

Original Article

Husband's Esteem Predicts His Mate Retention Tactics

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Abstract: Men sometimes enact mate retention tactics to thwart a partner's infidelity or prevent their defection from the relationship. These tactics include low-risk acts that render the current relationship more attractive by bestowing benefits on the woman, as well as cost-inflicting acts that render defection from the relationship risky or dangerous for her. Previous research has linked men's mate retention behavior with men's mate value (value as a current or potential partner) using women's reports. The current research addresses limitations of that research using self-reports and cross-spousal reports from 107 married couples concerning their self-esteem and their esteem for their partner. The results indicate that the level of esteem that wives have for their husbands is positively associated with their perception of their husband's use of positive inducements and negatively associated with their husband's self-reported use of cost-inflicting mate retention behaviors (i.e., Direct Guarding, Intersexual Negative Inducements, and Intrasexual Negative Inducements). The level of self-esteem reported by men was negatively associated with their self-reported direct guarding behavior. Discussion explores the possibility that esteem—both self-esteem and esteem from one's partner—functions as an internal gauge of relative mate value.

Keywords: self-esteem, mate retention, evolutionary psychology, sexual conflict

Introduction

Over human evolutionary history, men whose partners were sexually unfaithful or who defected from the relationship altogether experienced reproductive costs (Buss, 1988; Buss and Shackelford, 1997; Daly and Wilson, 1993). Men whose partners were sexually unfaithful risked investing in offspring sired by a rival as well as losing the investment of their partner, whose maternal effort could be diverted away from his own offspring and toward a rival's offspring. Men whose partners defected from the relationship suffered multiple costs, including the loss of a valuable reproductive resource, a rival's gain of that resource, and replacement costs incurred to attract an alternative mate (Buss, 1988; Buss and Shackelford, 1997; Daly and Wilson, 1993). Because of these selection pressures, men may have evolved psychological mechanisms that motivate the performance of "mate retention" behaviors (Buss, 1988; Buss and Shackelford, 1997). These behaviors may decrease the likelihood of a woman's temporary or permanent relationship defection by manipulating her perceptions of alternatives such that she perceives those options to be unattractive or unattainable. Further, these mate retention behaviors can change the perceptions that rivals have of one's own mate, dissuade potential rivals through displays of resources and ornamentation, and can involve direct threats to rivals (Buss, 1988, 2003; Buss and Shackelford, 1997).

Mate retention behaviors

Men's mate retention behaviors, and the effects they have on women, are diverse (Buss, 1988; Buss and Shackelford, 1997). The current study expands on a line of research that distinguishes two broad categories of men's mate retention: benefit-provisioning mate retention and cost-inflicting mate retention (Buss, 1998; Buss and Shackelford, 1997; McKibbin et al., 2007; Miner, Shackelford, and Starratt, 2009; Miner, Starratt, and Shackelford, 2009). Benefit-provisioning mate retention is characterized by the investment of time, resources, and effort to maintain exclusive sexual access to one's partner by making her infidelity and defection less attractive than commitment. That is, these tactics usually involve behaviors such as bestowing gifts on the partner and complimenting the partner, making the relationship more positive and potentially boosting the partner's self-esteem. This is a low-risk mate retention method because it has a relatively low probability of having its intended effects reversed, whereby the female becomes more likely to be unfaithful (Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009). Conversely, cost-inflicting mate retention is characterized by abuse, intrasexual and intersexual posturing, manipulation, and the monopolization of time, rendering attempts to defect costly and dangerous to one's partner (Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009). Although demanding fewer resources, these behaviors are riskier than benefit-provisioning mate retention because the partner may become more likely to be unfaithful than if these higher-risk behaviors were not deployed (Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009). That is, these high-risk mate retention behaviors may be perceived differently by the partner such that they feel threatened and may, in turn, become more likely to defect

from the relationship. Both tactics involve a tradeoff between the investment costs of performing these mate retention behaviors and the risk of having one's partner defect: Benefit-provisioning represents a high-cost, low-risk strategy whereas cost-infliction is a low-cost, high-risk strategy.

Men perform these diverse mate retention behaviors in specific circumstances, allocating more effort to mate retention when the costs of a partner being unfaithful or permanently defecting from the relationship are especially high or when these events are perceived to be particularly likely (Buss and Shackelford, 1997; Goetz et al., 2005; Starratt, Shackelford, Goetz, and McKibbin, 2007). Losing a youthful or more attractive partner may be more costly to men than losing an older or less attractive partner because of the difficulty of replacing a more reproductively valuable partner (Buss and Shackelford, 1997; Trivers, 1972). Additionally, more attractive partners have a greater likelihood of finding opportunities for infidelity, as they are found more desirable by other males (Buss and Shackelford, 1997). For these reasons, men mated to younger, more attractive women allocate more effort to mate retention than do men mated to older, less attractive women (Buss and Shackelford, 1997). Men also allocate more effort to mate retention when they perceive that their partner is more likely to be unfaithful (Buss and Shackelford, 1997; Goetz et al., 2005; Starratt et al., 2007).

Mate value

Men and women may use assessments of mate value to gauge the likelihood and consequent costs of a partner's infidelity or outright relationship defection (Buss and Shackelford, 1997). Mate value reflects the extent to which a person possesses the characteristics desired by a current or potential partner. Mate value references the degree to which choosing and retaining a particular mate would have historically contributed to an individual's reproductive success (Sugiyama, 2005). That is, individuals with higher mate values possess a number of traits that are indicative of good health (e.g., facial and bodily symmetry, optimal waist-to-hip and shoulder-to-hip ratio, clear skin) and willingness to invest (e.g., friendly disposition, agreeable nature). Although there is overlap in the characteristics valued by men and women in a mate, there are several differences (Buss, 1989, 2003). For example, men from a wide array of cultures place more value on characteristics such as youthfulness and physical attractiveness in a long-term partner, whereas women place more value on access to resources (i.e., ability to provide the resources necessary to invest in the partner and provide for any potential offspring) in a long-term partner (Buss, 1989, 2003; Kenrick and Keefe, 1992).

Although men's effort allocated to mate retention is positively associated with his partner's mate value (Buss, 1989, 2003), recent research indicates that men's mate retention behavior is better predicted by his *own* mate value than by his partner's mate value (Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009), or his partner's reproductive viability (i.e., fertility; Pillsworth and Haselton, 2006). Miner, Shackelford, et al. (2009) and Miner, Starratt, et al. (2009) propose that women mated to men of lower mate value may be more likely to be sexually unfaithful or to defect altogether from a relationship than are women mated to men of higher mate value.

Miner, Shackelford, et al. (2009) and Miner, Starratt, et al. (2009) speculate on two possible consequences of this increased likelihood of relationship defection and infidelity.

First, men of lower mate value may need to perform more mate retention behaviors than men of higher mate value to address their partner's increased likelihood of infidelity. Second, men of lower mate value may more often lack the necessary resources (money, time, etc.) to perform sufficient benefit-provisioning behaviors to retain their partners. Men in this circumstance may perceive no alternative to practicing cost-inflicting mate retention strategies (e.g., derogating the partner). Research has yet to distinguish between these two possibilities, and both possibilities are compatible with the results of previous research suggesting that men of lower mate value allocate more effort to cost-inflicting mate retention (Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009) and less effort to benefit-provisioning mate retention than do men of higher mate value (Miner, Starratt, et al., 2009). However, a majority of the previous research is limited by reliance on women's reports of their own and their partner's mate value and behaviors, as well as by reports provided by participants in non-marital relationships, with only some studies considering both female and male reports (e.g., Kaighobadi, Starratt, Shackelford, and Popp, 2008). Previous research indicates that non-marital relationships are less stable or enduring than marital relationships (Bennett, Blanc, and Bloom, 1988; Buss, 2003), which may lead to men in non-marital relationships performing more mate retention behaviors than men in marital relationships.

Measurement of mate value

Measuring mate value has proven to be challenging. Some researchers have used interviewers to evaluate the overall mate value of individuals (e.g., Buss and Shackelford, 1997). Others have used self-reports of personal mating success (e.g., Lalumière, Chalmers, Quinsey, and Seto, 1996). Still others have hypothesized that self-esteem has a status-tracking property that monitors, among other things, an individual's mate value (Kirkpatrick and Ellis, 2001, 2004). This idea is referred to as the "sociometer model" of self-esteem and was developed by Leary and his colleagues (Leary and Downs, 1995). The sociometer model proposes that self-esteem is an adaptation that allows individuals to monitor the degree to which they are valued by others. From this perspective, self-esteem is considered to be analogous to a gauge that alerts the individual to gains or losses in his or her value (which are accompanied by corresponding increases or decreases in self-esteem). An individual's level of self-esteem serves as an indicator of his or her current mate value in much the same way that the fuel gauge on a car provides information concerning how much fuel remains in the tank. Given that previous studies support this proposed connection between self-esteem and mate value (e.g., Brase and Guy, 2004), we used self-esteem as an indicator of mate value in the present study.

The current research

In the current research, we address the limitations of previous research by securing self-reports *and* partner-reports of esteem (i.e., self-esteem and esteem for one's spouse), as well as reports of husbands' mate retention behaviors from *both* members of married couples. Obtaining reports from two separate data sources—even though not entirely independent of each other—circumvents, at least to some degree, the limitations and possible biases associated with a single data source. We expected to demonstrate that each spouse's esteem would predict husband's effort allocated to mate retention. In addition, we

extend the research of Miner, Starratt, et al. (2009) and Miner, Shackelford, et al. (2009) by conducting and reporting analyses using combinations of self-reports and spouse-reports provided by husbands and their wives. A similar approach was taken by Kaighobadi et al. (2008), where reports were obtained from both women and men. However, these individuals were not in a relationship together (i.e., the men and women sampled were not partners). Therefore, the current research offers a valuable addition, as it will explore these relationships in couples who are married.

The first set of analyses was intended to replicate and extend results reported by Miner, Starratt, et al. (2009) and Miner, Shackelford, et al. (2009). We intended to replicate previous results using wives' reports of their own self-esteem and esteem for their husbands to predict wives' reports of their husbands' mate retention behaviors. We hypothesize that a *wife's* esteem for her husband will predict the *wife's* reports of her husband's mate retention behaviors better than the *wife's* self-esteem (Hypothesis 1).

Without men's reports, the results of previous research cannot address the possibility that men's mate retention behaviors are related to their partner's esteem for him such that *each* partner's reports of their esteem for their spouse are related to men's mate retention behaviors. That is, the mate retention behaviors that a man performs may influence the evaluation that both partners have of the relationship and, in turn, the esteem that they hold for each other. If this were the case, we would expect to find that husbands' esteem for their wives, in addition to their own mate value, predicts husbands' reports of their own mate retention behaviors. We intend to rule out this possibility by performing a second set of analyses that use husbands' reports of their self-esteem and their esteem for their wives to predict husbands' reports of their own mate retention behaviors. We hypothesize that a *husband's* self-esteem will predict the *husband's* reports of his own mate retention behaviors better than the *husband's* esteem for his wife (Hypothesis 2).

The results of previous research also cannot address the possibility that the observed relationship between esteem and men's mate retention behaviors might be attributable to the reliance on women's self-esteem, their esteem for their husbands, and their perception of their partner's mate retention behaviors. In the current research, we conducted a third set of analyses on specific combinations of husbands' reports and wives' reports. Because women may not be aware of some of the mate retention behaviors that their partners perform, men's reports of their own mate retention behaviors may be more accurate than women's partner reports (see Shackelford, Goetz, Buss, Euler, and Hoier, 2005). Social desirability may influence responses as well (Sugarman and Hotaling, 1997). We therefore used husbands' reports of their own mate retention behaviors to test the remaining hypotheses: A *Husband's* self-esteem will predict the *husband's* reports of his own mate retention behaviors better than his *wife's* self-esteem (Hypothesis 3); a *wife's* esteem for her husband will predict the *husband's* reports of his own mate retention behaviors better than the *husband's* esteem for his wife (Hypothesis 4); and a *wife's* esteem for her husband will predict the *husband's* reports of his own mate retention behaviors better than the *wife's* self-esteem (Hypothesis 5). All five hypotheses propose that it is esteem for the husband (wife's esteem for him and his self-esteem) acting as a proxy for his mate value that best predicts mate retention behaviors, rather than esteem for the wife.

Materials and Methods

Participants

Both members of 107 heterosexual married couples were assessed during the first year of marriage (see Buss, 1991). All couples who had been issued marriage licenses within a large county in the Midwestern United States were contacted by letter and invited to participate. The mean age of husbands was 26.6 years ($SD = 3.7$) and the mean age of wives was 25.6 years ($SD = 4.0$). Further information about this sample can be found in Buss (1991) and Buss (1992).

Procedures

First, couples received a battery of instruments via postal mail to be completed at home, including an instrument securing husbands' reports of their own mate retention behaviors. Then, about one week later, couples attended a testing session at a local university. During this session, participants completed instruments that secured assessments of their own self-esteem and their esteem for their spouse. Wives also completed an instrument that secured assessments of their husband's mate retention behaviors (see Materials). Participants completed instruments in separate rooms from their partners. Participants were compensated US\$25 (per couple) for their participation.

Materials

Self-esteem and esteem for spouse. Participants completed the California Self-Evaluation Scale (CSES; Phinney and Gough, 1984) to assess their self-esteem and the California Observer-Evaluation Scale (COES; Phinney and Gough, 1984) to assess their esteem for their spouse. Each scale includes 20 items that assess several dimensions of esteem or valuation. For each item, the participant rated themselves or their spouse on a 9-point scale, with varying anchors depending on the attribute, with 1 = extremely low esteem or valuation on the attribute under consideration and 9 = extremely high esteem or valuation on the attribute under consideration. The 20 items in each version assess four dimensions of esteem: global esteem, physical esteem, social esteem, and intellectual esteem. These four dimensions correspond with characteristics that men and women value in potential partners (e.g., agreeableness: Botwin, Buss, and Shackelford, 1997; attractiveness: Buss, 1989; Li, Bailey, Kenrick, and Linsenmeier, 2002; intelligence: Li et al., 2002). Although the two scales were designed originally to measure esteem, they provide an indirect measure of own mate value and spouse's mate value in the current study.

To control for sex differences in sources of men's mate value and women's mate value (e.g., physical appearance vs. ability to acquire resources; see Buss, 1989, 2003), we used responses to all 20 items to construct a global measure of self-esteem that is not sex-dependent; the four dimensions included in the self-esteem scales correspond to characteristics that both men and women value in relationships. Previous research has established the reliability, validity, and utility of these scales as indirect assessments of mate value (Shackelford, 2001; Shackelford and Buss, 1997). Wives' ratings of their own self-esteem and husbands' ratings of their own self-esteem were calculated by averaging responses to the 20 items from the CSES. Alpha reliabilities were .94 and .92, respectively.

Husbands' esteem for their wives and wives' esteem for their husbands were calculated by averaging responses to the 20 items from the COES. Alpha reliabilities were .93 and .92, respectively.

Self-reported and perceived mate retention of the husband. Participants also completed the Mate Retention Inventory (MRI; Buss 1988; Buss and Shackelford, 1997) to assess men's mate retention behaviors. Husbands provided reports of their own mate retention behaviors, whereas women provided reports of their husband's mate retention behaviors. We chose to focus on the mate retention behaviors of husbands as these are likely to be more sensitive and nuanced than the mate retention behaviors of wives. This is due to the risk of parental uncertainty faced by males. That is, men do not carry the child to term, and thus cannot be sure that the child is their own genetic offspring and are at risk of cuckoldry (Buss, 1988; Buss and Shackelford, 1997; Daly and Wilson, 1993). Furthermore, focusing on husbands' mate retention behavior allows us to replicate and continue the line of research developed by Miner, Starratt, et al. (2009) and Miner, Shackelford, et al. (2009). The 104-item inventory assesses mate retention behaviors along 19 tactics that are further divided into five categories: Direct Guarding (e.g., "I did not take her to the party where other males would be present"), Intersexual Negative Inducements (e.g., "He became angry when I flirted too much"), Intrasexual Negative Inducements (e.g., "He threatened to hit the guy that was making moves on me"), Positive Inducements (e.g., "I bought her an expensive gift"), and Public Signals of Possession (e.g., "He put his arm around me in front of others"). For each item, the participant indicated how often the husband had performed the behavior in the past year using scales that ranged from 0 ("Never") to 3 ("Often"). Three of the mate retention categories—Direct Guarding, Intersexual Negative Inducements, and Intrasexual Negative Inducements—are cost-inflicting categories of mate retention behaviors. The remaining two categories—Positive Inducements and Public Signals of Possession—are benefit-provisioning categories of mate retention behaviors (see McKibbin et al., 2007; Miner, Starratt, et al., 2009). A full listing of these behaviors is provided in Table 1. Previous research has established the reliability, validity, and utility of the MRI as an assessment of mate retention behaviors (Buss and Shackelford, 1997; Shackelford et al., 2005). Wives' reports of their husbands' mate retention behaviors and husbands' reports of their own mate retention behaviors were calculated by summing responses to the items included in each of the 19 tactics and then averaging the component tactic scores to obtain values for the five mate retention categories (following Buss, 1988). The alpha reliabilities for wives' reports of their husbands' mate retention behaviors and husbands' reports of their own mate retention behaviors exceeded .70 for all categories.

Results

The means, standard deviations, and intercorrelations among the target variables are provided in Table 2. Investigation of the correlation matrix reveals that each of the esteem variables is associated with various mate retention categories. More specifically, wives' esteem for their husbands is positively associated with wives' reports of Positive Inducements and negatively associated with husbands' reports of Direct Guarding and Intersexual Negative Inducements. These findings are consistent with those of Miner,

Starratt, et al. (2009) and Miner, Shackelford, et al. (2009). Furthermore, husbands' self-esteem is negatively associated with wives' reports of Direct Guarding and Intrasexual Negative Inducements, as well as with husband's reports of Direct Guarding and Intersexual Negative Inducements.

Table 1. Mate retention domains, categories, tactics, and sample items

Mate Retention Domain	Mate Retention Category	Mate Retention Tactic	Sample Item
Cost-inflicting Behaviors	Direct Guarding	Vigilance	<i>Called to make sure my partner was where she said she would be</i>
		Concealment of Mate	<i>Did not take my partner to a party where other men would be present</i>
		Monopolization of Time	<i>Insisted that my partner spend all her free time with me</i>
	Intersexual Negative Inducements	Jealousy Induction	<i>Showed interest in another woman to make my partner angry</i>
		Punish Mate's Infidelity Threat	<i>Threatened to break up if my partner ever cheated on me</i>
		Emotional Manipulation	<i>Pleaded that I could not live without my partner</i>
		Commitment Manipulation	<i>Told my partner that we needed a total commitment to each other</i>
		Derogation of Competitors	<i>Told my partner that another man was stupid</i>
	Intrasexual Negative Inducements	Derogation of Mate	<i>Told other men my partner was a pain</i>
		Intrasexual Threats	<i>Stared coldly at a man who was looking at my partner</i>
Violence Against Rivals		<i>Slapped a man who made a pass at my partner</i>	
Benefit Provisioning Behaviors	Positive Inducements	Resource Display	<i>Bought my partner an expensive gift</i>
		Sexual Inducements	<i>Performed sexual behaviors to keep my partner around</i>
		Appearance Enhancements	<i>Made myself extra attractive for my partner</i>
		Love and Care	<i>Displayed greater affection for my partner</i>
		Submission and Debasement	<i>Gave in to my partner's every wish</i>
	Public Signals of Possession	Verbal Possession Signals	<i>Bragged about my partner to other men</i>
		Physical Possession Signals	<i>Put my arm around my partner in front of others</i>
		Possessive Ornamentation	<i>Gave my partner jewelry to signify that she was taken</i>

Table 2. Intercorrelations and descriptive statistics for target variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Wife's Esteem of Husband	—													
2. Wife's Self-Esteem	.34***	—												
3. Husband's Esteem of Wife	.27**	.44***	—											
4. Husband's Self-Esteem	.50***	.44***	.39***	—										
5. Wife's Direct Guarding	-.16	-.05	-.10	-.23*	—									
6. Wife's Intersexual Negative	-.19	.00	-.06	-.14	.74***	—								
7. Wife's Intrasexual Negative	-.18	-.04	-.11	-.24*	.47***	.74***	—							
8. Wife's Positive Inducements	.30**	.31**	.29*	.18	.24*	.21*	.05	—						
9. Wife's Public Signals	.08	.12	.06	.01	.43***	.43***	.30**	.58***	—					
10. Husband's Direct Guarding	-.27**	.02	-.04	-.26*	.49***	.40***	.38**	.03	.22*	—				
11. Husband's Intersexual Negative	-.34***	-.07	-.07	-.25*	.42***	.50***	.42***	.05	.30*	.74***	—			
12. Husband's Intrasexual Negative	-.19	-.05	.09	-.11	.09	.13	.20*	.03	.13	.39***	.57***	—		
13. Husband's Positive Inducements	.04	.11	.17	.12*	.24*	.22*	.16	.42***	.36***	.43***	.46**	.23**	—	
14. Husband's Public Signals	.04	.07	.17	.05	.07	.15	.17	.26**	.43***	.44***	.52***	.40***	.65***	—
<i>M</i>	7.98	6.73	7.82	7.05	6.15	8.11	1.17	39.93	19.62	7.36	10.21	2.01	40.03	19.88
<i>SD</i>	0.65	0.91	0.55	0.67	5.37	7.60	2.21	8.24	5.97	5.77	7.12	3.33	8.09	6.37

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

We conducted two sets of analyses to test our hypotheses across each of the five mate retention strategies. More specifically, we conducted a set of five simultaneous multiple regressions for wives' perception of their husbands' mate retention behaviors and another set of five simultaneous multiple regressions for husbands' self-reported mate retention behaviors. This made for a total of 10 separate regressions, in two sets of five. In both sets of analyses, four predictors were used: wife's esteem for her husband, wife's self-esteem, husband's esteem for his wife, and husband's self-esteem. This approach allowed us to make comparisons between different aspects of esteem, as well as to investigate differences in perceived mate retention and self-reported mate retention. The results of these analyses are presented below; Table 3 presents analyses targeting wives' perceptions of their husbands' behaviors and Table 4 presents analyses targeting husbands' self-reported behaviors. We followed these regression analyses with the Williams (1959) modification of the Hotelling (1940) procedure to compare the strengths of particular associations of interest (e.g., comparing the strength of the associations that husbands' self-esteem and husbands' esteem for their wives had with mate retention behaviors).¹

Wife's perception of mate retention strategies

The analyses concerning wives' perceptions of their husbands' mate retention strategies allowed us to test Hypothesis 1 (i.e., a wife's esteem for her husband will be a better predictor of her perceptions of her husband's mate retention than her own self-esteem). To test this hypothesis, we conducted five multiple regressions using wives' esteem for their husbands, wives' self-esteem, husbands' esteem for their wives, and husbands' self-esteem to predict reports of their husbands' mate retention behaviors (see Table 3).

Table 3. Wives' perceptions of their husbands' mate retention behaviors

	Standardized beta				
	Direct Guarding ¹	Intersexual Negative Inducements ²	Intrasexual Negative Inducements ³	Positive Inducements ⁴	Public Signals of Possession ⁵
Wife's Esteem for Husband	-.05	-.11	.07	.27*	.23
Wife's Self-Esteem	.09	.01	-.18	.16	.00
Husband's Esteem for Wife	.04	.12	.18	.14	.02
Husband's Self-Esteem	-.17	.04	-.20	-.10	-.06

Note. * $p < .05$; Mate retention behaviors were assessed by the Mate Retention Inventory; Esteem was assessed by the California Self-Evaluation Scale and the California Observer Evaluation Scales (see text). Model statistics: ¹ $R^2 = .03$, $F(4,95) = .67$, $p = .62$; ² $R^2 = .02$, $F(4,95) = .50$, $p = .74$; ³ $R^2 = .07$, $F(4,95) = 1.80$, $p = .14$; ⁴ $R^2 = .16$, $F(4,95) = 4.40$, $p < .01$; ⁵ $R^2 = .04$, $F(4,95) = 1.10$, $p = .36$.

¹ We also conducted a series of simple linear regressions (available from the first author upon request) and the results were similar to the multiple regressions reported above (i.e., there is no evidence of statistical suppression). We only present the results of the multiple regression analyses in the interest of parsimony.

Individual standardized regression coefficients indicated that wives' esteem for their husbands uniquely predicted wives' reports of their husbands' use of Positive Inducements ($\beta = .27, t = 2.39, p = .02$), but wives' self-esteem did not ($\beta = .16, t = 1.41, p = .16$). However, the association that wives' esteem for their husbands had with their perception of their husbands' use of Positive Inducements was not significantly stronger than the association that wives' self-esteem had with their perception of their husbands' use of Positive Inducements ($t = 0.98, p = .83$). These results are not consistent with Hypothesis 1. Wives' esteem for their husbands was not a reliable predictor of perceptions of their husbands' mate retention behavior, nor was it a stronger predictor than wives' self-esteem.

Husband's self-reported mate retention strategies

The analyses concerning husbands' self-reported mate retention strategies allowed us to test Hypotheses 2-5. To test Hypothesis 2 (i.e., a husband's self-esteem will be a better predictor of his self-reported mate retention than his esteem for his wife), the unique predictive ability of husbands' self-esteem and their esteem for their wives were compared across the five analyses (see Table 4). Individual standardized regression coefficients indicated that husbands' self-esteem uniquely predicted husbands' reports of their use of Direct Guarding ($\beta = -.26, t = -2.20, p = .03$), but their esteem for their wives did not ($\beta = .05, t = .49, p = .63$). Furthermore, the difference in the strength of these associations was statistically significant ($t = 1.94, p = .03$). These results provide some support for Hypothesis 2 because husbands' self-esteem was a better predictor of their self-reported mate retention behaviors than their esteem for their wives. However, it is important to note that husbands' self-esteem did not predict other mate retention behaviors.

Table 4. Husbands' self-reports of their mate retention behaviors

	Standardized beta				
	Direct Guarding ¹	Intersexual Negative Inducements ²	Intraseual Negative Inducements ³	Positive Inducements ⁴	Public Signals of Possession ⁵
Wife's Esteem for Husband	-.24*	-.28*	-.26*	.00	.06
Wife's Self-Esteem	.19	.10	.06	.00	-.05
Husband's Esteem for Wife	.05	.03	-.01	.12	.10
Husband's Self-Esteem	-.26*	-.13	-.06	.08	-.03

Note. * $p < .05$; Mate retention behaviors were assessed by the Mate Retention Inventory; Esteem was assessed by the California Self-Evaluation Scale and the California Observer Evaluation Scales (see text). Model statistics: ¹ $R^2 = .13, F(4,95) = 3.52, p = .01$; ² $R^2 = .10, F(4,95) = 2.72, p = .03$; ³ $R^2 = .07, F(4,95) = 1.83, p = .13$; ⁴ $R^2 = .03, F(4,95) = .66, p = .62$; ⁵ $R^2 = .01, F(4,95) = .27, p = .90$.

To test Hypothesis 3 (i.e., a husband's self-esteem will be a better predictor of his self-reported mate retention than his wife's self-esteem), the unique predictive ability of husbands' self-esteem and wives' self-esteem were compared across the five analyses (see Table 4). Individual standardized regression coefficients indicated that husbands' self-

esteem uniquely predicted husbands' reports of Direct Guarding ($\beta = -.26, t = -2.20, p = .03$), but wives' self-esteem did not ($\beta = .19, t = 1.66, p = .10$). However, these associations did not differ in their strength ($t = 0.68, p = .25$). These results are not consistent with Hypothesis 3 because husbands' self-esteem was not a reliable predictor of their self-reported mate retention behavior, nor was it a stronger predictor than their wives' self-esteem.

To test Hypothesis 4 (i.e., a wife's esteem for her husband will be a better predictor of her husband's mate retention behavior than the husband's esteem for his wife), the unique predictive ability of wives' esteem for their husbands and husbands' esteem for their wives were compared across the five analyses (see Table 4). Individual standardized regression coefficients indicated that wives' esteem for their husbands uniquely predicted husbands' reports of their use of Direct Guarding ($\beta = -.24, t = -2.07, p = .04$), but husbands' esteem for their wives did not ($\beta = .05, t = .49, p = .63$). The difference in the strength of these associations was marginally significant ($t = 1.59, p = .06$). Wives' esteem for their husbands also uniquely predicted husbands' reports of their use of Intersexual Negative Inducements ($\beta = -.28, t = -2.41, p = .02$), but husbands' esteem for their wives did not ($\beta = .03, t = .26, p = .80$). The difference in the strength of these associations was statistically significant ($t = 2.12, p = .02$). Finally, wives' esteem for their husbands uniquely predicted husbands' reports of their use of Intrasexual Negative Inducements ($\beta = -.26, t = -2.16, p = .03$), but husbands' esteem for their wives did not ($\beta = -.01, t = -.05, p = .96$). The difference in the strength of these associations was statistically significant ($t = 2.11, p = .02$). These results provide partial support for Hypothesis 4 because wives' esteem for their husbands was a better predictor of husbands' self-reported use of cost-inflicting mate retention behaviors (i.e., Direct Guarding, Intersexual and Intrasexual Negative Inducements) than was husbands' esteem for their wives.

To test Hypothesis 5 (i.e., a wife's esteem for her husband will predict her husband's self-reported mate retention better than her self-esteem), the unique predictive ability of wives' esteem for their husbands and wives' self-esteem were compared across the five analyses (see Table 4). Individual standardized regression coefficients indicated that wives' esteem for their husbands uniquely predicted husbands' reports of their use of Direct Guarding ($\beta = -.24, t = -2.07, p = .04$), but wives' own self-esteem did not ($\beta = .19, t = 1.66, p = .10$). However, the difference in the strength of these associations was not statistically significant ($t = 0.44, p = .33$). Wives' esteem for their husbands uniquely predicted husbands' reports of their use of Intersexual Negative Inducements ($\beta = -.28, t = -2.41, p = .02$), but wives' own self-esteem did not ($\beta = .10, t = 0.86, p = .39$). The difference in the strength of these associations was marginally significant ($t = 1.60, p = .06$). Finally, wives' esteem for their husbands uniquely predicted husbands' reports of their use of Intrasexual Negative Inducements ($\beta = -.26, t = -2.16, p = .03$), but wives' own self-esteem did not ($\beta = .06, t = .51, p = .61$). The difference in the strength of these associations was statistically significant ($t = 1.77, p = .04$). These results provide partial support for Hypothesis 5 because wives' esteem for their husbands was a better predictor of their husbands' self-reported use of certain mate retention behaviors than was wives' self-esteem.

Discussion

A number of our hypotheses received at least partial support. The most consistent finding across the analyses is that wives' esteem for their husbands predicts husbands' self-reported use of cost-inflicting mate retention behaviors, primarily for Intrasexual Negative Inducements. However, these findings were only marginally significant for Direct Guarding and Intersexual Negative Inducements. These results suggest that husbands who are held in lower esteem by their wives perform more cost-inflicting mate retention behaviors than do husbands who are held in higher esteem by their wives. That is, husbands are more likely to engage in behaviors that make infidelity more costly for their wives when they are not valued by their wives. Additionally, husbands of a higher mate value may avoid employing these behaviors as they may lead to a loss of esteem from their wives. This is an important extension of previous research (e.g., Miner, Shackelford, et al., 2009; Miner, Starratt, et al., 2009) that focused on the self-esteem of the husband without considering the extent to which he is valued by his partner.

Men's cost-inflicting mate retention

The first set of analyses used self-reports and cross-spouse reports of esteem to predict how wives perceived the mate retention behaviors of their husbands. The second set of analyses addressed Hypotheses 2-5 using self-reports and cross-spouse reports of esteem to predict the self-reported mate retention behaviors of husbands. The results indicate that the level of esteem that wives have for their husbands is associated with husbands' use of Intrasexual Negative Inducements, and is marginally associated with husbands' use of Direct Guarding and Intersexual Negative Inducements. Furthermore, these associations are significantly stronger than the associations that wives' self-esteem has with these cost-inflicting mate retention strategies. In the language of sociometer theory, husbands who are perceived by their wives to be of lower mate value perform more cost-inflicting mate retention behaviors than do husbands who were perceived by their wives to be of higher mate value. This pattern is broadly consistent with the results reported by Miner, Starratt, et al. (2009) and by Miner, Shackelford, et al. (2009). In addition, the present results are consistent with those reported by Zeigler-Hill, Fulton, and McLemore (2012), who found that men with *true* low self-esteem (i.e., low levels of both explicit and implicit self-esteem) reported the highest levels of Direct Guarding and Intersexual Negative Inducements.

We note, however, that the results for the benefit-provisioning mate retention tactics from Miner, Starratt, et al. (2009) were not replicated in the current research. Specifically, we did not find a significant difference between wives' esteem for their husbands and wives' self-esteem in predicting wives' perceptions of their husbands' use of Positive Inducements, and no other significant effects emerged for the four esteem variables predicting perceived mate retention behaviors. This failure to replicate may be due to the samples used between the two studies, as well as the measures used. More specifically, the Miner, Starratt, et al. (2009) study obtained data from 235 women, which is much larger than the 50 women sampled in the current study. Therefore, failure to replicate their findings may be due to a lack of power and an inability to detect the effect. Further, the Miner, Starratt, et al. (2009) study used the Trait-Specific Dependence Inventory (Ellis,

Simpson, and Campbell, 2002) to assess mate value. Therefore, failure to replicate previous findings may be a result of the use of different measures. It should also be noted that two of the associations (i.e., those for Direct Guarding and Intersexual Negative Inducements) were only marginally significant. This marginality may be due to the nature of these mate retention behaviors. That is, these mate retention behaviors are slightly more focused on the female, and thus may not be directly related to wives' esteem for their husbands. Future research should consider this relationship in more detail.

Men's benefit-provisioning mate retention

The results linking each spouse's esteem with husbands' benefit-provisioning mate retention behaviors are less clear compared to those for cost-inflicting behaviors. In previous research (i.e., Miner, Starratt, et al., 2009; Miner, Shackelford, et al., 2009), women who reported high levels of self-esteem also reported that their partners performed more Positive Inducements than did women who reported low levels of self-esteem. In the current research, we did not identify this relationship when using wives' reports or husbands' self-reports of mate retention behaviors. Furthermore, husbands' esteem for their wives did not predict husbands' benefit-provisioning mate retention in the current research. This pattern of results suggests the possibility that the path between wives' esteem (i.e., a wife's self-esteem and her husband's esteem for her) and husband's use of Positive Inducements (i.e., both perceived and reported) may be moderated by other factors.

Although this was not assessed in the current research, one variable that may play a role in this relationship is contingent self-esteem (see Crocker and Wolfe, 2001, for a review), particularly relationship-based contingent self-esteem (Sanchez and Kwang, 2007). Due to the complimentary and submissive behaviors included in the Positive Inducements category of mate retention, performance of behaviors in this category may have a stronger effect on a woman's self-valuation than does the performance of behaviors in other categories of men's mate retention. Perhaps women's perceptions of their own mate value depend on the reassurance that their partner provides through compliments or submissive behaviors, which may elevate a woman's self-esteem. This may particularly be the case for women who base their feelings of self-worth on their romantic relationships (thus developing a form of contingent self-esteem; see Sanchez and Kwang, 2007). Additionally, the Positive Inducement category of mate retention includes behaviors such as "I complimented my partner on her appearance" and "I acted against my will to let my partner have her way." Previous research indicates that compliments are related to relationship satisfaction for both women and men, but that women are more aware of compliments given to them by their romantic partner than are men (Doohan and Manusov, 2004).

Future directions and conclusions

The current research is limited by a reliance on correlational data collected from a single time point. That is, we cannot establish the direction of causality between esteem and use of mate retention behaviors. Furthermore, our underlying process model assumes that level of esteem leads to the endorsement of certain mate retention behaviors (e.g., cost-inflicting mate retention behaviors that are used by men who are not valued). However, a reciprocal association may also emerge such that husbands using particular mate retention

behaviors—such as those that inflict costs on their wives—may contribute to the esteem that wives feel for their husbands. That is, men who use certain mate retention tactics may be more or less esteemed by their partners. This may particularly be the case for men who use cost-inflicting mate retention behaviors. Future research might address the direction of a causal relationship between the assessments of mate value and the performance of mate retention behaviors (Miner, Starratt, et al., 2009). By securing assessments across multiple time points, it would be possible to determine the temporal sequencing of esteem and mate retention behaviors. Also, laboratory studies that manipulate esteem and observe subsequent mate retention behavior would provide useful data for clarifying this connection. For example, participants could be given false feedback about their appearance (i.e., mate value) or the commitment of their partner to influence their feelings of self-worth. Additionally, the current research is limited by its reliance on the use of self-esteem as a proxy for mate value. Future research might attempt to replicate the current results using another method for capturing mate value.

It should also be noted that the current study employs a relatively modest sample size (i.e., 107 couples). Therefore, the current study may be somewhat limited in power. Future research should consider measuring these constructs in a larger sample. It should also be noted that although mate value was of primary interest in the current study, an indirect measure of this construct was used (i.e., self-esteem). As mentioned above, the measurement of mate value has been shown to be elusive, but self-esteem and esteem for partner may provide a useful first step in assessing mate value. Finally, it should be noted that we did not make any sort of statistical correction to account for the number of analyses that we conducted (e.g., a Bonferroni correction). The reason is that doing so would have made it much more difficult to detect any effects given our relatively modest sample size (Perneger, 1998).

In summary, the results of the current research extend what is known about the connection between esteem and mate retention behavior. More specifically, we found that the esteem that wives have for their husbands is a consistent predictor of his use of cost-inflicting mate retention behavior. This suggests that men who are not valued by their partners—which may signal the potential for a woman's infidelity or defection—are more likely to use high-risk mate retention behaviors that inflict costs on their wives to deter them from infidelity or defection. In other words, under the threat of infidelity, devalued men tend to employ the mate retention strategy that does not require the sacrifice of resources, and instead attempt to make defection untenable for their partner.

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