Sex Differences in Relationship Regret: The Role of Perceived Mate Characteristics

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Abstract: The current set of studies examined regret involving action and inaction in the realm of romantic relationships by testing whether such regret is associated with the characteristics of one’s mate. In study 1, 394 participants reported on a previous casual sexual encounter, and in study 2, 358 participants reported on a previous romantic relationship. In both, instances of actual engagement and instances of passing up opportunities were studied. Study 3 was experimental and elicited reactions to hypothetical scenarios from 201 participants. Regret reported by men in both study 1 and study 2 varied as a function of the perceived attractiveness of the participants’ actual and potential mate. Regret reported by women in study 2 varied as a function of the perceived stinginess of the participant’s mate and perceived wealth of the participants’ potential mate. Study 3 found that sex differences in type of regret (with men regretting inaction more than women) occurred only when the mate presented in the scenario was described in ways consistent with mate preferences. Together these findings suggest that regret differs between the sexes in ways consistent with sex differences in mate preferences.

Keywords: regret, relationships, sex differences

Introduction

“I should have married her when I had the chance.” “I shouldn’t have eaten that entire pie.” “If only I had not gotten into that car on that fateful day.” Sentiments such as these reflect an emotion that is known to most of us. Regret is an unpleasant emotion
commonly felt when we experience some unfortunate outcome that we believe would have
been different had we taken a different course of action.

There has been a great deal of research on regret, including investigations into what
people most commonly regret, what outcomes generate the most intense regret, and how
peoples' thoughts about regret change over time (Gilovich and Medvec, 1995; Kahneman
and Tversky, 1982; Landman, 1987). In a meta-analysis involving adults of varying ages
and occupations the three most cited regrets in life were education, career, and romance
(Roese and Summerville, 2005). In a sample of college students romance topped the list
(Roese and Summerville, 2005). It is not surprising that romance trumped education and
career among this group as college students are in the midst of pursuing education and most
have yet to confront challenges regarding career. Another important distinction in regret
research centers on the difference between action and inaction regrets. Regrets of action
center on what should not have been done, whereas inaction regrets center on what should
have been done, but was not (Gilovich and Medvec, 1995). Which do people regret more?
This question has been the subject of much research, and the answer, not surprisingly,
appears to be that it depends. For instance, Gilovich and Medvec (1995) found time frame
to be an important factor; in the short term action is regretted most, but over time inactions
predominate.

Despite the considerable amount of research on regret, sex differences in regret
have rarely been found. In achievement domains, educational domains, and even most
social domains, men and women do not seem to differ in terms of what causes them regret
(Gilovich and Medvec, 1995). Roese, Pennington, Coleman, Janicki, Li, and Kenrick
(2006), however, found a characteristic sex difference specific to the domain of romantic
relationships. The sex difference centers on the distinction made above between action and
inaction regrets. In three studies, Roese et al. (2006) found that in the context of romantic
relationships, men tend to experience regrets of inaction (failing to pursue romantic
possibilities) over action (engaging in romantic encounters), whereas women report regrets
of inaction and action equally. Importantly, this difference in type of regret was found only
for romantic relationships, and not for familial relationships or friendships. When
examining only the sexual aspects of romantic relationships, a more extreme sex difference
emerged, wherein men reported particularly high levels of regret for inaction and women
reported higher levels of regret for action.

Roese et al. (2006) cite evolutionary factors as a possible explanation for these sex
differences. According to sexual strategy theory, basic differences in the reproductive
biology between men and women have led to the evolution of sex differences in mating
strategies and preferences (Buss and Schmitt, 1993). One important reproductive difference
between men and women is asymmetry in minimum levels of parental investment
(Symons, 1979; Trivers, 1972). Whereas women bear the burden and pleasures of
pregnancy, lactation, and usually childcare, men need only engage in a single act of sex to
produce a child. Secondly, although men who mate with a variety of sexual partners in a
given time span may sire multiple offspring, having multiple partners confers no such
benefit to women (Symons, 1979). Indeed, it is well documented that men have a greater
desire for sexual variety and a greater willingness to engage in casual sex relative to
women (Buss, 2003; Buss and Schmitt, 1993; Clark and Hatfield, 1989; Oliver and Hyde,
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1993; Schmitt, 2003). Thus, casual sex is thought to play a larger role in the strategic repertoire of men than women because it has historically conferred a much greater advantage to men than to women. In addition, because fertility is more strongly tied to youth in women than in men (Williams, 1957), a failed relationship may pose a larger reproductive cost to women than men.

Thus, the sex differences in regret identified by Roese et al. (2006) may be understood by proposing that such regret results from engaging in behaviors that run counter to evolved sexual strategies. Men may disproportionately regret neglecting to pursue romantic opportunities (inaction) because failing to pursue such opportunities has historically hindered reproductive success. In contrast, among women, for whom there has historically been greater cost associated with action, it is instances of action that are disproportionately regretted (at least with respect to purely sexual aspects of relationships).

If it is true that sex differences in relationship regret reflect divergent sexual strategies, then we might expect sex differences in regret to vary as a function of mate characteristics in ways that map onto differences in mate preferences. The primary purpose of the current research is to test this proposition. Although there are some characteristics that men and women both value heavily in a mate (e.g., kindness), other characteristics are more heavily valued by members of one sex than the other. Men tend to value attractiveness and youth in their mates, and women tend to value those with resources and those willing to provide said resources. That men and women tend to value different characteristics in their mates has been widely documented (Buss, 1989; Buss and Schmitt, 1993; Shackelford, Schmitt, and Buss, 2005; Tadinac and Hromatko, 2004; Wiederman and Allgeier, 1992). For instance, one study involving thousands of participants from three dozen cultures found women more heavily valued resources and status in mates and men more heavily valued physical attractiveness (Shackelford et al., 2005). According to sexual strategy theory, these mate preferences stem from sex differences in what constrains reproductive success (Buss and Schmitt, 1993, but see Eagly and Wood, 1999, for an opposing view). Specifically, because women invest more heavily in offspring and have sharp constraints on quantity, the primary reproductive limitation for women centers around the resources they can secure for themselves and their children. Women therefore value men with resources and those who demonstrate a willingness to commit those resources. The primary limitation to men’s reproductive success is access to healthy and fertile females. Since relative youth and physical attractiveness provide strong cues to health and fertility in females (Fink and Penton-Voak, 2002; Thornhill and Gangestad, 1999), men are hypothesized to value such qualities in potential mates. Thus, we propose that the pattern of relationship regret identified by Roese et al. (2006) will be moderated by mate characteristic. Specifically, we propose that men will be particularly regretful of missed romantic opportunities when the potential mate is attractive and may regret romantic involvements more when the mate is relatively unattractive. Women, on the other hand, may be particularly regretful of romantic involvements when the mate is low in resources (or withholds them) and may regret missed opportunities more when the potential mate is relatively high in resources and generous with them.

In three studies we tested whether sex differences in relationship regret vary in the ways proposed above. The first two studies took the form of a survey. In study 1,
participants were asked about either a previous one-night stand or about a situation in which they believe they had the opportunity to engage in a one-night stand. In study 2, participants were asked about either a previous romantic relationships or missed opportunity for a romantic relationship. In both studies participants reported their level of regret in regard to the target situation and rated their previous partner or potential partner on a variety of characteristics. In study 3, we presented participants with a hypothetical scenario that described a person either partaking in or passing up the opportunity for casual sex or a romantic relationship with someone who varied in terms of physical attractiveness and resource potential. Participants then rated how regretful they believe they would be had they been the protagonist in the scenario.

Studies 1 and 2

Materials and Methods

Participants

In both studies, participants were students enrolled in upper division psychology and biology courses at Southeastern Louisiana University who participated in the study for extra credit. In study 1 (the casual sex study), 394 students participated. Of these, seven women and three men reported being either homosexual or bisexual. Data from these individuals were not included in the data analysis, resulting in a sample of 158 male and 226 female participants. In study 2 (the romantic relationships study) 358 students participated. Of these, five of the men and seven women reported being either homosexual or bisexual and were thus not included in the data analysis, resulting in a sample of 144 male and 202 female participants. The mean age of the participants in study 1 was 21.01 years and 21.95 in study 2. In neither sample did male and female participants differ significantly in age, \( t(392) = .43, p = .67 \), for study 1 and \( t(356) = .95, p = .34 \), for study 2.

Materials

The questionnaire packet contained either the action survey or the inaction survey and a demographic questionnaire.

Casual sex survey (Study 1)

Action. In the action survey, participants were asked to think of the most recent casual sex experience they have had with a member of the opposite sex (an experience in which the participant had sexual intercourse, i.e., a one-night stand). They were asked to think of an encounter in which no romantic relationship (i.e., no dating) occurred prior to or following the experience. If the participant had not had such an encounter in his or her life, the participant was asked to skip ahead to the last page of the packet. The first question asked the participant to report how long ago the event had occurred in months. The next item asked participants to rate how much they regret the encounter on a scale from 1 (not at all) to 7 (severely). Next, participants were asked to rate the person with whom they had had the encounter on six characteristics, each on a scale from 1 (not at all) to 7 (extremely). The characteristics were: funny, kind, stingy, physically attractive, wealthy, and honest.
These traits reflect the primary traits of interest (physically attractive, wealthy, and stingy) as well as several traits that are generally desired in a mate. Stingy was included because it is not only the possession of wealth, but the willingness to provide said wealth that is assumed to be of value to women, and because wealth is not common among students. The order of the six items was randomly determined for each participant.

**Inaction.** In the inaction survey, participants were asked to think of the most recent opportunity where they believe they could have had a casual sexual encounter (could have had sexual intercourse, i.e., a one-night stand) with a member of the opposite sex, but chose not to or did not try hard enough to. They were asked to think of an encounter in which no romantic relationship (i.e., no dating) occurred prior to or following the experience. The remaining part of the survey was identical to the action survey with the exception that participants were asked to rate how much they regret not having had the sexual encounter.

**Romantic relationship survey (Study 2)**

**Action.** In this survey, participants were asked to think of their most recent former (i.e., not current) romantic relationship. Romantic relationship was defined for them as a previously ongoing relationship that could be defined as a boyfriend/girlfriend relationship (not a strictly sexual one). The remainder of the survey was the same as in study 1 except that participants were asked to rate how much they regret having been in this relationship on a scale from 1 (not at all) to 7 (severe) and were asked to report how long ago the relationship had ended in months.

**Inaction.** In this survey, participants were asked to think of the most recent situation in which they believe they could have entered into a romantic relationship with someone, but they chose not to or did not try hard enough to. They were told to think of a situation that the respondent believes may have possibly turned into an ongoing relationship that could be defined as a boyfriend/girlfriend (i.e., not a strictly sexual one). They were then asked to take a moment to think about this "possibly could have been" relationship and the other person involved before answering the questions that followed. The remaining part of the survey was identical to the action survey except that the participants were asked to rate how much they regret not pursuing this relationship and asked how long ago this opportunity had occurred.

**Demographic questionnaire.** The last page asked participants to report their sex, their sexual orientation, and their age.

**Procedure**

The experimenter arrived at the beginning of the class and administered the surveys to the students. Participants received either the action survey or the inaction survey. The experimenter announced that the purpose of the study was to investigate different types of relationships, and that participants would receive one of several different versions of a survey about relationships. The experimenter announced that completion of the survey was voluntary and stressed the anonymous nature of the questionnaire.
Study 1 Results

Sixty one men (77%) completed the action survey and 64 men (81%) completed the inaction survey. Sixty nine women (61%) completed the action survey and 89 women (78%) completed the inaction survey. Recall that the participants were told to skip the survey and complete only the demographic form if they had not experienced the situation described in the survey. Whereas men did not differ in the rate with which they completed these two surveys, $\chi^2(1, N = 158) = .35, p = .56$, women were more likely to complete the inaction survey than the action survey, $\chi^2(1, N = 228) = 8.25, p = .01$.

Sex differences in regret by type (action vs. inaction) for causal sex encounters

Before analyzing the relationship between mate characteristics and regret, we examined whether the pattern of sex differences in type of regret identified by Roese et al. (2006) was evident in the current sample. To do this we conducted a 2 (sex of participant) X 2 (type of encounter: action vs. inaction) ANOVA with rating of regret as the dependent variable. There was a main effect of type of encounter, $F(1,279) = 60.94, p = .001$, such that regret for action ($M = 3.85$) exceeded regret for inaction ($M = 2.19$). Importantly, the interaction between type of encounter and sex was significant, $F(1,279) = 35.16, p = .001$. While men reported relatively similar levels of regret for action and inaction, $t(124) = 1.22, p = .27$, ($M = 3.16$ and $M = 2.86$, respectively), women reported much higher levels of regret for action than inaction, $t(157) = 11.49, p = .001$, ($M = 4.55$ and $M = 1.61$, respectively).

Mate qualities as predictors of regret for casual sex encounters

We used multiple regression analyses to test our predictions about the relationship between mate characteristics and regret. We conducted a separate regression analysis for each sex and each type of regret (action vs. inaction). In each of the four analyses, the six characteristic ratings were entered into the regression model with the rating of regret as the criterion variable. These regressions involve the simultaneous entry of all the variables, so that the coefficients reflect the unique predictive power of each predictor while controlling for all others.

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1 The mean number of months that had reportedly elapsed since the event had occurred was 2.92 for those who completed the action survey and 2.56 for those who completed the inaction survey. A 2 (type of encounter; action vs. inaction) X 2 (participant sex) ANOVA on the number of months revealed this (action vs. inaction) to be a significant difference, $F(1,258) = 7.18, p = .01$. Neither participant sex $F(1,258) = 1.08, p = .299$, nor the interaction between type of encounter and participant sex, was significant $F(1,258) = 1.49, p = .23$.

2 Not surprisingly, many of the trait ratings were weakly to moderately correlated. In study 1, correlations among trait ratings varied in strength from .02 (between fun and kind) to .59 (between kind and honest). In study 2, correlations among ratings varied in strength from .03 (between stingy and fun) and .52 (between kind and honest). All predictors in this model and the subsequent models tested in study 1 and study 2 exhibited VIF values less than 2.
Sex differences in regret

**Mate characteristics as predictors of action regret in casual sex encounters**

Our first regression analysis examined regret in response to having engaged in the casual sex encounter (action regret). Table 1 reports the coefficients. In this and all subsequent regression analyses, simple regression models produced findings that did not differ substantially from the combined models reported below.

**Table 1.** Regression coefficients of mate characteristics predicting regret involving a sexual encounter (Study 1) conducted separately by sex and type of encounter (Action vs. Inaction)

|          | Action B | B | Inaction B | B |
|----------|----------|---|------------|---|
| **Men**  |          |   |            |   |
| Attractive | -.86*    | .65 | Attractive | .64* | .44 |
| Wealthy    | -.12     | -.09 | Wealthy | -.15 | -.10 |
| Stingy     | .18      | .15 | Stingy | -.21 | -.16 |
| Honest     | .08      | .05 | Honest | .24  | .23 |
| Kind       | .16      | .10 | Kind | -.38 | -.28 |
| Funny      | .24      | .20 | Funny | .22  | .16 |
| **Women** |          |   |            |   |
| Attractive | -.27     | -.17 | Attractive | .05 | .06 |
| Wealthy    | .27      | .18 | Wealthy | .23  | .21 |
| Stingy     | -.05     | -.04 | Stingy | -.04 | -.04 |
| Honest     | -.38*    | -.29 | Honest | .03  | .03 |
| Kind       | -.18     | -.15 | Kind | .07  | .07 |
| Funny      | -.15     | -.10 | Funny | -.06 | -.07 |

*Note: *p < .05

The set of six predictors accounted for a significant proportion of variance in men’s action regret, $F(6,54) = 5.39, p = .001$; $R^2 = .31$. Only the predictor “attractive” was significant, $t(54) = -4.68, p = .001$. The six predictors accounted for a significant proportion of variance in women’s action regret, $F(6,62) = 4.29, p < .001, R^2 = .233$. Only the predictor “honest” contributed significantly to regret among women, $t(62) = -2.05, p = .045$.

**Mate characteristics as predictors of inaction regret in casual sex encounters**

Next, we examined the relationship between mate qualities and degree of regret over having chosen not to engage in casual sex (inaction regret). Table 1 shows the results of these analyses. The six predictors accounted for a significant proportion of variance in men’s inaction regret, $F(6,57) = 2.55, p = .03; R^2 = .13$. Once again, the predictor “attractiveness” was significant, $t(57) = 3.42, p = .001$. The predictor “kind” was marginally significant, $t(57) = -1.76, p = .084$. The six predictors failed to account for a significant proportion of variance in women’s inaction regret, $F(6,82) = 1.24, p = .29, R^2 = .02$. We note, however, that women reported very low levels of regret for inaction ($M = 1.61$), which may have precluded any detectable association with the predictors.
Sex differences in regret

Coefficient reached significance, although the coefficient for wealthy was marginally significant, $t(82) = 1.82, p = .073$.

Study 2 Results

Sixty four men (89%) completed the relationship survey and 63 men (88%) completed the missed relationship survey. Ninety (89%) women in our study completed the relationship survey and 96 (95%) completed the missed relationship survey$^3$. Neither men $\chi^2(1, N = 144) = .07, p = .79$, nor women $\chi^2(1, N = 202) = 2.44, p = .12$ differed in the rate with which they completed the two surveys.

Sex differences in regret by type (action vs. inaction) for romantic relationships

We conducted a 2 (sex) X 2 (type of experience: action vs. inaction) ANOVA with rating of regret as the dependent variable to examine sex differences in type of regret. Only one effect was significant, the interaction between type of experience and participant sex, $F(1,309) = 4.3, p = .034$. While women reported relatively similar levels of regret for inaction and action, $t(184) = .628, p = .48$ ($M = 2.64$ and $M = 2.80$, respectively), men reported higher levels of regret for inaction than action, $t(125) = 2.10, p = .038$ ($M = 3.27$ and $M = 2.58$, respectively).

Mate qualities as predictors of regret in romantic relationships

To examine regret over involvement in a previous romantic relationship (action) we once again used multiple regression analyses with the trait ratings as predictors and action regret as the criterion variable, performed separately by sex. Table 2 reports the resulting coefficients. The six predictors accounted for a significant proportion of variance in men’s action regret, $F(6,57) = 10.60, p = .001; R^2 = .48$, with the predictors “attractive” [$t(57) = -3.33, p = .002$], “honest” [$t(57) = -3.14, p = .003$], and “kind” [$t(57) = -2.32, p = .024$] being significant. The six predictors accounted for a significant proportion of variance in women’s action regret, $F(6,83) = 5.87, p = .001, R^2 = .25$, with the predictors “stingy” [$t(83) = 2.18, p = .032$] and “kind” [$t(83) = -2.40, p = .019$] being significant. In addition, the coefficient for “wealthy” was marginally significant, $t(83) = -1.97, p = .052$.

Mate qualities as predictors of inaction regret in romantic relationships

We next examined the relationship between mate qualities and degree of regret over having not pursued a romantic relationship (inaction regret). Table 2 reports the resulting coefficients. The six predictors accounted for a significant proportion of variance in men’s inaction regret, $F(6,56) = 5.92, p = .001; R^2 = .32$. The predictors “attractive” [$t(56) = 3.30,$

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$^3$ The mean number of months that had reportedly passed since the event had occurred was 3.33 for those who had completed the action survey and 4.96 for those who completed the inaction survey. A 2 (type of encounter) X 2 (participant sex) ANOVA revealed that these two means differed significantly, $F(1,296) = 116.23, p = .001$. Neither participant sex, $F(1,296) = .01, p = .96$, nor the interaction between type of encounter and participant sex was significant $F(1,296) = .11, p = .74$. 

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$p = .002$] and “honest” $[t(56) = 2.08, p = .043]$ were significant. The six predictors accounted for a significant proportion of variance in women’s inaction regret, $F(6, 89) = 10.25, p = .001, R^2 = .37$. The predictors “wealthy” $[t(89) = 4.20, p = .001]$ and “kind” $[t(89) = 3.62, p = .001]$ were significant.

Table 2. Regression coefficients of mate characteristics predicting regret involving a romantic relationship (Study 2) conducted separately by sex and type of encounter (Action vs. Inaction)

|       | Action B |       |       | Inaction B |       |       |
|-------|----------|-------|-------|------------|-------|-------|
|       | Men      | Women |       | Men        | Women |       |
| Attractive | -.49* | -.01  | Attractive | .60* | .07   |
| Wealthy    | .11    | -.24  | Wealthy   | -.05 | .47*  |
| Stingy     | -.09   | .25*  | Stingy    | -.06 | .05   |
| Honest     | -.33*  | -.10  | Honest    | -.32* | .05   |
| Kind       | -.28*  | -.33* | Kind      | .28  | .52*  |
| Funny      | .08    | -.06  | Funny     | -.11 | .02   |

Note: * $p < .05$

Discussion

The primary purpose of the study was to test for sex differences in the mate qualities that predict regret. Consistent with expectations, mate attractiveness accounted for a significant amount of variance in regret among men for both sexual encounters and romantic relationships. This held true for both action and inaction regrets. Thus, the more attractive the woman, the less regret our male participants reported over having engaged romantically or sexually with her and the more regret they reported over having missed out on an opportunity to have engaged romantically or sexually. Notably, mate attractiveness was the only trait that significantly and consistently predicted regret among men in all four types of romantic/sexual scenarios. In contrast, mate attractiveness did not significantly predict regret among our female participants for any of the four types of romantic/sexual scenarios.

The pattern of findings for our female participants was only moderately consistent with predictions. Our predictions for women largely held up in the romantic relationship survey. Among our female participants only, mate wealth (in missed relationship opportunities and, to a marginal extent, in relationships) and mate stinginess (in relationships) was related to regret. Contrary to expectations, stinginess was not associated
with regret among women in the inaction context. Perhaps stinginess is hard to assess outside of an actual relationship.

Neither perceived mate wealth nor perceived mate stinginess accounted for a significant amount of variance in regret involving casual sex among women. Mate resources are likely less important in very short term mating situations in which continued investment is generally unlikely. In addition, whereas a mate’s physical attractiveness may be readily and immediately apparent in a casual sex scenario, a mate’s wealth or stinginess is generally not. Lastly, when it came to inaction, women reported little regret, very possibly resulting in a floor effect.

The only quality that predicted regret in women in the sexual context was honesty in sexual action encounters, such that women who rated their mates as less honest reported relatively greater regret over having engaged in casual sex. We believe this may have resulted from dissatisfaction with the limited nature of the encounter coupled with the belief that her mate may have deceived her about the nature of the encounter. Researchers have identified forms of deception that are used to achieve the goals of one sex at the expense of the other (Haselton, Buss, Oubaid, and Angleitner, 2005). One of the most robust forms of deception identified in this research is that of men deceiving women about the depth of their feelings or magnitude of commitment in order to gain sexual access. Believing that one has fallen prey to such a deception may have been a contributing factor in women's regret in such situations. Although it is important not to read much out of marginal findings, we briefly note here that the tendency for men to regret sexual inaction less when the woman in question was perceived as kind may tie into this as well. There are certainly many reasons a man may have little regret about passing up an opportunity for a one-night stand. One reason may be the belief that having a one-night stand may not be in the best interest of the woman involved. This concern may weigh more heavily when the woman in question is believed to be kind.

As expected, men and women differed in the type of regret (action vs. inaction) they experienced with respect to both casual sex and romantic relationships. We discuss these findings in the general discussion.

Study 3

Overview

Both study 2 and (to some extent) study 1 found that partner characteristics predicted relationship regret in ways consistent with known mate preferences. It is our view that the mate qualities influenced the intensity of regret experienced among our participants. One could argue, however, that the causal direction between partner characteristics and regret runs in the opposite direction; that regret experienced after a sexual or romantic encounter distorts or colors one’s perceptions of one’s partner. The purpose of our third study was to conceptually replicate the findings of study 1 and 2 by conducting an experiment. Converging results from different methods would provide greater confidence in our findings and allow for stronger causal conclusions about the impact of mate characteristics on regret. In this third study, participants were asked to rate how regretful they would feel if they were the main character in a hypothetical scenario.
that described a person either partaking in or passing up the opportunity for casual sex or a romantic relationship with someone who varied in terms of physical attractiveness and resource potential.

**Materials and Methods**

**Participants**

Participants were 201 students (100 male) enrolled in an introductory psychology course at Southeastern Louisiana University who received partial course credit for participating. Eleven of our participants (eight female and three male) reported that they were either homosexual or bisexual and were thus not included in our data analysis. The mean age of the participants was 20.37 years. Our male and female participants did not differ significantly in age, $t(199) = 1.23, p = .22$.

**Design**

The experiment was a 2 (sex of participant) X 2 (type of relationship; casual sex or romantic) X 2 (type of situation; action vs. inaction) X 2 (mate characteristic; resource potential vs. attractive) between subject factorial design.

**Materials**

_Hypothetical scenarios._ Sixteen scenarios were created corresponding to the 16 cells resulting from crossing the four factors. The instructions for all scenarios read as follows: “The following reports a hypothetical situation that may or may not be similar to something that might happen to you. Please put yourself in the position of the main character, (described as ‘you’), as you read the scenario.” All scenarios were between 224 and 234 words in length and began by stating that the main character was single. The male and female versions differed only in terms of the name of the love/sex interest and relevant pronouns.

The scenarios that presented the casual sexual encounter involved the main character going to go eat at a local bar and grill with his or her friend. At the bar and grill, the main character meets a woman/man named Ashley/Mike. “The two of you become engrossed in conversation, you realize you have quite a bit in common such as that you are both college students. You have a good time chatting and laughing with one another.” As the establishment begins to close down, Ashley/Mike asks if you would like to finish the conversation at her/his apartment. The main character agrees. The ending of this scenario depends upon the action/inaction factor. In the action versions, the scenario ends with: “once you get to the apartment one thing eventually leads to another and the two of you have sex. The next morning, you wake up in Ashley/Mike's bed. After a brief conversion with Ashley/Mike, you leave her/his apartment. You never see Ashley/Mike again.” In the inaction versions, the scenario ends with: “Once at Ashley/Mike's home it becomes apparent Ashley/Mike would like to have sex. You tell her/him you are not interested and leave her/his apartment. You never see Ashley/Mike again.”

The scenarios that presented the romantic relationship involved the main character meeting a woman/man named Ashley/Mike in class. “One day in class, a woman/man
strikes up a conversation with you. After talking for a while you realize you have quite a bit in common with one another and end up talking regularly before class for the remainder of the semester.” Later the scenario reads that “Ashley/Mike seems interested in you. On the last day of class, Ashley/Mike hands you her/his phone number and asks that you call her/him if you are interested in going out sometime.” It further states that “from previous conversations, you know s/he is not interested in any sort of casual or purely sexual relationship.” In the action versions, the scenario ends with: “You end up calling her/him and in time the two of you begin to date one another exclusively. The relationship lasts for about 9 months. Eventually, however, you two split and go your separate ways, and you don't see Ashley/Mike again.” In the inaction versions, the scenario ends with: “You gladly take her/his phone number but end up not calling her/him. You never see Ashley/Mike again.”

Partner characteristic was manipulated by describing the love/sex interest as having high resource potential (and average attractiveness) or as being highly attractive (and average resource potential). The description appeared midway through the scenario. We included information indicating that the love/sex interest was average with respect to the non-target trait in order to preclude participants from inferring a high value on that non-target trait which would likely result from a halo effect or implicit personality theory. In the high resource potential conditions, the love/sex interest is described as being “confident and ambitious. S/he is a business major who has a great job lined up when s/he graduates. In terms of looks, s/he is rather plain, and is of average attractiveness.” In the attractiveness conditions, the love/sex interest is described as “being good-looking and nicely built. You consider him/her to be very physically attractive. S/he doesn’t seem to have many ambitions and is not yet sure what s/he wants to do for a living.” We believe that this last sentence, when combined with the information that the love/sex interest is a college student, describes a person of fairly average resource potential for this population.

The dependent measure of regret. The exact wording of the question used to assess regret varied slightly by condition. Participants were asked to rate how much he or she would regret the sexual encounter (or passing on the encounter) described in the scenario or how much he or she would regret having been in relationship (or not pursuing the relationship, i.e., not calling Ashley/Mike) described in the scenario. Participants provided their ratings on a 1 (no regret) to 7 point scale (extreme regret).

Post-scenario survey. The purpose of the post-scenario survey was to perform a manipulation check and to collect demographic information. Participants were asked to report how Ashley/Mike was described in the scenario. Following this task, participants were asked to indicate whether they were currently in a romantic relationship, and, if so, how long they had been in the relationship, their sex, their sexual orientation, and their age.

Procedure
Experimental sessions were run in groups of a maximum of five participants. After providing brief instructions and emphasizing the anonymous nature of their responses, the experimenter distributed a scenario and accompanying regret question to each participant and told the participants to return the sheet to a communal envelope when done. Scenarios were randomly distributed except that men received a male version and women a female
version. Once everyone placed their completed responses in the envelope, the experimenter distributed the post-scenario survey. Once everyone had completed the post-scenario survey, the participants were debriefed, thanked, and excused.

**Coding participant descriptions.** In order for mate characteristics to have affected ratings of regret, participants must have both read and registered the few sentences presented in the scenario that described the partner as either physically attractive or having high resource potential. In order to identify and analyze data from only participants who showed evidence of having read and registered the critical information we had a graduate student, blind to the hypothesis and participant condition, code participants’ description of Ashley/Mike. The description was coded as adequately described if those in the resource potential condition mentioned either that the person was ambitious or some synonym of ambitious, had a job lined up, or was a business major or if those in the attractiveness condition mentioned that the person was attractive or some synonym of attractive.

**Results**

Ten of the female participants and 11 of the male participants did not adequately describe the potential mate as depicted in the scenario, and thus were dropped from the analyses. We then conducted a 2 (sex of participant) X 2 (type of relationship; casual sex or romantic) X 2 (type of regret; action vs. inaction) X 2 (partner characteristic; resource potential vs. attractiveness) ANOVA with rating of regret as the dependent variable. There was only one significant main effect, which was sex of participant, $F(1,153) = 5.58$, $p = .019$. Men reported greater regret ($M = 4.12$) than did women ($M = 3.62$). The expected two way interaction between sex of participant and type of regret was significant, $F(1,153) = 43.44$, $p = .001$. This two way interaction shows that while men reported higher levels of regret for the inaction scenarios than for action scenarios ($M = 4.84$ and $M = 3.41$, respectively), women reported higher levels of regret for the action scenarios than the inaction scenarios ($M = 4.30$ and $M = 2.95$, respectively).

This two way interaction was qualified by two significant three way interactions. First, and most importantly, it was qualified by partner characteristic. That is, there was a significant three way interaction between sex of participant, type of regret, and partner characteristic, $F(1,153) = 7.03$, $p = .009$ (See Table 3 for the mean regret ratings of the corresponding 8 cells and results of follow up simple effects analyses). Although, overall, men reported higher levels of regret in response to the inaction than action scenarios, this tendency occurred only when the love/sex interest was described as physically attractive (and average wealth potential). When men were presented with a love/sex interest who was described as only average in looks (but high in wealth potential) ratings of regret did not significantly differ between the action and inaction scenarios. Likewise, although women overall reported higher levels of regret in response to the action scenarios than the inaction scenarios, this tendency was significant only when the love/sex interest was described as merely average in wealth potential (and high in physical attractiveness). When women were presented with a partner of considerable wealth potential (and average looks) regret for action no longer significantly exceeded that of inaction. Another way to describe this interaction is to note that the sex difference in the action/inaction dichotomy occurred only
when the love/sex interest was described as high in attractiveness and average in wealth potential (i.e., described in ways assumed to be more desirable for men), as the two way interaction between participant sex and type of regret was significant in this case, $F(1,80) = 29.76, p = .001$, but was not significant when the love/sex interest was described as high in wealth potential and average in attractiveness (i.e., when the love/sex interest was described in ways assumed to be more desirable for women) $F(1,81) = 3.01, p = .08$. The crucial 3-way interaction was not qualified by a 4-way interaction with type of relationship, $F(1,153) = .80, p = .37$.

**Table 3.** Mean ratings of regret for action and inaction as a function of participant sex and partner characteristic

| Characteristic     | Action  | Inaction | Difference |
|--------------------|---------|----------|------------|
|                    | $M$     | $N$      | $M$        | $N$      |           |
| Men                |         |          |            |          |           |
| Wealth Potential   | 3.88    | 21       | 4.74       | 21       | -0.86     |
| Attractive         | 2.93    | 22       | 4.93       | 22       | -2.00*    |
| Women              |         |          |            |          |           |
| Wealth Potential   | 3.85    | 20       | 3.04       | 23       | 0.81      |
| Attractive         | 4.75    | 20       | 2.85       | 20       | 1.90*     |

*Note:* Values represent mean ratings of regret on a scale from 1 (no regret) to 7 (a great deal of regret). Difference values appearing with an asterisk are significant at $p < .05$

A three way interaction between sex of participant, type of regret, and type of relationship, $F(1,153) = 41.66, p = .001$, was also significant. Table 4 reports the relevant mean regret ratings. Simple effect analyses revealed that men reported higher levels of inaction regret than action regret regardless of whether the scenario depicted a romantic relationship or a purely sexual encounter. In contrast, women’s regret depended upon type of relationship portrayed, as indicated by a significant 2-way interaction between type of regret and type of relationship in an ANOVA using female data only, $F(1,79) = 129.59, p = .001$. Simple effect analyses revealed that when presented with the casual sex scenario, women reported much higher levels of regret for action than inaction. When presented with the romantic relationship scenario, however, women reported higher levels of regret for inaction than action.

There was one other significant effect, a two way interaction between type of regret and type of relationship, $F(1,153) = 75.60, p < .001$, such that participants presented with the casual sex scenario reported greater regret for action than inaction ($M = 4.93$ and $M = 3.14$, respectively), while those presented with a romantic relationship scenario reported greater regret for inaction than action ($M = 4.65$ and $M = 2.78$, respectively).
Table 4. Mean ratings of regret for action and inaction as a function of participant sex and type of relationship

| Relationship Type | Action | Inaction | Difference |
|-------------------|--------|----------|------------|
|                   | $M$    | $N$      | $M$        | $N$        |          |
| Men               |        |          |            |            |          |
| Sexual            | 3.77   | 23       | 4.72       | 23         | -0.95    |
| Romantic          | 3.05   | 20       | 4.95       | 20         | -1.90*   |
| Women             |        |          |            |            |          |
| Sexual            | 6.10   | 20       | 1.55       | 20         | 4.55*    |
| Romantic          | 2.50   | 20       | 4.34       | 23         | -1.84*   |

Note: Values represent mean ratings of regret on a scale from 1 (no regret) to 7 (a great deal of regret). Difference values appearing with an asterisk are significant at $p < .05$

Discussion

The purpose of the experiment was to lend support to the idea that regret in sexual and romantic domains is affected by mate characteristics in ways that coincide with mate preferences. Our results are as predicted. Men reported relatively greater regret in response to a scenario in which they imagined passing up the opportunity for a sexual or romantic relationship (compared to imagining having engaged in one), but only when the love/sex interest was described as attractive (and average in wealth potential). When the love/sex interest was described as average looking (and high in wealth potential), men no longer disproportionately reported regret in response to failing to pursue over partaking in the sexual/romantic relationship.

Overall, women reported greater regret in response to imagining engaging in a sexual or romantic relationship than in response to imagining passing on the opportunity. However, again, this tendency depended upon the particular characteristics possessed by the romantic/sex interest. The pattern held when the love/sex interest was described as average in wealth potential (and high in attractiveness). When the love/sex interest was described as high in resources (and average attractiveness), women no longer disproportionately imagined regretting partaking in the sexual/romantic relationship. This is exactly the pattern one would expect if attractiveness was more highly valued by men and wealth potential more highly valued among women.

Curiously, the pattern above did not vary significantly by type of relationship. It seems reasonable to expect that the relative importance of mate characteristics might differ somewhat depending on the nature of the relationship. That it did not in this experiment may in part be due to the relatively short term nature of the romantic relationship we presented in our study. Perhaps the two characteristics would differentially affect regret if we had included scenarios that involved a genuinely long term relationship such as marriage.

One limitation of our experiment involves the manner by which we manipulated mate characteristic. In our experiment the two target characteristics (wealth and...
attractiveness) were pitted against one another. High in terms of one characteristic was paired with average of the other, and vice versa. One could argue the differences in the ratings found in the study was driven less by attraction towards the target characteristic and more by an aversion to the non-target characteristic. We think that unlikely and note that even if aversion played a role it did so in way consistent with mate preferences. However, future research should disentangle the two target characteristics in order to provide a clearer picture of the mechanisms underlying these findings.

General Discussion

The findings reported here are largely consistent with that of previous research showing that degree of regret experienced by men and women in romantic and sexual domains differs according to whether the regret was one of action (regret over having engaged in a relationship or sexual encounter) or inaction (regret over having passed up an opportunity to engage in a relationship or sexual encounter), with men tending to regret inaction more than women (Roese et al., 2006).

When asked about a previous romantic experience (study 2), men reported greater regret over failures to pursue a relationship (inaction) than having had one (action), while women’s ratings for these two (action vs. inaction) were similar. This pattern mirrors the findings reported by Roese et al. (2006, studies 1 and 2). Men in their study disproportionately reported inaction regrets while women reported the two types of regrets with equal frequency. This similarity in findings emerged despite considerable differences in the way regret was assessed in these the two investigations. Participants in the present study were asked to think about their most recent romantic relationship or failure to pursue a romantic relationship. Regret was then measured along a continuum. In contrast, Roese et al. (2006) asked participants to identify romantic events that caused them regret. Participants’ descriptions were then categorized as action or inaction and their relative proportions compared. Thus, the similar pattern emerged whether the romantic events in question involved highly variable levels of regret or were, by definition, regretful.

Sex differences in the action/inaction dichotomy were more pronounced in the context of casual sexual experiences. Women in our studies reported much higher levels of regret over having had a one-night stand than over passing one up (either in real-life or in response to a scenario). In contrast, men reported similar levels of action and inaction regret (for a real-life one-night stand encounter) or reported greater regret for inaction than action (in response to a scenario featuring a one-night stand). Men and women reported similar levels of regret, however, in response scenarios featuring romantic relationships (study three), with both reporting more regret for inaction than action. Sharper sex differences in the sexual domain is once again consistent with the findings reported by Roese et al. (2006, study 3) who found greater sex differences in the sexual compared to nonsexual components of previous relationships. Theoretically, that sex differences were stronger in the context of casual sex is not surprising as men and women’s sexual strategies are thought to diverge most in this context (Buss and Schmitt, 1993).

Across our studies, the greatest regret was reported by women in reference to engaging in casual sex. This is consistent with recent research showing that a substantial
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The proportion of women (but few men) report an array of negative emotions following a one-night stand (Campbell, 2008; Eshbaugh and Gute, 2008; Grello, Welsh, and Harper, 2006). Together these findings may suggest there remain considerable sex differences with respect to the psychological consequences of casual sex, despite recent advances (e.g., reliable birth control) having mostly leveled the playing field with respect to the physical consequences.

The primary purpose of the current research was to examine whether regret in romantic and sexual domains varies as a function of mate characteristics in ways consistent with sex differences in mate preferences. The results of our three studies largely, although not entirely, confirm our hypotheses. In all three studies, men’s regret (both action and inaction) was related to the perceived attractiveness of his mate or potential mate. This held true for actual relationships and sexual encounters (study 2 and 1 respectively) and was apparent in our experimental study as well (study 3), where disproportionate regret for inaction was more pronounced for physically attractive mates.

In contrast to our male participants, females’ level of regret in romantic and sexual relationships was unrelated to mate attractiveness. As expected, mate wealth and stinginess was related to regret for women, although the relationships were not as strong or consistent as was the case of mate attractiveness for men. For previous sexual encounters (study 1), neither of these characteristics was significantly related to regret. These characteristics did, however, significantly predict regret in former romantic relationships (study 2). The stingier the mate was rated, the greater the reported regret over having had that romantic relationship, and the wealthier the potential mate, the more regret the women reported over having failed to pursue a romantic relationship. The importance of mate resources to women’s regret was also apparent in our experimental study (study 3) where disproportionate regret for action in response to a scenario was less pronounced for mates high in resource potential.

Taken together these findings conform quite well to our predictions. It is important to note, however, that participants in all three studies were, for the most part, young adults. The sex differences found in these studies may not hold in older and more diverse samples. For instance, the importance of the mate characteristics wealth and attractiveness may become less sex differentiated as people get older, and thus the relationship between mate characteristics and regret may become less sex differentiated as well. Perhaps the largest limitation of our study is the potential for demand characteristics and social desirability to have impacted responding. Sexual behavior in particular is a socially sensitive topic, and collecting data in a classroom setting (as in studies 1 and 2) may have made salient sex-typed societal expectations. We can’t deny the possible influence of such factors. We note, however, that in studies 1 and 2 our sample consisted only of those individuals who admitted to the stated sexual or romantic experience. It seems likely the participants most prone to these biases would have opted out of completing the survey. In addition, we took several measures to reduce biases in responding (e.g., anonymous responding, a between subject design, trait ratings collected following regret rating).

Although the mate characteristics of wealth and stinginess were related to regret for women, the relationships were both fewer and weaker than was the case of mate attractiveness for men. This is in line with several previous studies indicating that the
importance of mate attractiveness in men’s preferences is more consistent across cultures and seemingly less amendable to societal factors than is women’s preferences for men with resources (Eagly and Wood, 1999; Kasser and Sharma, 1999). Perhaps the importance of mate resources to women’s mate preferences (and perhaps to women’s reproductive fitness) has been overstated. However, it is also likely that the impact of mate resources may be weaker among female college students than among the general populations. Most male college students have few resources and current status in regard to resources is not a good predictor of later status. In addition, mate wealth and stinginess may have yielded weak associations in comparison to mate attractiveness because such factors may be more difficult to ascertain and be less salient than physical attractiveness.

The literature on mate preferences has often been criticized on the grounds that its findings are based on paradigms in which participants list their ideal mate preferences or examine vignettes and photographs of strangers (e.g., Dickermann, 1989; Eastwick and Finkel, 2008). Such methods, it has been argued, may not reveal preferences that occur in real relationships. In the present research, two of the three studies examined ratings derived from actual interpersonal experiences and found that the level of regret coinciding with mate preferences were often sex differentiated in the expected manner. In addition, participants in the current studies were never directly asked about mate preferences, and yet mate characteristics were implicated in expected ways. By providing some (albeit indirect) evidence of sex differences in mate preferences in the context of real relationships and asked in a nontransparent manner, these studies serve to further bolster confidence in the pattern of sex differences identified in previous research.

We maintain that the sex differences discovered here, like those initially found by Roese et al. (2006), may be understood by viewing such regret as the result of engaging in behaviors that run counter to evolved sexual strategies. Men may disproportionately regret neglecting to pursue romantic opportunities because failing to pursue such opportunities has historically hindered reproductive success, while women may disproportionately regret action (at least for purely sexual aspects of relationships) because of the greater costs associated with action than inaction for women. Likewise, men may regret missing out on romantic opportunities more (and regret romantic entanglements less) when the mate in question is attractive because, historically, mating with such women enhanced men’s reproductive success. In contrast, women may regret romantic entanglements less (and regret passing up romantic opportunities more) when the mate in question has resources because, historically, mating with such men enhanced reproductive success. Thus, the regret we feel may not only be a product of our own personal past experiences, but also a product of humanity’s past, reflecting lessons learned and passed down by our ancestors.

The sex differences reported here may also be explained by the differences in justifications and rationalizations that men and women may have at their disposal in sexual and romantic domains. Previous research has shown that regret occurs more frequently in areas that allow for free choice (Roese and Summerville, 2005), and is more keenly felt when actions are unconstrained by outside forces (Cooper and Fazio, 1984) and are counter-normative (Zeelenberg, van den Bos, van Dijk, and Pieters, 2002). Men may experience less sexual regret following action than women because they may feel they have less choice over such actions than do women (“that’s what men do”). This may be
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particularly true when the mate is attractive (“how could I say no”). Likewise, women may regret sexual inaction less than men do because of greater constraints on sexual behavior (e.g., greater reputational concerns, greater physical risks). These factors may wield some influence in romantic relationships as well, with women and men being differentially able to justify partaking and passing up relationships based on the characteristics of the mate or potential mate.

Whether one favors distal or proximal explanations for these sex differences, the consequence of such sex differences in regret are the same. Regret, although unpleasant to experience, serves an important purpose; it pushes people toward corrective action (Cosmides and Tooby, 2000; Landman, 1993; Plutchik, 1980; Saffrey, Summerville and Roese, 2008; Zeelenberg, 1999). In the romantic realm, what causes regret depends on one’s sex. The current findings reveal just how tailored such regret may be, functioning to nudge men and women to seek out and to avoid potential mates in accordance to who is (or who has been) most reproductively beneficial.

Received 28 January 2012; Revision submitted 27 April 2012; Accepted 26 June 2012

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