responsibility (i.e., shifting or sharing the blame for immorality with others), and distortion of consequences (i.e., minimization of the harm imposed from immorality). In the present study, romantic pairs sharing a moral transgression may re-interpret their actions as serving the purpose of obtaining a monetary reward, may share the blame for their actions with their romantic partner, and may minimize their behavior by re-construing the consequences as minimal.

Expanding on Bandura's (1990) proposition, Tsang's (2002) *moral rationalization*, where individuals re-frame their unethical behaviors to fit within their moral standards, identifies the empirically supported cognitive process of *deindividuation* (e.g., bystanders prodding individuals attempting suicide; Mann, 1981), as crucial to unethical behaviors committed within a group. Through deindividuation, heightened anonymity and diffused responsibility serve to influence unethical actions undertaken by more than one individual (Mann 1981; Tsang 2002). Thus, moral rationalization may make way for positive effects for romantic pairs following a shared moral transgression through the aforementioned processes reducing dissonance.

Although dissonance may occur in a variety of situations, Aronson (1961) notes that it is often the result of partaking in a difficult (i.e., expending significant effort) or unpleasant task (i.e., engaging in an immoral behavior). In such situations, individuals may reduce dissonance by
either convincing oneself that the activity was not particularly unpleasant, or emphasizing positive aspects of the activity while neglecting negative ones (Aronson & Mills, 1959). For romantic pairs sharing a moral transgression, dissonance created by immorality may be reduced by focusing cognitions on an obtained reward (i.e., financial compensation), while ignoring those centered on the immoral act committed, or justifying unethical behavior due to the effort expended in a challenging situation.

Ultimately, the aforementioned cognitive processes underlying unethical behaviors and their effects on agents provide insight into why romantic pairs might engage in a shared moral transgression, as well as why such actions may actually lead to positive effects for the relationship. Besides cognition as a mechanism underlying unethical behaviors, emotions also provide insight into the effects of shared immorality.

*Emotion as Mechanism*

Another possible explanation for why a shared moral transgression might promote positive relationship outcomes is via emotion induction. That is, perhaps shared immoral behaviors induce some form of positive emotional experience that individuals then map on to those around them. A recent set of studies found some evidence that performing immoral acts might actually lead to increased positive emotions (Ruedy et al., 2013). Although rating expected feelings following an immoral act as negative (Studies 1a and 1b), participants experienced significantly greater boosts in positive affect than negative affect after cheating on an anagram task in comparison to those who did not cheat on the task (Studies 2-5). Such effects persisted even in the presence of a confederate (Study 3), as well as when performance was not financially rewarded (Study 4). Ruedy et al. (2013) name the observed phenomenon as the “cheater’s high” based on the momentary nature of the boosts in positive affect.
Unfortunately, this is the sole evidence in support of this effect. The majority of the existing work on the emotional impact of immoral behavior has found just the opposite: that performing immoral acts actually leads to an increase in negative, not positive, emotions (Klass, 1978). Empirical examples include negative emotions experienced following the reading of a degrading evaluation to another purported participant compared to reading a positive or neutral evaluation (Noel, 1973), as well as resulting from writing an essay in support of a belief or proposal the participant did not personally endorse (i.e., lying about their personal beliefs; Rossomando & Weiss, 1975; Shaffer, 1975). Further, Calder, Ross, and Inkso (1973) noted that incentive, choice, and consequences of immoral acts might impact subsequent emotional experiences. Specifically, participants asked to lie to another supposed participant (i.e., a confederate) reported feeling particularly negative about their actions when choice was high (i.e., giving participants choice to lie versus requiring them to lie), and such effects were further compounded when incentive was low, and consequences were high.

Research on emotion as an underlying mechanism for unethical behavior has produced mixed results. While a significant amount of research points to unethical behavior promoting negative emotions, a more recent examination suggests positive emotions may prevail. We argue, however, that it is neither emotions nor cognitions that mediate the relationship between moral transgressions and relationship outcomes, but a rather basic explanation is at work: physiology. The experience of either positive or negative emotions as evaluated in previous literature is likely to result in physiological arousal. Likewise, obsessive preoccupation and dissonance are implicated with physiological arousal. Thus, instead of trying to measure processes occurring below conscious awareness (i.e., dissonance), or those that are subject to
response biases and time constraints (i.e., emotions), the present study measures the directly observable—physiology.

*Physiology: The Underlying Mechanism of Cognition and Emotion*

Under the presumption that engaging in an unethical behavior consists of a high-anxiety situation, associated with feelings of guilt or fear (Dienstbier & Hunter, 1971), such circumstances may often lead to increased attraction to others relevant to the situation. Numerous studies have shown that individuals may be more attracted or sexually aroused under conditions of strong emotions. For example, one study subjected undergraduate students to a scolding by either their professor or an experimenter, and found elevated sexual arousal among subjects in the arousal (i.e., anger) condition as measured by a Thematic Apperception Test (TAT) task (Barclay & Haber, 1965). Similarly, two studies using fraternity and sorority members demonstrated that those in an aroused condition (e.g., an experimenter scolds and belittles the individuals) were more sexually aroused and motivated in comparison to those who were not aroused by anger (Barclay, 1969; Barclay, 1970).

In their classic set of field experiments, Dutton and Aron (1974) set forth the potential conditions for misattributing physiological arousal for actual emotions, such as attraction. Their experiment sought to examine whether a male became more attracted to a female when experiencing a strong emotion (i.e., fear) in comparison to males who did not experience such strong emotions. The experimenters approached subjects on one of two bridges—one was a solidly constructed wooden bridge which served as the control condition as subjects were not expected to experience fear when crossing this bridge, while the second bridge was a suspension bridge constructed out of wooden boards and suspended via wire cables; the bridge was known to sway and as such it was considered to be the fear-inducing experimental condition. After
crossing the bridge, the subjects were approached by a female and given the Thematic Apperception Test (TAT) task, which the researchers eventually scored for sexual imagery. Before letting the subjects go, the female experimenter would offer subjects her telephone number to discuss the study further at sometime in the future.

In comparison to those who had crossed the seemingly secure, non-fear-inducing bridge, those who had crossed the fear-inducing bridge scored significantly higher for sexual imagery on the TAT task, and also called the female experimenter to discuss the study further at a significantly higher rate. Dutton and Aron (1974) proposed that such increased attraction may actually have been the result of the experienced strong emotion of fear, rather than mere attraction. That is, individuals misattributed their high anxiety as arousal for the attractive female. In the present study, in a high-anxiety cheating condition, participants may incorrectly identify the source of their arousal as that of their romantic partner, when in fact it is caused by their engagement in an unethical act.

Ultimately, unethical behaviors may be affected by numerous underlying mechanisms, including cognitive, emotional, and physiological ones. The aforementioned theories and empirical findings suggest potential explanations for romantic pairs engaging in a shared moral transgression and subsequently experiencing boosts in closeness, commitment, and passion.

*The Present Study*

The present study seeks to add to the literature on the effects of unethical behavior in a unique way: by focusing on the potentially positive effects on relationship-relevant variables. Based on the literature presented, we suggest that shared immoral acts may indeed result in positive benefits for a romantic relationship. To demonstrate these effects, we employed an
experimental design that allows romantic pairs to behave unethically (i.e., cheat) in their completion of individual anagram tasks, and our measures will assess whether engaging in such behaviors will lead to boosts in commitment, closeness, and attraction between the romantic partners. The current study tests two hypotheses:

**H1:** Romantic pairs sharing a moral transgression will report higher levels of commitment, closeness, and attraction in comparison to participants who do not share a moral transgression.

**H2:** The association between shared moral transgressions and increased attraction ratings will be mediated by increased physiological arousal experienced during the task.

**Method**

**Participants**

Twenty-nine heterosexual romantic couples (N = 58; 29 males and 29 females) were recruited to participate in the study from a southeastern city in the United States. Participants were predominately in their late teens and twenties (M = 26.27 years, S.D. = 12.6). The sample was primarily Caucasian (63.8%), spoke English as their primary language (89.7%), and primarily conversed with their partner using English (93.1%). Moreover, 93.1% of the sample reported growing up in the United States. Fifty percent of participants reported an educational background of “some college, but no degree,” while 15.5% indicated having obtained a bachelor’s degree, and an additional 13.8% a master’s degree. Furthermore, 46.6% of respondents reported an approximate annual family income of $85,000 or more, and 55.2% identified as working at least part-time (29.3% full-time; 25.9% part-time), while 39.7% labeled their occupational status as “student.”
Since the experiment involved romantic pairs, the romantic couple had to have been in a relationship for at least six months and the average relationship length was 32.6 months (S.D. = 59.33). Predominately, participants characterized their relationship as dating exclusively (63.8%), however, 3.4% of participants identified as dating casually, 13.8% as engaged to be married, and 10.3% as married. Lastly, 41.4% of participants reported living with their romantic partner. All participants received $10 for their complete participation in the study.

Procedure

The present study consisted of two parts: an online questionnaire and an in-laboratory session. Participants were directed to the online questionnaire via informational emails sent out to university mailing lists, flyers posted throughout campus, and posts made to social networking sites. Both couple members completed the online questionnaire individually, and presumably from a private computer in a setting of his or her choice. The online questionnaire took approximately fifteen minutes to complete and included a number of individual and relationship relevant measures. Once both partners completed the questionnaire, a member of the research team contacted the romantic pair via email to schedule the in-laboratory session, which took place approximately one week after the questionnaires were completed.

The laboratory session followed this general procedure: psychophysiological sensor placement and resting measurement phase, an anagram task which introduced the experimental manipulation of shared immoral behavior, and finally a questionnaire response phase during which participants individually responded to relevant relationship measures.

Two experimenters conducted the in-laboratory portion of the study. All experimenters were undergraduate students who had undergone extensive training prior to interacting with participants, including training on how to appropriately apply and remove psychophysiological
sensors. Upon arriving to the laboratory, participants were greeted by one of the experimenters and guided to the laboratory. The set-up of the laboratory room had two desks facing each other, separated by a garment rack with a moveable curtain, which was used during different portions of the study to provide privacy (see Figure 1).

To begin the session, written consent was obtained and an overview of the procedure was given to participants. Experimenters then placed five psychophysiological sensors on each participant in order to obtain continuous measures of heart rate and galvanic skin conductance. Where possible, male experimenters placed sensors on the male participant, while female experimenters placed sensors on the female participant. In the case that two female experimenters conducted the session, one of the female experimenters placed the sensors on the male participant. To measure heart rate, two sensors were placed on each participant’s torso near the lowest rib on either side and one sensor was placed on the right side of each participant’s clavicle. Galvanic skin conductance was assessed with two sensors placed on the palm of each participant’s non-dominant hand. In order to obtain a resting state of participants’ physiology, participants were asked to sit quietly for five minutes, avoiding movement and discussion with their partner. In order to ensure romantic partners did not interact with one another during the resting phase, the curtain was drawn for added privacy.

After obtaining the resting physiological measures for five minutes, one of the experimenters returned to the room to provide instructions for the experimental manipulation—the anagram task. During the task, each partner of the romantic pair completed a series of twenty anagrams individually on a piece of paper. The words chosen were meant to be neutral words that did not elicit any particular effects in participants. The anagram lists were designed so that the initial words could be solved relatively easily, but became progressively more difficult after
the first few ($M_{Anagrams\ Solved} = 4.71; \ S.D. = 3.27$). Each partner’s anagrams were different. A complete list of both sets of anagrams can be found in Appendix A.

Prior to the romantic couple’s arrival to the laboratory, the couple was randomly assigned to one of two conditions: the experimental (“cheating”) condition (N=17) or the control (“non-cheating”) condition (N=12). In the cheating condition, participants were given the correct answers to their partner’s anagrams on the back of their own worksheets (see Appendix B). The anagram worksheets were placed in the folders so that each participant would pull out their worksheets and immediately see their partner’s answers. This experimental manipulation provided romantic couples assigned to the cheating condition the opportunity to cheat on the anagram task by sharing their answers with their romantic partner. In the non-cheating condition, participants were not provided the answers to their partner’s anagrams on the back of their worksheets. Regardless of condition, all romantic couples were told at the beginning of the study that the purpose of the study was to investigate how individual performance is affected by the presence of, or working together with their romantic partner. Upon administering the anagram task, all romantic couples were told they had been randomly assigned to complete the task individually. Participants were also instructed that the room they were in was soundproof and that neither of the experimenters would be able to answer any questions for the duration of their five-minute anagram challenge. Additionally, although already turned off, the cameras located on the walls of the room were covered to lessen any anxiety that participants that participants were being observed. Participants were told that they would have five minutes to complete the anagram task, after which they would be given another five minutes to score their results. Lastly, participants were told that their compensation for participation in the study depended on the number of anagrams they each solved correctly, and that they would be awarded .50 cents per
correct answer, thereby further increasing the incentive to cheat on the task. An experimenter then provided each romantic partner their individual anagram folder and a pencil, started the timer, and left the room immediately. Importantly, prior to the laboratory session, another research assistant prepared the anagram packets, ensuring that the session experimenters had no knowledge of which condition each pair was assigned.

The aforementioned steps were designed to create the conditions where cheating would be most likely to occur in the experimental condition. The instructions pertaining to the soundproof room and the cameras were included to lessen suspicions of surveillance and thus minimize the risk of detection. The presence of a timer and strict time limit were included to increase the pressure associated with the task and thus make the likelihood of cheating higher. Similarly, the incentive structure of the anagrams was also included in hopes of making participants cheat on the task in order to obtain a greater monetary reward. Lastly, the experimental manipulation provided only one group the opportunity to cheat through the accessibility of their answers, thus establishing a clear difference between the experimental and the control conditions.

After the five minutes had passed, the experimenter returned to the room and asked the participants for their pencils. The experimenter then provided the romantic pair with a packet containing scoring instructions and two red pens. The pencils were removed to uphold the experimental manipulation, as leaving them in the room would have provided the non-cheating condition the opportunity to behave unethically. Participants were asked to score their anagram worksheets, and then place all of the sheets back into their scoring instructions packet. The scoring instructions for the cheating condition simply told participants that the answers to their anagrams were on the back of their partner's worksheet, while the scoring instructions for the
non-cheating condition provided the unscrambled words for each partner's anagrams (see Appendix C).

After the participants self-scored their results, both experimenters returned to the room and provided each participant with a laptop. Participants were instructed to answer the questions on the questionnaire based on how they were feeling at that particular moment. The in-lab questionnaire consisted of many of the same relationship scales provided in the online questionnaire followed by basic demographic questions. Including the same relationship measures in the online questionnaire and in-lab questionnaire provided the comparative basis for assessing changes in relevant relationship variables following the experimental manipulation.

Upon completing this questionnaire, both experimenters returned to the room to remove the psychophysiological sensors and begin the debriefing procedure. To assess suspicion, participants were asked what they thought the study was about, what they thought our research hypotheses were, whether they found anything in the study to be strange, artificial, or deceiving, and whether any aspect of the study may have influenced their behavior (e.g., anagram task, their partner, the questionnaires, the garment hanger, etc.). The experimenter then explained the full details and intentions of the study and provided participants with their $10 in compensation.

**Measures**

In order to assess the relevant relationship variables, the researchers employed several measures. The researchers assessed relevant relationship demographics such as characterization of the relationship (e.g., dating casually, dating exclusively, engaged to be married, married, or other), how long the partners knew one another, whether or not the partners lived together, and how long the partners were in a romantic relationship with one another. The relevant relationship variables of interest in this study were closeness, commitment, and passion. Closeness was
measured using Aron, Aron, and Smollan's (1992) Inclusion of Other in the Self Scale (IOS). The scale is a one-item assessment of closeness in the relationship, which requires participants to choose from among seven different Venn diagram representations of overlapping circles to indicate how close they feel to their romantic partner (1 = not at all close; 7 = very close; \( M_{T1} = 5.10, S.D. = 1.35; M_{T2} = 4.62, S.D. = 1.58 \)). Commitment was measured using Rusbult, Martz, and Agnew's (1998) seven-item survey (\( \alpha_{T1} = .81; \alpha_{T2} = .86 \)). One item, for example, read "I am committed to maintaining my relationship with my partner." Responses were scored on a 1-7 scale, where "1" represented "Not all true/Never true", and a value of "7" represented "Very true/True all of the time" (\( M_{T1} = 6.3, S.D. = .9; M_{T2} = 6.33, S.D. = .82 \)). To measure passion, Hatfield and Sprecher's (1986) 14-item Passionate Love Scale (\( \alpha_{T1} = .87; \alpha_{T2} = .90 \)) was administered. Sample items included "I sense my body responding when my partner touches me," and "I want my partner—physically, emotionally, mentally;" responses were scored on a 1-7 scale, where "1" represented "Not all true/Never true," and a value of "7" represented "Very true/True all of the time" (\( M_{T1} = 5.95, S.D. = .71; M_{T2} = 5.98, S.D. = .76 \)). Closeness, commitment, and passion were measured prior to (i.e., during the online questionnaire) as well as following the experimental manipulation.

Although the aforementioned measures were the primary measures of interest, additional measures were also included to provide further information relevant to the relationship and the experimental manipulation. Relationship satisfaction (\( \alpha_{T1} = .91; \alpha_{T2} = .90 \)) was measured using a seven-question assessment targeting different aspects pertinent to relationship satisfaction (Elliot, Gable, & Mapes, 2006). The questions are in four distinct categories with corresponding response scales, however, each response was scored on a 1-7 scale (\( M_{T1} = 6.15, S.D. = .83; M_{T2} = 6.19, S.D. = .77 \)). An example from each category follows: "How well does your partner meet
your needs?” (1 = very low satisfaction; 7 = very high satisfaction); “How often do you wish you had not gotten into this relationship?” (1 = never; 7 = very often); “How much do you love your partner?” (1 = not at all; 7 = a great deal)\(^2\); “How many problems are there in your relationship?” (1 = none; 7 = very many).

Physiological measures relevant to the present study include heart rate (ECG) and galvanic skin response (GSR). Stressful, emotional, or anxiety-inducing events have been shown to activate the sympathetic portion of the autonomic nervous system, leading to physiological reactions such as increased heart rate, respiration, and stimulation of the sweat glands; measuring such reactions involves methods such as ECG and GSR, as these indexes are affected by activation of the sympathetic nervous system (Brannon & Feist, 2010). GSR involves monitoring the electrical changes of the skin in response to stimuli in the environment as reflected in sweat glands activity, which are regulated by the autonomic nervous system (Hochman, Glockner, & Yechiam, 2010). Several studies have used such physiological measures to assess the effects of stress, tension, and cognitive dissonance (Croyle & Cooper, 1983; Elkin & Leippe, 1986; Etgen & Rosen, 1993; Kneer, Glock, & Rieger, 2012; Tesser, Whitaker, Martin, & Ward, 1998). Accordingly, these measures are appropriate to incorporate into our analysis of physiological arousal.

Physiological monitoring and storing of ECG and GSR data was conducted using Mindware Technologies’ BioLab Version 3.0.4. ECG data was analyzed using Heart Rate Variability (HRV) Analysis 3.0.14, which allows for analysis of mean heart rate in distinct segments. For the resting phase, heart rate was compiled into five 60-second segments, and the

\(^2\) Due to experimenter error, item #5 (i.e., “How much do you love your partner?”) was mistakenly left out of the online questionnaire. Since relationship satisfaction was not a primary variable of interest, and since we expected to see any changes in the in-laboratory session, where the question was included, we kept the measure despite this factor.
average of these values was taken to obtain average resting phase heart rate ($M_{Resting ECG} = 76.43; S.D. = 11.66$). During the experimental portion of the study, measurements of heart rate were separated into distinct experimental events, however, analysis focused on three particular segments: during the anagram task ($M_{ECG} = 81.43, S.D. = 12.02$), while the experimenter gave the scoring instructions following the task ($M_{ECG} = 85.86, S.D. = 27.98$), and while participants scored their results ($M_{ECG} = 80.23, S.D. = 11.52$). These particular segments were chosen because the effects of the experimental manipulation on physiological arousal were most likely to occur during these portions. GSR was analyzed using Electrodermal Activity (EDA) Analysis Version 3.0.12. GSR compilation and analysis procedures were identical to those for heart rate ($M_{Resting GSR} = 3.23; S.D. = 4.19; M_{Task GSR} = 6.8, S.D. = 5.51; M_{Instructions GSR} = 7.9, S.D. = 5.55; M_{Scoring GSR} = 7.77, S.D. = 6.27$).

In addition to the relationship relevant and physiological variables assessed, the researchers also assessed basic mood and personality measures. To assess a participant’s general mood, the researchers used Ruch and Carrell’s (1998) 30-item State-Trait-Cheerfulness Inventory (STCI). The STCI is broken down into three subscales: cheerfulness ($\alpha = .87$; e.g., “Every day life often gives me the occasion to laugh”), seriousness ($\alpha = .53$; e.g., “I am a serious person”), and bad mood ($\alpha = .86$; e.g., “I am a rather sad person”). Responses were scored on a 1-4 scale, where a value of “1” indicated a response of “strongly disagree,” and a value of “4” indicated “strongly agree” ($M_{Cheerfulness} = 32.55, S.D. = 4.53; M_{Seriousness} = 28.34, S.D. = 3.39; M_{Bad Mood} = 18.11, S.D. = 4.89$). Personality measures were obtained using the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003). Sample items on the TIPI are broken down into five sub-scales: extraversion (e.g., “extraverted, enthusiastic”), agreeableness (e.g., “critical, quarrelsome”), conscientiousness (e.g., “dependable, self-disciplined”), emotional
stability (e.g., "anxious, easily upset"), and openness to experience (e.g., "conventional, uncreative"). The ten items were prefaced by "I see myself as;" and participants responded on a 1-7 scale ($M_{Extraversion} = 4.16, S.D. = 1.7; M_{Agreeableness} = 5, S.D. = 1.16; M_{Conscientiousness} = 5.36, S.D. = 1.42; M_{Emotional Stability} = 4.94, S.D. = 1.45; M_{Openness} = 5.29, S.D. = 1.14), where a value of "1" indicated "strongly disagree," and a value of "7" indicated "strongly agree."

Given that the experimental manipulation in the present study involved immorality, the researchers also used Graham, Haidt, and Nosek's (2009) Moral Foundations Scale. This assessment includes two parts, consisting of sixteen items each. The first part asks participants to rate the extent to which a series of statements were relevant to their decision of whether something was right or wrong, and was scored on a 0-5 scale, where zero represented "Not at all relevant (This consideration has nothing to do with my judgments of right and wrong)." and a value of five indicated "Extremely relevant (This is one of the most important factors when I judge right and wrong)." (e.g., "Whether or not someone suffered emotionally;" "Whether or not someone was cruel."). The second part of the survey asked participants whether they agreed with a series of statements, and was also scored on a 0-5 scale; however, a value of zero represented "strongly disagree," and a value of five indicated "strongly agree." The Moral Foundations Scale is broken down into five sub-scales: harm ($\alpha = .63; M = 20.02, S.D. = 4.77$), fairness ($\alpha = .58; M = 21.25, S.D. = 3.55$), in-group ($\alpha = .82; M = 14.31, S.D. = 4.85$), authority ($\alpha = .53; M = 14.91, S.D. = 4.23$), and purity ($\alpha = .73; M = 10.98, S.D. = 5.4$). Additionally, another subscale labeled as progressive is created by subtracting the sum of the means for the in-group, authority, and purity subscales from the sum of the means for the harm and fairness subscales ($M = 1.19, S.D. = .88$). Finally, participants provided personal demographic information, such as sex, age, education, race/ethnicity, language spoken, and income level. The aforementioned measures
unrelated to the romantic relationship were included to assess any potential individual
differences in effects.

Results

Data collection and statistical analysis was conducted using SPSS Version 19. The
psychological phenomena of interest in the present study are interpersonal and thus effects refer
not only to the person but to the romantic relationship as well; accordingly the social psychology
tendency of focusing on data solely on the individual level is not appropriate in the present study
(Kenny, Kashy, & Cook, 2006). To account for the dependence in the data, multilevel models
were constructed in which individuals (Level 1) were nested within their romantic dyad (Level 2;
Kenny et al., 2006).

Manipulation Check

Prior to analyzing the hypothesized effects, a manipulation check was conducted to
examine whether romantic couples in the cheating condition did in fact cheat. As employed in
previous research (e.g., Gino et al., 2009), one can examine cheating behavior by assessing
differences in task performance by condition. Given that romantic pairs completed the same
exact anagrams under the same situational pressures regardless of condition, significant
differences in performance between the two conditions would indicate that the experimental
manipulation (i.e., accessibility to answers) was the cause of the results. Using multilevel
modeling (MLM) techniques, condition was dummy coded and used as a couple-level predictor,
while total anagrams solved was used as the Level-1 dependent measure. Although romantic
couples assigned to the cheating condition ($M_{Cheating} = 10.65, S.D. = 6.85$) solved on average
three more anagrams than did couples in the non-cheating condition ($M_{Non-cheating} = 7.67, S.D.$).
the results just barely failed to reach statistical significance: $F(1.56) = 3.023, p = .08$, suggesting that cheating did not occur as expected in the experimental condition.

*Effects on Relationship Relevant Variables*

After conducting the manipulation check, we explored the effects of assigned condition on the relevant relationship variables of interest in the study. We hypothesized that romantic couples who shared a moral transgression would report higher levels of closeness, commitment, and attraction. Just as we did in the manipulation check, condition was again dummy-coded and used as a couple-level predictor, while baseline measures of each outcome variable were included as covariates in Level 1. The analyses revealed no significant results. Romantic couples who had presumably shared a moral transgression did not report increased levels of closeness $t(55) = -.097, p = .86$, commitment $t(55) = -1.073, p = .32$, or passion $t(55) = -1.655, p = .45$. Additionally, romantic couples in the cheating condition did not experience any increases in relationship satisfaction, $t(55) = -1.655, p = .1$.

Because the effect of cheating on passion was not significant, we could not conduct the mediation analyses needed to test our second hypothesis. We did, however, test for basic associations between cheating and physiological arousal. Condition did not significantly affect physiological arousal. Romantic couples in the cheating condition did not experience any significant increases in heart rate during the anagram task: $t(52) = 1.139, p = .26$, immediately following the task: $t(52) = .896, p = .37$, or while self-scoring their results: $t(53) = .783, p = .44$, nor did they exhibit significant increases in galvanic skin response during the aforementioned segments: $t(55) = .83, p = .41$, $t(55) = .97, p = .34$, and $t(55) = .97, p = .33$, respectively. Given the failed manipulation check and non-significant results of our primary analyses, we explored the data further for signs of a possible failure of random assignment or dampening effect.
In comparing the two conditions on relationship relevant baseline measures, we found that there were significant pre-manipulation differences across conditions on both closeness and commitment. Indeed, participants in the cheating condition reported significantly less closeness, $\beta = -0.381$, t(55) = -3.081, p = .011, and significantly less commitment, $\beta = -0.276$, t(55) = -2.152, p = .059, than did participants in the control condition prior to the cheating manipulation. Although not ideal, these group differences were effectively managed in the prior analyses by including the baseline measures as covariates. Thus, they are not expected to have influenced the data substantially.

To see if any theoretically relevant individual differences might have interacted with or dampened the effect of cheating on each of the relationship outcomes, we ran another set of models using the Moral Foundations Questionnaire subscales as moderators.\(^3\) Moderation analysis revealed several interactions that approached significance. Participants' scores on the harm subscale of the MFQ interacted with condition to predict closeness (t(53) = 1.568, p = .12), commitment (t(53) = -1.753, p = .085), and passion (t(53) = -1.597, p = .116). Specifically, participants scoring high on harm reported feeling less closeness, commitment, and passion when assigned to the cheating condition compared to the control condition; those low in harm reported comparable levels of closeness, commitment, and passion, regardless of condition (see Table 1, Table 2, and Table 3 for means and standard deviations of each comparison; see Figure 2, Figure 3, and Figure 4 for graphical representations). The subscales of authority and purity also produced interactions worth noting in regards to relationship satisfaction. The Condition x Authority interaction: t(53) = 2.14, p = .037, indicated that participants in the cheating condition

\(^3\) We also analyzed models using the State-Trait Cheerfulness Inventory (STCI) and the Ten-Item Personality Inventory (TIPI) items as moderators. For both closeness and passion, the Condition x Seriousness interactions approached significance. For satisfaction, the Condition x Cheerfulness and Condition x Conscientiousness interactions approached significance. Due to the lack of theoretical and empirical relevance of these interactions to the present study, specific values are not reported.
high on authority reported higher levels of relationship satisfaction ($M = 6.31; S.D. = .6$) than did those who reported lower levels of authority ($M = 5.92; S.D. = .94$). Lastly, the Condition x Purity interaction: $t(53) = 1.434$, $p = .16$ showed those low on purity in the cheating condition reported less relationship satisfaction ($M = 6.09; S.D. = .83$) than did those high on purity ($M = 6.15; S.D. = .77$). Ultimately, moderation analyses allowed for further insight into the data.

Additional analyses revealed that one romantic couple rated substantially lower on all of the relevant relationship variables in comparison to the rest of the sample. They were thus removed from the sample and all analyses were rerun. Again, even when dropping the outlying couple from the data set, assigned condition did not significantly predict increased levels of closeness: $t(53) = -0.116$, $p = .91$, commitment: $t(53) = -1.132$, $p = .263$, passion: $t(53) = -1.317$, $p = .194$, or relationship satisfaction: $t(53) = -1.53$, $p = .132$.

**Discussion**

Bonnie and Clyde remain America’s most infamous romantic couple as portrayed in popular media and literature. This study sought to examine the possibility that the duo’s enduring love was strengthened through their shared criminal acts. Existing examinations of unethical behavior within romantic relationships focus overwhelmingly on moral transgressions committed by one romantic partner against another romantic partner rather than moral transgressions shared with one’s romantic partner. Previous research also centers on cognitive and emotional processes underlying the effects of unethical behaviors rather than physiological mechanisms. The present study sought to account for the neglect in previous literature by examining the effects of shared immorality within romantic relationships, and its potential underlying physiological processes. In

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4 The analysis also revealed that the measures of commitment, passion, and relationship satisfaction evidenced a substantial negative skew. To normalize the distribution for these measures, we transformed the variables in SPSS; however, analyses still revealed no significant effects such that assigned condition did not significantly predict boosts in commitment: $t (53) = -1.091$, $p > .05$, passion: $t (53) = -1.022$, $p > .05$, or relationship satisfaction $t (53) = -1.36$, $p > .05$. 
an experiment in which romantic partners were given the opportunity to cheat on a difficult anagram task, we predicted that partners sharing a moral transgression would report feeling closer, more committed, and more attracted to one another compared to partners who did not engage in such behavior. Additionally, we predicted that the increased attraction resulting from a shared moral transgression would be mediated by increased physiological arousal resulting from the act (i.e., the misattribution effect). We did not find support for our hypothesized effects of shared immorality on increased levels of closeness, commitment, or attraction. We likewise found no associations between condition and physiological arousal.

Interestingly, analyses of moderation revealed nearly significant interaction effects between condition and participants’ scores on the Moral Foundations subscales for reports of closeness, commitment, passion, and relationship satisfaction. In particular, the interaction between participants’ responses on the harm subscale and assigned condition, although insignificant, predicted lower levels of closeness, commitment, and passion for romantic partners in the cheating condition. Thus, individuals who value elements of harm toward others as highly salient to their morality tend to experience negative effects on the relationship variables of interest in this study. Such individual differences may prohibit these romantic partners for experiencing the benefits of shared immorality that may be applicable to others. Exploring these and other individual differences may serve as an important topic for future research. Ultimately, we believe a variety of reasons account for the lack of support for the expected results, however, most importantly, the failure of our experimental manipulation in substantially inducing cheating behavior is at the center of all underlying explanations.

The manipulation check conducted failed to reach significance, indicating that the experimental condition did not significantly predict higher amounts of anagrams solved in
comparison to the control condition. While the manipulation check was not significant, it did approach significance \( (p = .08) \), and results were trending in the desired direction (i.e., more anagrams solved in the cheating condition compared to the non-cheating condition). Thus, the nearly significant results indicate that romantic pairs in the cheating condition solved more anagrams than those in the “non-cheating” condition given that such differences in scores indicate that cheating occurred (Gino et al., 2009). Anecdotal evidence obtained during experimental debriefing, however, suggests that the experimental manipulation was largely unsuccessful. Indeed, of the seventeen couples in the cheating condition, only two (11.7%) admitted to cheating on the anagram task. Although such evidence may be subject to social desirability bias, we believe that the accompanying lack of significance in the manipulation check indicates that the vast majority of romantic pairs did not engage in a shared moral transgression. This approximate cheating rate is relatively low in comparison to other research employing similar cheating manipulations in which cheating rates have ranged from 40%-100% (Ruedy et al., 2013; Shu & Gino, 2012). Given that the exploratory basis of the present study relies on romantic pairs sharing a moral transgression, the lack of cheating behavior poses a major obstacle to examining the effects of such an act on the romantic relationship.

There are a number of explanations for why the current study’s cheating manipulation was unsuccessful. First, whereas previous research on cheating behavior has focused primarily on *individuals* cheating on a task either while in the complete absence of others, or in the presence of a confederate who only serves to further induce cheating (Gino et al, 2009; Mazar, Amir, & Ariely, 2008; Ruedy et al., 2013; Shu & Gino, 2012), the nature of the present study uniquely requires joint participation in an unethical behavior. Cheating in the present study could not have occurred without the active engagement of both romantic partners, as the seating
arrangement and accessibility to one's partner's answers, necessitated some form of communication to unethically share answers. Naturally, the fact that this experimental design requires two participants to engage in an unethical behavior rather than one in and of itself is an obstacle to inducing unethical behavior. Additional deterrents from cheating behavior potentially present in this study but absent from those with higher cheating rates involves the already established relationship between romantic partners and the fear of potential judgment arising from one romantic partner initiating shared immorality. Given the internal need for individuals to view themselves as honest individuals and to also be perceived by others as honest (Greenwald, 1980; Tsang, 2002), romantic partners may have avoided initiating cheating due to potential negative perceptions from their romantic partner, and the general perception that such behavior may result in negative feelings. We therefore did not expect to find the same rates of cheating in our study as are found in the existing work. It is entirely possible that a shared cheating manipulation will only be effective in 10-15% of the population, as evidenced by the comments made during the debriefing portion of the study. Such a small effect would require a much larger sample size than that of the current study in order to adequately examine the predicted effects.

Aside from the presence of one's romantic partner tapering cheating behavior, additional aspects related to the experimental protocol and experimental setting may have inhibited romantic pairs from cheating on the anagram task. As a means of masking the true nature of the study, participants were led to believe that they were randomly assigned to complete the anagrams individually although the study's cover story centered on cooperation in romantic relationships. Given this instruction, it is possible that effects of compliance to an authority figure operated in reducing cheating behavior. As demonstrated by Stanley Milgram's (1974) classic experiments, experimental participants often acquiesce to the requests of an experimenter
(i.e., authority figure) even if such requests involve inflicting a substantial amount of pain on another individual. Indeed, experimenters in this study could have been perceived as authority figures due to their lab-coats. Thus, although essential to the cover story, the instruction of working on the anagram task individually may have resulted in participants' obedience, and thus prevented cheating behavior from occurring. During the debriefing portion of the experiment, several participants explained that they did not cheat on the task because of the instructions, and also because they did not want to compromise the data they deemed pertinent to the cover story.

Another design-specific aspect of the experiment that may have inhibited cheating behavior relates to the incentive element intended to induce cheating. Participants were recruited under the presumption that they could receive up to $10 for their participation in the study, and were instructed prior to the anagram task that their compensation depended on their performance on the anagram task, such that each anagram solved correctly would be rewarded with $.50, an incentive similar to other studies on cheating behavior (Gino et al., 2009; Ruedy et al., 2013; Shu & Gino, 2012). Although studies with similar incentives resulted in higher cheating rates than we obtained, it is reasonable to expect that a larger incentive may serve as a means of eliminating any internal and external inhibitory factors and thus lead to a greater likelihood of cheating (Covey, Saladin, & Killen, 1989).

Beyond the experimental design itself, the experimental setting may have also prevented cheating behavior to occur. Previous cheating behavior research has noted the effects of surveillance (i.e., risk of detection) on promoting cheating behavior, indicating that minimizing surveillance leads to significantly more cheating compared to heightened surveillance (Covey et al., 1989). Indeed, recent cheating behavior studies emphasize minimizing surveillance by leaving participants in private during the experimental manipulation (Ruedy et al., 2013; Shu &
Gino, 2012). The experimental design in this study also sought to minimize detection by leaving participants alone in a closed room, explaining that the room was soundproof, and identifying the cameras in the room and highlighting their being covered up in addition to being turned off. Aside from leaving the participants alone in the room, the two additional methods of reducing risk of detection may have had the opposite intended effects, such that priming the participants with such information may have elevated their sense of surveillance and thus lessened cheating behavior. Ultimately, although the experimental design intended to minimize surveillance, these aspects of the study may have actually led to an unintended suppressive effect on cheating behavior.

Apart from the experimental design and setting, environmental factors pertinent to the community in which the study took place may have also led to decreased likelihood of cheating behavior. The study was conducted at a university with a tradition of self-governance dating back to 1875, embodied in an honor code outlining acceptable standards of both community conduct and academic conduct (UNC Office of Student Conduct, 2014). Indeed, a pledge not to "lie, cheat, or steal" hangs in every single classroom, new student orientations cover the code extensively, and students are required to sign the honor pledge on all major assignments. Seemingly, the code is engrained in the community, and violations of the code result in strict punishments (e.g., recommended section for an initial instance of academic dishonesty is one semester of disciplinary suspension). Research on the effects of such environments on cheating behavior has shown an association between honor codes and decreased academic dishonesty (McCabe & Treviño, 1993). Within organizational settings (i.e., corporations), the effects of ethical codes on unethical behavior are not as conclusive, as some studies suggest the codes curb unethical behavior, while others do not support such an effect (McCabe, Treviño, & Butterfield,
1996). Although there is not conclusive evidence of the effects of ethical codes on unethical behavior, one can suspect that the strong tradition of an honor code at the university where this study was conducted may have constrained the expected shared immorality, especially considering the sample characteristics, which predominately included students and university employees.

Even amidst the inconclusive evidence, the effect of an honor code on reducing unethical behavior may have been heightened at the particular time this study was conducted. Over the last five years, academic scandals pertaining to the university’s popular athletic programs, where rampant cheating behavior was exposed, have brought the university’s honor code and ethical standards national media attention, as well as close scrutiny by the university’s student newspaper, faculty, and administrators (Barrett, 2014; Kane, 2011). Thus, aside from the constant reminders of the honor code throughout this university, increased attention to the honor code through the recent academic scandals may have increased the saliency of, and attentiveness to, ethical standards during the time of the experiment. Experimental evidence where saliency and attentiveness to moral standards are elevated has shown that both factors lead to reduced cheating behavior (Gino et al., 2009; Mazar et al., 2008). Therefore, the potentially increased saliency and attentiveness to standards in the sample provide a potential environmental inhibitory factor on cheating behavior.

Despite these limitations, we intended to generalize the potential findings concerning shared immorality to romantic couples in the greater population. In doing so, we strived to illuminate the common effects portrayed in popular media and literature (e.g., Bonnie and Clyde), whereby shared immoral acts strengthen romantic relationships. Although such study aims may indicate intentions to promote shared unethical behaviors for romantic relationships,
our sole intent was to examine what could be considered a particularly surprising phenomenon. We also hoped to fill the void on morality research within romantic relationship and stray away from the overwhelming focus of moral transgressions by one partner against the other partner, and instead demonstrate what results when both partners share such behaviors. Such findings not only would have shed light on surprising effects within romantic relationships, but would also provide further support to group morality research, and the notions of a strengthened in-group through unethical behaviors. Lastly, the study intended to provide a physiological perspective on the underlying mechanisms of unethical behavior, straying away from the largely focused upon emotional and cognitive processes.

Although we could not make the aforementioned contributions to extant literature on morality within romantic relationships, we suggest future directions in this area of research. Given the theoretical bases set forth, the predicted effects are likely to occur given a successful experimental manipulation. Future research, therefore, should focus on designing an experimental manipulation that maximizes the likelihood of shared immorality, and again examining the relationship relevant variables of closeness, commitment, and attraction. Ultimately, although we did not substantively contribute to empirical findings or theoretical explanations, we did make several important research contributions through the present study. First, we shed light on the long-neglected phenomenon of shared immorality within a romantic dyad. Second, we demonstrated a potential research paradigm to produce shared cheating behavior, which to our knowledge has not been attempted in previous cheating research. And third, we found initial evidence for potentially relevant individual differences that may influence the effect of shared cheating on relationship outcomes. Overall, given the weaknesses pointed out in our research design, as well as the potentially unintended effects of seemingly logical
experimental procedures, we have provided future researchers with a foundation for improving
the experimental design to more adequately test this unexplored area of research.
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Table 1

*Moderation Analysis: Means and Standard Deviations for Closeness*

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Table 2

*Moderation Analysis: Means and Standard Deviations for Commitment*

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Table 3

*Moderation Analysis: Means and Standard Deviations for Passion*

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<td>.950</td>
</tr>
</tbody>
</table>
Figure 1. As described, each romantic partner’s desk faced one another in order to increase the likelihood of cheating behavior. The timer was in plain review of each participant. The curtain was removed for this portion of the study, however, was used for separation during the resting physiological phase, and in-lab questionnaire phase.
Figure 2. Condition x Harm on Closeness
Figure 3. Condition x Harm on Commitment
Figure 4. Condition x Harm on Passion.
Appendix A

Anagram Worksheet—Partner A

Instructions: Each of the words/phrases below can be rearranged to form a different single word. Please unscramble as many of the following twenty anagrams as you can within the allotted five minutes. You will receive 50 cents per correct answer, totaling to a maximum of $10.

1. ipr: ____________________________
2. geap: __________________________
3. ramf: __________________________
4. Tens us: ________________________
5. Task Be: ________________________
6. Lama In: ________________________
7. Hew Silt: ________________________
8. Taco Van I: _____________________
9. Cede Mi In: _____________________
10. Balm Rule: _____________________
11. Ani Mot Nu: ____________________
12. Dub Gring Hmm I: ______________
13. Hag Errs Pops: _________________
14. Iamb Ole Out: _________________
15. Hah Gorp Pot: _________________
16. Voile Nites: _________________
17. Sank Few Lo: ________________
18. Cad Qi Sunk: ________________
19. Re Fur Ti Nu: ________________
20. Hag Minter: ________________
Anagram Worksheet—Partner B

Instructions: Each of the words/phrases below can be rearranged to form a different single word. Please unscramble as many of the following twenty anagrams as you can within the allotted five minutes. You will receive 50 cents per correct answer, totaling to a maximum of $10.

1. atf: _____________________________
2. alps: _____________________________
3. Mite: _____________________________
4. ripsct: _____________________________
5. A lad pup: _____________________________
6. Hay Whi I: _____________________________
7. Tends Ti: _____________________________
8. Elk Oh Ton: _____________________________
9. Pawl Shh I: _____________________________
10. Artier Forger: _____________________________
11. Ad Erring Kent: _____________________________
12. Gee Firth Fir: _____________________________
13. Regard Nth Om: _____________________________
14. Bairn Ms Ort: _____________________________
15. Dab Lab Cork: _____________________________
16. Raws Twitch: _____________________________
17. La Dong Fry: _____________________________
18. Mar Nip Tot: _____________________________
19. Acmes Salt: _____________________________
20. A Ran Touts: _____________________________
Appendix B

Back of Partner A’s Anagram Worksheet

Answers to your partner’s anagrams:

1. fat
2. slap
3. time
4. script
5. applaud
6. highway
7. dentist
8. knothole
9. whiplash
10. refrigerator
11. kindergarten
12. firefighter
13. grandmother
14. brainstorm
15. blackboard
16. wristwatch
17. dragonfly
18. important
19. classmate
20. astronaut
Appendix C

Experimental Condition Scoring Instructions

SCORING INSTRUCTIONS

Please take the next few minutes to score your anagrams. The answers to your anagrams are on the back of your partner’s anagram sheet. Go through each anagram and circle all correct answers with the supplied red pen. Leave any incorrect answers unmarked and write the total number of correct answers at the top of your respective worksheets.

Once you and your partner have both checked your answers, place each of your individual anagram sheets along with these instructions inside the folder labeled “SCORING” and notify an experimenter that you are ready for the next task. We will then double-check your responses to ensure proper compensation.
Control Condition Scoring Instructions

SCORING INSTRUCTIONS
Please take the next few minutes to score your anagrams. The answers to each your anagrams are provided below. Go through each anagram and circle all correct answers with the supplied red pen. Leave any incorrect answers unmarked and write the total number of correct answers at the top of your respective worksheets.

Once you and your partner have both checked your answers, place each of your individual anagram sheets along with these instructions inside the folder labeled “SCORING” and notify an experimenter that you are ready for the next task. We will then double-check your responses to ensure proper compensation.

Anagram Worksheet—Answers—Partner

1. rip
2. page
3. farm
4. sunset
5. basket
6. animal
7. whistle
8. vacation
9. medicine
10. umbrella
11. mountain
12. hummingbird
13. grasshopper
14. automobile
15. photograph
16. television
17. snowflake
18. quicksand
19. furniture
20. nightmare

Anagram Worksheet—Answers—Partner

1. fat
2. slap
3. time
4. script
5. applaud
6. highway
7. dentist
8. knothole
9. whiplash
10. refrigerator
11. kindergarten
12. firefighter
13. grandmother
14. brainstorm
15. blackboard
16. wristwatch
17. dragonfly
18. important
19. classmate
20. astronaut