

Individual Differences in Mate Poaching: An Examination of Hormonal, Dispositional, and Behavioral Mate-Value Traits

Shafik Sunderani · Steven Arnocky · Tracy Vaillancourt

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Abstract The personality and hormonal correlates of mate poaching (attempting to steal another person's partner away) and of the target of the seducer (the mate poached) were examined in a sample 154 undergraduate university students (91 females; 63 males). Thirteen variables were modeled into two regression equations to predict and profile mate poachers and the mate poached. Findings revealed that (1) male mate poachers were better looking and had higher cortisol levels, lower levels of testosterone, and reported being higher on self-esteem, cold affect, and criminal tendencies and (2) female mate poachers and targets of mate poachers reported being more physically attractive, as did male targets of mate poachers. Sex differences in the context of mate poaching attraction as well as the characteristics of those who are successful in their attempts to lure away another person's romantic partner were discussed.

Keywords Individual differences · Mate poaching · Mate value · Sex differences

Introduction

One realm of human mating that has received little attention is the behavior of mate poaching. Mate poaching is a widespread phenomenon (Schmitt & Buss, 2001) that is found across a variety of species (Dawkins & Krebs, 1978; de Waal, 1986; Trivers, 1985) and across various cultural groups (Schmitt et al., 2004). Mate poaching directly involves two people.¹ A mate “poacher” is an individual who knowingly attempts to disrupt or terminate an existing romantic dyad with the intent of mating with one of the already-paired partners (Schmitt & Buss, 2001; Davies, Shackelford, & Hass, 2007). The mate “poached” refers to the person stolen away from their existing relationship (Schmitt & Buss, 2001).

Mate poaching can increase an individual's mating success by providing access to a mate who would not otherwise be available. Although there are clear benefits associated with mate poaching (e.g., casual sex or formation of a long-term union), such behavior is risky (Davies, Shackelford, & Hass, 2010; Schmitt & Buss, 2001). Poaching is a form of sexual competition. Thus, a poaching attempt can bring about various forms of retaliation from the individual stolen from them (i.e., the “poachee”), as well as sanction from the social group. Poaching attempts can also test the strength of a romantic dyad and lead to a wide variety of interpersonal conflict between romantic partners, including feelings of jealousy (e.g., Buss, Larsen, Westen, & Semmelroth, 1992), emotional pain, anguish, sadness, anxiety (Buunk & van Driel, 1989), infidelity (e.g., Buss & Shackelford, 1997), relationship dissolution (e.g., Gottman, 1994), intimate partner violence (e.g., Buss,

S. Sunderani · T. Vaillancourt
Department of Psychology, Neuroscience & Behaviour, McMaster University, Hamilton, ON, Canada

S. Arnocky
Department of Psychology, Nipissing University, North Bay, ON, Canada

T. Vaillancourt (✉)
Faculty of Education and School of Psychology, University of Ottawa, 145 Jean-Jacques-Lussier Private, Ottawa, ON K1N 6N5, Canada
e-mail: tracy.vaillancourt@uottawa.ca

¹ We recognize there is a third-party (the “poachee”) involved directly or indirectly in the mate poaching attraction process. Specifically, the “poachee” is defined as the individual whose mate is lured away from them (Schmitt & Buss, 2001). Details pertaining to the “poachee” are beyond the scope of the present study. We recommend future studies investigate the nature of the “poachee” in relation to the poacher-poached dynamic.

1988; Buss & Shackelford, 1997), and even homicide (Buss, 2005; Daly & Wilson, 1988). Researchers have sought to investigate the complex interplay among individuals involved in the mate poaching process. Currently, the individual differences that render some people more or less likely to succeed in the act of mate poaching are insufficiently understood. The present study attempted to answer the following two questions: (1) What individual factors characterize a successful mate poacher? (2) What individual factors characterize the target of desire to be poached away?

Schmitt and Buss's (2001) seminal work on individual differences in mate poaching showed that those who have attempted to poach someone from their existing romantic relationship tended to be lower on agreeableness, higher on extraversion, and, to a lesser extent, lower on conscientiousness. Successful mate-poaching was associated with greater physical attractiveness (especially in females) and having a proclivity towards promiscuity (unrestrained sexual disposition) in males. Other studies examining personality factors of male mate "poachers" showed an association with psychopathy (Williams, Spidel, & Paulhus, 2005), Machiavellianism, and narcissism (Jonason, Li, & Buss, 2010). Higher scores on psychopathy, Machiavellianism, and narcissism were also associated with being "poached" away (those who defected more often from their existing romantic dyad).

Targets of mate poaching (i.e., those who received frequent attempts to lure them from their existing romantic relationship) were characterized as being extraverted, open to experience, physically attractive, and uninhibited with regards to sex (Schmitt & Buss, 2001). Psychological traits of those who have been successfully poached away from their existing romantic relationship include low agreeableness, an uninhibited sexuality, and lower levels of commitment to the romantic relationship (see also Schmitt et al., 2004).

The overarching assumption in human mating research is that individuals who possess certain traits or qualities (e.g., good looks) will be more or less successful at mating (e.g., Buss & Barnes, 1986; Buss & Schmitt, 1993; Langlois et al., 2000). These traits are often termed "mate-value characteristics." Although many researchers have shown that these traits are indeed desired by the opposite sex, few have examined whether individuals who possess these qualities or traits are actually more successful in the endeavour of mating. Rhodes, Simmons, and Peters (2005) investigated whether physically attractive males and females (as measured by aggregate ratings of both facial and body attractiveness) actually had more sexual partners. Results revealed males with more masculine faces and bodies had more short-term and lifetime sexual partners whereas females with more feminine faces had more long-term relationships and became sexually active at an earlier age.

Studies on mate-value characteristics tend to focus on only a limited number of factors, such as physical attractiveness. However, it has been shown that many individual characteristics play a role in determining an individual's overall value as a mate. When

considering which qualities play a role in the various aspects of mate poaching, it is important to highlight two classes of characteristics. One is mate-value characteristics, which increase an individual's attractiveness to the opposite-sex and therefore increases his/her chances of being selected as a target for a mate poacher (e.g., being physically attractive). These same mate-value characteristics, as a result of their desirability to the opposite-sex, make an individual more likely to attract and successfully lure away a target from their existing romantic partnership. The second class of characteristics are traits that, although not necessarily desirable to the opposite sex, increase the likelihood that an individual will initiate more frequent attempts to infiltrate an existing romantic relationship (e.g., psychopathy, aggressiveness, sex drive). Physical prowess and behavioral dominance, for example, may reduce the risk of physical harm incurred by a prospective mate poacher from their target's primary partner. This may have been especially true in ancestral environments where a poacher could not rely on the police force for example for protection from an irate male who discovers the poacher interloping with his mate.

To our knowledge, no study to date has comprehensively investigated the individual differences of the mate poacher and the mate poached, while taking into account characteristics that are physical (e.g., height and weight), psychological (e.g., indirect aggression and cold affect), and physiological (e.g., testosterone and cortisol) in nature. Much of the previous research has examined the traits and qualities that characterize the individual defecting from their existing relationship to engage in a short-term sexual liaison or a more committed, long-term affair with the mate poacher (for a review, see Thompson, 1983), whereas only a few studies have investigated the traits and qualities of the mate poacher (e.g., Schmitt & Buss, 2001; Schmitt et al., 2004).

In our model, we used qualities and traits that have been shown to be important in the mate attraction process. These processes have differential effects as a function of sex; therefore, we investigated these variables in men and women separately. The qualities and traits used in the present study can be broken down into two broad classes: competition-related variables and attraction-related variables. Competition-related variables enhance the success of the potential mate poacher by usurping the opponent for the target. These include sex drive, submissiveness, criminal tendencies, erratic lifestyle, cold affect, interpersonal manipulation, and indirect aggression. These traits may provide their possessor with an impetus to seek out mates, or with the skills necessary to effectively steal another's partner. Indeed, traits associated with psychopathy have also been shown to be more pronounced in males in comparison to females. Ostensibly, the characteristics of psychopathy mobilize the individual to seek mates with minimal guilt (Jonason et al., 2010; Schmitt & Buss, 2001; Williams et al., 2005). For instance, expressing cold affect (i.e., little care or compassion for others) may help to quell any moral objections to poaching or any feelings of empathy for the intra-sexual rival whose mate one is attempting to poach. Testosterone

and cortisol levels may also enhance a prospective mate poacher's ability to compete. These physiological characteristics are not stable traits because they rise and fall throughout the day and are very sensitive to environmental context. Nevertheless, these hormones may be related to motivating an individual to engage in mate-seeking behavior.

The other broad class of traits are attractiveness related variables that are selected for by the opposite-sex, which parallel the same traits involved in general romantic attraction. Because mate poaching is a subtype of general mate attraction (Schmitt & Buss, 2001), we presumed that some of the qualities, traits, and dispositions involved in mate poaching should be akin to those involved in general romantic attraction. In the present study we examine height, weight, self-esteem and self-perceived physical attractiveness. It is important to note that while these variables are in no way comprehensive to the identification of mate attraction, they are among the most important and commonly examined ones in the literature. For instance, it has been shown that weight (e.g., Singh & Young, 1995), and physical attractiveness (Buss & Schmitt, 1993; Langlois et al., 2000) are important predictors of one's ability to attract a mate, and this may be especially true for females. In a similar vein, height (e.g., Pawlowski, Dunbar, & Lipowicz, 2000), sex drive (Baumeister, Catanese, & Vohs, 2001), and high testosterone (e.g., Dabbs, 2000) have been related to males' ability to obtain mating opportunities.

We further predicted that high self-esteem as a sociometric indicator of one's own mate value (Brase & Guy, 2004) would be related positively to each of the poaching domains. People with high self-esteem have been shown to be better at making new friends and better at communicating information about themselves (Baumeister, 1993), both of which are skills that might make oneself more noticeable or desirable to a poacher or to a target of a poach. Consistent with the results of previous work (e.g., Schmitt & Buss, 2001), we also predicted the targets of mate poachers would have been higher on physical attractiveness.

Other studies have investigated facial and behavioral dominance in males and its role in attracting females (e.g., Bogaert & Fisher, 1995; Mazur, Halpern, & Udry, 1994; Sadalla, Kenrick, & Vershure, 1987). For instance, lower dominance has been associated with a greater likelihood of being a virgin among a college sample (Keller, Elliot, & Gunberg, 1982). Yet, no studies have specifically directed their efforts to examine whether submissiveness is associated with an increased likelihood to engage in mate poaching attraction as either the poacher and/or the target of a poach. Related to both dominance and sexual behavior is the hormone testosterone (Mazur, 2005). Accordingly, we were interested in the relationship between testosterone and poaching behavior. Among males both prenatal and circulating testosterone levels (as indicators of male dominance) are associated with having more lifetime sex partners (Honekopp, Voracek, & Manning, 2006; Pollet, der Meil, Cobey, & Buunk, 2011). Moreover, in females, testosterone correlates with intercourse frequency (during ovulation)

as well as sexual gratification scores (Persky, Lief, Strauss, Miller, & O'Brien, 1978).

Cortisol secretion has been associated with romantic attraction in both males and females. However, comparisons between the two sexes have not been made (e.g., Lopez, Hay, & Conklin, 2009; Loving, Crockett, & Paxson, 2009; Roney, Lukaszewski, & Simmons, 2007; Roney, Mahler, & Maestripieri, 2003). Finally, although the aforementioned attractiveness variables have been previously identified as predictors of human mating, it is important to note that their relationships to human sexuality may be more complex than was once believed. Height, for example, has a complex relationship to sex as a mate preference, with some finding that height is desirable in men and women, and others showing a curvilinear relationship in women (Buunk, Pollet, Klavina, Figuerdo, & Dijkstra, 2009).

It is also crucial to note that these two broad classes of traits— attractiveness related variables and competition-related variables are not mutually exclusive. For example, the personality trait of sex drive may propel an individual to seek out a mate via poaching as well as be deemed desirable by a member of the opposite-sex, as it may be a cue to better sexual performance.

The present study is limited to testing successful poaching dynamics. There may be a fundamental difference between those who attempt to poach and those who do not. Poaching behavior can vary considerably (direct courting to more subtle manipulations). Moreover, one can be “shut-down” and thus be unsuccessful in their attempts making it costly and a non-beneficial strategy.

To summarize, in the present study, we predicted (1) high self-esteem and high physical attractiveness would predict successful mate poaching in both sexes. Following from the literature reviewed herein, we also predicted that (2) height, cold affect, interpersonal manipulation, criminal tendency, erratic lifestyle, and high testosterone would predict mate poaching by males only. (3) For females, we predicted that lower weight and greater indirect aggression would predict successful mate poaching. We made no sex-specific hypotheses as to whether sex drive, submissiveness and cortisol level would predict mate poaching behavior because of the inconsistent results obtained regarding sex differences in general romantic attraction. (4) We predicted that being a target of a poach would be predicted by greater height for males, lower weight for females, and greater physical attractiveness for both sexes. Furthermore, we made no-sex specific predictions for being a target of a poach with regards to all the other variables mentioned.

Method

Participants

Our sample consisted of female ($n = 91$, M age = 18.53 years, $SD = 0.69$) and male ($n = 63$, M age = 18.76 years, $SD = 1.0$)

undergraduate students enrolled in a mid-sized, multi-ethnic university in southern Ontario. Participants were recruited via posters that were displayed in common areas of university housing complexes. They were offered \$26 in total for providing 8 saliva samples and completing and returning the questionnaire package. As the present study applied to heterosexual relationships, sexual orientation was measured by asking participants to identify as “heterosexual” “bisexual” “gay” “lesbian” “transgendered” “other.” Data from non-heterosexual students were excluded from the analyses ($n = 6$). We asked participants about the following factors which might influence our hormonal analyses: (1) cigarette use, (2) use of psychotropic or steroid medication, (3) oral contraceptive use, and (4) waking and sleeping time using a “yes”/“no” dichotomous response scale. These variables were included in the analyses in order to reduce potential confounds with respect to the testosterone and cortisol data.

Procedure

Participants were instructed to complete the questionnaire package and provide the saliva samples in their own home (e.g., dormitory room). They were also provided with detailed oral and written instructions of the proper storage of the saliva samples. They were instructed to keep the samples frozen in their personal freezer until the end of the 4-day testing period at which point the researchers collected all completed questionnaire packages and saliva samples. Participants were asked to complete several self-report questionnaires pertaining to a wide range of variables thought to play a role in successful and unsuccessful mate poaching attraction.

Measures

Mate Poaching

Two outcome variables were used as the dependent measures of mate poaching behaviors. The following items were used: “How often have you successfully poached someone away from a past partner?”, “How often have you experienced someone try to poach you away successfully from an existing relationship you have had?” and “How often have you experienced someone try to poach you away unsuccessfully from an existing relationship you have had?” The latter two items were summated to create a composite measure of how often the participant was the target of the poacher’s romantic desire. Participants were asked to circle their response on a 9-point scale, developed for purposes of this study, ranging from never to 8 or more times.

Following the procedures outlined by Schmitt and Buss (2001) participants were provided with a short description explaining the concept of mate poaching. The description provided in the present study is as follows:

Sometimes people try to romantically attract one another. On occasion, people try to attract someone who is already in a romantic relationship. For example, a woman may try to attract a man even though he is already dating, in a relationship with or married to another woman. She might do this for a short-term sexual affair with him or to try and obtain him for long-term relationship. Mate poaching then is attracting (or trying to attract) someone away from their current partner.

Height and Weight

Participants were asked to report their height (in either feet/inches or in centimeters) and weight (in either kilograms or in pounds). Values were converted to the former in each case.

Physical Attractiveness

Participants responded to the statement “I am good-looking” along a 7-point Likert scale ranging from 1 = not at all to 7 = very much so, as an index of their self-perceived physical attractiveness.

Self-Esteem

The 10-item Rosenberg (1965) Self-esteem scale was used to gauge global self-esteem. Participants expressed the extent to which they agreed or disagreed on a 4-point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree. This scale had an overall reliability of $\alpha = 0.90$ (males $\alpha = 0.94$; females $\alpha = 0.87$) in the present sample.

Submissiveness

Participants completed the 16-item Submissiveness Scale (Allan & Gilbert, 1997) to measure the participants’ degree of deference in interpersonal situations. Items were scored on a 5-point Likert scale ranging from 0 = Never to 4 = Very often. Sample items included: “I avoid starting conversations at social gatherings” and “I am not able to tell my friends I am angry with them.” This scale had an overall reliability of $\alpha = 0.83$ (males $\alpha = 0.87$; females $\alpha = 0.79$) in this sample.

Sex Drive

A 4-item scale measuring frequency of experienced sexual desire was administered to the participants (SDQ) (Ostovich & Sabini, 2004). The SDQ utilizes a 7-point Likert scale to assess the following items: “How often do you experience sexual desire?” and “How often do you masturbate in the average month?” These items were anchored at 0 = Never to 6 = Several times a day. A 6-point Likert scale was used to assess the following item “How often do you orgasm in the average month?” This item was

anchored at 0 = Never to 5 = Several times a day. Finally the following item “How would you compare your level of sex drive to the average person of your age and gender?” was assessed using a 6-point Likert scale ranging from 1 = very much lower to 7 = very much higher. This scale had an overall reliability of $\alpha = 0.85$ (males 0.75; females $\alpha = 0.81$) in this sample.

Indirect Aggression

Participants were asked to complete the 35-item Indirect Aggression Scale- Aggressor Version (IAS-A) (Forrest, Eatough, & Shevlin, 2005). Sample items include: “How often have you done the following to your peers “criticized them in public”, “turned other people against them”, “spread rumours about them” and “used emotional blackmail on them”. The IAS-A uses a 5-point Likert scale ranging from 5 = very often to 1 = never. The measure of indirect aggression had an internal consistency of $\alpha = 0.95$ overall (males $\alpha = 0.95$; females $\alpha = 0.95$), in our sample.

Psychopathy

Participants completed the 64-item Self Report Psychopathy scale (SRP-III) (Paulhus, Neumann, & Hare, in press; Williams, Paulhus, & Hare, 2007), which uses a four factor structure to capture the heterogeneity found within the personality construct of psychopathy: interpersonal manipulation, cold affect, criminal tendencies, and erratic lifestyle developed for a non-criminal, non-forensic sample. The SRP-III uses a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Interpersonal manipulation refers to the use of scheming, manipulating, and deceitfulness. Sample items from the Interpersonal Manipulation subscale include “I would get a kick out of “scammingsomeone,” and “I purposely flatter people to get them on my side”” (overall $\alpha = 0.84$; males $\alpha = 0.83$; females $\alpha = 0.81$). *Cold affect* refers to the disregard of other people and lack of emotional care and concern. Sample items from the cold affect subscale include “People sometimes say I’m coldhearted” and “People cry way too much at funerals” (overall $\alpha = 0.83$; males $\alpha = 0.75$; females $\alpha = 0.75$). *Erratic lifestyle* refers to behaviors that are reckless, impulsive, and involve an element of high risk. Sample items from the Erratic Lifestyle subscale include “I’d be good at a dangerous job because I make fast decisions” and “I enjoy doing wild things” (overall $\alpha = 0.83$; males $\alpha = 0.82$; females $\alpha = 0.80$). *Criminal tendencies* refer to behaviors that are mainly antisocial in nature and are deemed illegal. Sample items from the criminal tendency subscale include “I have broken into a building or vehicle in order to steal something or vandalize” and “Every now and then I carry a weapon (knife or gun) for protection” (overall $\alpha = 0.80$; males 0.84; females 0.65).

Cortisol and Testosterone

Following procedures by Vaillancourt et al. (2008) and Vaillancourt, de Catanzaro, Duku, and Muir (2009), participants were provided with Wrigley’s Extra Peppermint sugar-free gum and asked to chew it prior to providing each saliva sample. They were instructed to supply one saliva sample in the morning (20 min after waking) and to produce another sample in the late afternoon (at 16:00) across 4 days, adding up to a total of 8 saliva samples.

Participants were asked to drool up to the 1 ml mark in polyethylene tube-shaped vials manufactured by Nalgene Co. All saliva samples were stored at -20°C until they were ready to be assayed for both testosterone and cortisol. For a detailed description of assaying procedures see Vaillancourt et al. (2008, 2009).

All of the four morning samples were found to be highly correlated with each other and all four evening samples were highly correlated with each other. In addition, morning samples were also correlated with evening samples. As a result, all eight of the saliva samples (i.e., morning and evening samples inclusive) were aggregated together to create an overall composite measure of testosterone and cortisol levels. Multi-level modeling techniques were used to confirm the aggregation of the data. Both testosterone and cortisol data were log transformed using log base 10 as indicated in the results section due to high variance in the sample. The internal consistency of cortisol and testosterone were: $\alpha = 0.83$ (males $\alpha = 0.90$; females $\alpha = 0.87$) and $\alpha = 0.86$ (males $\alpha = 0.87$; females $\alpha = 0.90$), respectively.

Results

Tables 1 shows the means and SD of the variables used in this study. Of the 13 predictors used in this study, four were statistically significantly correlated with successful poaching by males and four were significantly correlated with successful poaching by females.

Being a target for a poach was significantly correlated with self-perceived attractiveness for males and females. Moreover, for females being targeted was significantly correlated with only one of the examined variables— physical attractiveness (Table 2).

Multiple regression models were used to examine the predictors of both mate-poaching and being the target of poaching attempts. Each regression equation included 13 predictor variables believed to be related to experiences of poaching within romantic relationships. Because certain traits have been shown to affect poaching differently for males and females, each sex was examined independently of the other.

Successful Poaching

Of 13 predictors, only one significantly predicted successful mate poaching by females: being good-looking ($\beta = .43$, $p = .01$, $SR^2 = 0.10$).

Table 1 Intercorrelations by sex

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Successful poaching															
2. Target of being poached	.17														
3. Height	.24	.12													
4. Weight	.14	.00	.38**												
5. Self esteem	.28*	.11	.15	.09											
6. Good looking	.21	.34*	.09	.09	.60**										
7. Erratic lifestyle	.28*	.10	.20	.34**	.26*	.39**									
8. Criminal tendencies	.33*	-.14	.00	.15	.56**	.10	.45**								
9. Cold affect	.37**	.20	.16	.32*	-.16	.20	.53**	.33*							
10. Interpersonal Manipulation	.17	.12	.12	.25	.19	.31*	.64**	.39*	.65**						
11. Indirect aggression	.11	.09	.12	.12	.09	.17	.47**	.28*	.37**	.64**					
12. Sex drive	.07	.26	.06	.21	.14	.14	.24	.02	-.01	.12	.27*				
13. Submissive	-.19	-.26	-.11	-.28*	-.60**	-.49**	-.35**	-.07	-.29*	-.24	.24	-.36**			
14. log 10 (C)	.10	-.08	.00	-.25*	-.17	-.02	-.02	.05	.00	-.02	.08	-.03	.15		
15. log 10 (T)	-.17	-.14	-.06	-.18	-.25	-.23	-.13	.03	-.09	-.00	.08	.20	.15	.47**	

log 10 (C) = log (cortisol ng/ml); log 10 (T) = log (testosterone pg/ml); female data are presented above the diagonal and male data see below the diagonal. * $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

For males, six of the independent variables predicted successful mate poaching: height ($\beta = .35, p = .01, SR^2 = 0.09$), self-esteem ($\beta = .59, p = .01, SR^2 = 0.11$), criminal tendencies ($\beta = .50, p = .01, SR^2 = 0.16$), displaying cold affect ($\beta = .42, p = .02, SR^2 = 0.09$), having higher levels of cortisol ($\beta = .36, p = .02, SR^2 = 0.08$), and lower levels of testosterone ($\beta = -.35, p = .03, SR^2 = 0.08$). See Table 3 for details of our findings.

Participant Reports of Being the Target of Poaching

For females, being good looking ($\beta = .40, p = .03, SR^2 = 0.04$) predicted being a target of poaching, as it did for males ($\beta = .46, p = 0.04, SR^2 = 0.09$). None of the other study variables predicted being the target of poaching.

Discussion

The present study examined the hormonal, dispositional, and behavioral qualities believed to be advantageous to human mating and examined their independent contributions to two important aspects of mate poaching—poaching and being poached.

The Poachers

Consistent with the literature showing that physically attractive females are more successful at attracting romantic partners (Rhodes et al., 2005), females in this study who reported that they were attractive also reported being more successful at poaching. For females, none of the other hormonal, dispositional, and/or behavioral mate-value traits were associated with successful poaching. We suggest that none of the other traits may have influenced being a successful poacher for females because of the premium males impose on physical attractiveness (e.g., Buss & Schmitt, 1993). Indeed, studies have shown that attractiveness in females is the most important determinant in eliciting romantic interest and in acquiring a larger quantity of dates for romantic purposes (e.g., Berscheid & Walster, 1974). Research on speed-dating confirms the importance of physical attractiveness on selecting a mate, in which, participants of an adult dating service who were better looking were more successful at gaining dates (e.g., Kurzban & Weeden, 2005).

Consistent with past research showing females prefer taller males in unattached romantic relationships, it follows that, in the context of mate-poaching, taller men should also be more successful (e.g., Nettle, 2002a, 2002b). This prediction was supported in the present study. Moreover, for males, self-esteem, displaying cold affect, criminal tendencies, physical attractiveness, and higher levels of cortisol were also all positively associated with successful poaching attempts.

It was not surprising to find that higher levels of cortisol were associated with successful mate poaching behavior in men as

Table 2 Descriptive statistics by sex

	<i>N</i>		<i>M</i>		<i>SD</i>		Range	
	Female	Male	Female	Male	Female	Male	Female	Male
Successful poaching	89	62	0.42	0.53	0.96	1.25	6.00	8.00
Target of being poached	79	56	2.76	2.04	2.72	2.24	11.00	10.00
Height (inches)	85	62	65.29	70.94	3.22	2.24	23.00	11.50
Weight (pounds)	84	61	135.70	168.80	21.82	23.90	110.00	163.00
Self esteem	89	62	3.11	3.07	0.47	0.62	2.30	2.70
Good looking	91	62	4.95	5.03	1.11	1.46	5.00	6.00
Erratic lifestyle	90	59	2.69	3.13	0.54	0.56	2.81	3.13
Criminal tendencies	89	58	1.45	1.82	0.37	0.59	1.75	2.69
Cold affect	91	60	2.16	2.85	0.44	0.47	2.63	2.44
Interp. Manip.	89	59	2.50	2.95	0.51	0.54	2.38	2.88
Indirect aggression	88	63	0.90	1.06	0.15	0.56	2.44	3.32
Sex drive	81	57	2.01	3.37	1.09	0.89	4.50	5.25
Submissive	89	63	1.70	1.65	0.49	0.58	2.56	3.38
Log 10 (C)	83	60	1.12	1.03	0.70	0.82	3.50	3.99
Log 10 (T)	81	59	6.81	6.41	1.17	0.96	5.86	4.17

Table 3 Summary of regression analyses highlighting predictors of poaching behavior and being targeted for a poach split by sex

	Successful poacher		Target of poaching attempts	
	Female (β)	Male (β)	Female (β)	Male (β)
Height	-.06	.35*	-.07	.22
Weight	-.22	.06	-.02	.04
Self-esteem	.01	.59*	.05	-.25
Good looking	.43*	.02	.40*	.46*
Erratic lifestyle	.14	-.45	-.08	-.33
Criminal tendencies	-.01	.50**	.00	.13
Cold affect	-.02	.42*	.21	.30
Interp. Manip.	.32	-.10	.19	-.06
Indirect aggression	-.20	-.20	-.33	-.03
Sex drive	-.02	.26	-.06	.28
Submissiveness	.10	.26	.37	-.07
Log 10 (C)	.25	.36*	-.16	-.12
Log 10 (T)	-.09	-.35*	.08	.05

* $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

Note: Control for wake time, steroid medication, and cigarette use not depicted

previous studies have associated higher cortisol with both impulsivity (King, Jones, Scheuer, Curtis, & Zarcone, 1990) and extroversion (e.g., Oswald et al., 2006; Schommer, Kudileka, Hellhammer, & Kirchbaum, 1999), factors shown to influence mate poaching (Schmitt & Buss, 2001). It was, however, surprising that lower levels of testosterone were associated with successful mate poaching. This result may be due to the fact that our sample was drawn from undergraduate students living in co-ed residence buildings. Studies have shown that male testosterone levels

decrease when married and/or in a long-term committed relationship to females (e.g., Burnham et al., 2003). It is possible that the lower levels of testosterone found in our sample mirror the findings of other studies which have shown that males who are in long-term relationships have lower levels of testosterone because of the constant close proximity to females. An alternative possibility is that the males in our sample who were deemed physically and behaviorally attractive to females would also be more likely to have opportunities to engage in sexual intercourse more often, thereby temporarily lowering their androgen levels reflecting sexual satiety due to their recent mating experience (e.g., Romano-Torres, Phillips-Farfan, Rodriguez-Manzo, & Fernandez-Guasti, 2007). Studies have also found that testosterone and cortisol have an inverse relationship (e.g., Terburg, Morgan, & van Honk, 2009), suggesting that it is possible that the androgen dynamics of this study were largely of adrenocortical origin (see Vaillancourt et al., 2009). Finally, we entertain the possibility that less masculine males with lowered levels of testosterone may appear less threatening to “poaches,” thereby allowing them increased access to the target in order to successfully infiltrate the relationship.

Individual characteristics known to comprise mate-value, such as physical attractiveness in females, have shown to be related to high self-esteem (e.g., Patzer, 1996). It is plausible that those higher in mate-value characteristics are more likely to engage in mate poaching behavior, because they may perceive themselves as having an increased likelihood of success in luring away a partner involved in a romantic dyad and a lower probability of rejection. Brase and Guy (2004) found the possession of a greater number of mate value characteristics predicted higher self-esteem, known as the sociometer hypothesis (also see Kirkpatrick & Ellis, 2001). The results of the present study support the sociometer hypothesis showing a positive

correlation between successful mate poaching and self-esteem. In effect, the decision to mate poach may be predicated on one's own evaluation of self attractiveness. It is also tenable that the direction may be reversed insofar as successful poaching and being the target of a poach can contribute to one's increased self-esteem and self-attractiveness ratings.

Consistent with Williams et al. (2005), our results supported that certain elements of psychopathy, including cold affect and criminal tendencies, were associated with being a successful poacher among male participants. Schmitt and Buss (2001) suggest low empathy can facilitate the poacher to not be concerned with the person who's mate they are stealing; a suggestion which corroborates with our finding insofar as cold affect in men enhances mate poaching success. Moreover, some have argued that psychopathy may have evolved as a unique short-term mating strategy (e.g., Jonason, Li, Webster, & Schmitt, 2009), which may also be implicated in mate-poaching endeavors.

The Poached

In regards to being the target of others' poaching attempts, both males and females tended to rate themselves as being better looking than their non-poached counterparts. This finding was consistent with the literature highlighting the importance of physical attractiveness in the realm of mating; suggesting physically attractive individuals annex a greater number of sexual partners (e.g., Bogaert & Fisher, 1995; Buss, 1994; Fisher, 1958). In the present study, none of the other variables examined were associated with being poached for either sex.

Limitations

A limitation of the present study was the primary use of self-report data; however, as Schmitt and Buss (2001) noted the surreptitious nature of mate poaching renders it difficult to study through observational methods.

We also acknowledge that the list of mate-poaching variables used in the present study is not exhaustive. It has been recently questioned as to whether attractiveness is the best predictor of mating success. Puts (2010) has argued that success in contest competition may be more important in predicting mating success. Hodges-Simeon, Gaulin, and Puts (2010) showed that a voice feature associated with dominance, but not physical attractiveness, was associated with mating success. Other variables of importance to mate poaching attraction can include but are not limited to athletic ability, muscularity, and strength which were not examined in the present study.

Another limitation of the present study was the assessment of degree one defects from an existing relationship. In the present study, poaching can refer to any form of defection from an existing romantic dyad and was left open-ended for the participant to evaluate. From the perspective of the poached, for example, the

use of the term poaching can cover a broad spectrum of behaviors including but not limited to kissing someone else while in a relationship, agreeing to go out on a date with the poacher, a one-night sexual liaison with another person while maintaining the existing relationship or abandoning one's current mate to engage in a more long-term romantic relationship with someone else.

A third limitation of the present study was the use of an undergraduate student sample. As Schmitt and Buss (2001) suggested, the extent to which mate poaching is overrepresented in young adults and the degree to which these findings can be generalized to other samples remains unknown. Undergraduate students are typically unmarried and, although they do form long-term relationships (e.g., Buss et al. 1992), it is likely that many of their relationships are also ephemeral and transient. Future research could profit from examining the personality profiles of the poachers and the poached in other age brackets and/or in married couples.

Another limitation is that we did not compare the number of mate poaching attempts to the number of mate poaching successes. It is entirely possible that people who have successfully mate poached more often are in actuality worse at mate poaching. This may be a consequence of making more attempts and thereby increasing one's odds of finding a mate opposed to achieving success through a smaller proportion of attempts. Future research can benefit from calculating proportions of unsuccessful mate poaching attempts to successful mate poaching occurrences for each participant.

Finally, we recognize both testosterone and cortisol are dynamic hormones that exhibit a clear circadian rhythm (e.g., Dabbs, 1990; for a review see, Mazur & Booth, 1998) and are known to be sensitive to context. For example, simply winning a competitive bout can lead to a sharp spike in testosterone for males (e.g., Bernhardt et al., 1998; Booth et al., 1989). Using a global estimate accessed via multiple measures of testosterone allows researchers to examine 'trait' testosterone and thus guard against dramatic fluctuations in testosterone due to an isolated emotional occurrence on a specific day/time (e.g., for a collection and summary of empirical studies treating single and/or multiple samples of testosterone as a fixed trait, see Dabbs, 2000).

Despite these limitations, the present study was novel in that a set of different hormonal, dispositional, and behavioral mate-value traits that have not been previously investigated until now were incorporated. Future research could benefit from investigating person-situation interactions in terms of mate-poaching. For example, the present study examined individual differences but other studies have proposed situational factors from the mate poacher's perspective, such as an inability to find a viable mate through normal channels of attraction and/or the use of a short-term mating strategy lending itself to engaging in mate-poaching attraction. From the perspective of the "poached", situational factors such as better options in the mating market presenting itself (i.e., trading upwards), dissatisfaction with one's current relationship, the thrill of initiating a clandestine romance with another partner and/or the novelty of initiating a new

romantic dyad may all interact with personality dispositions to better profile the characteristics of the “poacher” and the “poached.”

Future studies could also benefit from ascertaining the qualities that lead poachers to attempt yet fail to lure away a target. In a similar vein, the field of mate poaching attraction has understudied the mate “poachee”. Moreover it has also failed to distinguish between those who successfully retain their mate versus those who unsuccessfully defend against a same-sex rival, ultimately surrendering their romantic partner to the poacher that had initially created the wedge in his/her relationship.

Conclusion

The present study contributes to the rather elusive topic of mate poaching by commencing the process of profiling the traits that characterize the two members of the poaching dyad (i.e., the poacher and the poached). This advancement subsumed under the broader topic of human mating assists in deciphering the personality types involved in a central aspect of human experience—mate poaching.

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References

- Allan, S., & Gilbert, P. (1997). Submissive behavior and psychopathology. *British Journal of Clinical Psychology, 36*, 467–488.
- Baumeister, R. F. (1993). Self-presentation: Motivational, cognitive, and interpersonal patterns. In G. L. Van Heck, P. Bonaiuto, I. J. Deary, & W. Nowack (Eds.), *Personality psychology in Europe* (Vol. 4, pp. 257–279). Tillburg, Netherlands: Tillburg University Press.
- Baumeister, R. F., Catanese, K. R., & Vohs, K. D. (2001). Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of relevant evidence. *Personality and Social Psychology Review, 5*, 242–273.
- Bernhardt, P. C., Dabbs, J. M. Jr., Fielden, J. A., & Lutter, C. D. (1998). Testosterone changes during vicarious experiences of winning and losing events. *Physiology & Behavior, 65*, 59–62.
- Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7, pp. 157–215). London: Academic Press.
- Bogaert, A. F., & Fisher, W. A. (1995). Predictors of university men’s number of sexual partners. *Journal of Sex Research, 32*, 119–130.
- Booth, A., Shelley, G., Mazur, Tharp, G., & Kittock, R. (1989). Testosterone, and winning and losing in human competition. *Hormones and Behavior, 23*, 556–571.
- Brase, G. L., & Guy, E. C. (2004). The demographics of mate value and self-esteem. *Personality and Individual Differences, 36*, 471–484.
- Burnham, T. C., Flynn Chapman, J., Gray, J. B., McIntyre, M. H., Lipson, S. F., & Ellison, P. T. (2003). Men in committed, relationships have lower testosterone. *Hormones and Behavior, 44*, 119–122.
- Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology, 54*, 616–628.
- Buss, D. M. (1994). *The evolution of desire*. New York: Basic Books.
- Buss, D. M. (2005). *The murderer next door: Why the mind is designed to kill*. New York: Penguin.
- Buss, D. M., & Barnes, M. (1986). Preferences in human mate selection. *Journal of Personality and Social Psychology, 50*, 559–570.
- Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological Science, 3*, 251–255.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review, 100*, 204–232.
- Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology, 72*, 346–361.
- Buunk, A. P., Pollet, T. V., Klavina, L., Figuerdo, A. J., & Dijkstra, P. (2009). Height among women is curvilinearly related to life history strategy. *Evolutionary Psychology, 4*, 545–559.
- Buunk, B. P., & Van Driel, B. (1989). *Variant lifestyles and relationships*. Newbury Park, CA: Sage.
- Dabbs, J. M. (1990). Salivary testosterone measurements: Reliability across hours, days, and weeks. *Physiology & Behavior, 48*, 83–86.
- Dabbs, J. M. (2000). *Heroes, rogues, and lovers: Testosterone and behavior*. New York: McGraw-Hill.
- Daly, M., & Wilson, M. (1988). *Homicide*. New Brunswick, NJ: Transaction.
- Davies, A. P., Shackelford, T. K., & Hass, R. G. (2007). When a “poach” is not a poach: Re-defining human mate poaching and re-estimating its frequency. *Archives of Sexual Behavior, 36*, 702–716.
- Davies, A. P., Shackelford, T. K., & Hass, R. G. (2010). Sex differences in the perceptions of benefits and costs of mate poaching. *Personality and Individual Differences, 49*, 441–445.
- Dawkins, R., & Krebs, J. R. (1978). Animal signals: Information or manipulation. In J. R. Krebs & N. B. Davies (Eds.), *Behavioral ecology* (pp. 282–309). Oxford: Blackwell Scientific.
- de Waal, F. (1986). Deception in the natural communication of chimpanzees. In R. W. Mitchell & N. S. Thompson (Eds.), *Deception* (pp. 221–244). Albany, NY: State University of New York Press.
- Fisher, R. A. (1958). *The genetical theory of natural selection* (2nd ed.). New York: Dover.
- Forrest, S., Eatough, V., & Shevlin, M. (2004). Measuring adult indirect aggression: The development and psychometric assessment of the indirect aggression scales. *Aggressive Behavior, 31*, 84–97.
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum.
- Hodges-Simeon, C. R., Gaulin, S. J., & Puts, D. A. (2010). Voice correlates of mating success in men: Examining “contests” versus “mate choice” modes of sexual selection. *Archives of Sexual Behavior, 40*, 551–557.
- Honekopp, J., Voracek, M., & Manning, J. T. (2006). 2nd to 4th digit ratio (2D:4D) and number of sex partners: Evidence for effects of prenatal testosterone in men. *Psychoneuroendocrinology, 31*, 30–37.
- Jonason, P. K., Li, N. P., & Buss, D. M. (2010). The costs and benefits of the dark triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences, 48*, 373–378.
- Jonason, P. K., Li, N. P., Webster, G. W., & Schmitt, D. P. (2009). The dark triad: Facilitating short-term mating mates: What, whether, and why. *Journal of Personality and Social Psychology, 90*, 468–489.
- Keller, J. F., Elliot, S. S., & Gunberg, E. (1982). Premarital sexual intercourse among single college students: A discriminant analysis. *Sex Roles, 8*, 21–32.
- King, R. J., Jones, J., Scheuer, J. W., Curtis, D., & Zarcone, V. P. (1990). Plasma cortisol correlates of impulsivity and substance abuse. *Personality and Individual Differences, 11*, 287–291.
- Kirkpatrick, L. A., & Ellis, B. J. (2001). An evolutionary-psychological approach to self-esteem: Multiple domains and multiple functions. In G. J. Fletcher & M. S. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal processes* (pp. 411–436). Malden, MA: Blackwell Publishing.
- Kurzban, R., & Weeden, J. (2005). HurryDate: Mate preferences in action. *Evolution and Human Behavior, 26*, 227–244.

- Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, *126*, 390–423.
- Lopez, H. H., Hay, C. A., & Conklin, P. H. (2009). Attractive men induce testosterone and cortisol release in women. *Hormones and Behavior*, *56*, 84–92.
- Loving, T. J., Crockett, E. E., & Paxson, A. A. (2009). Passionate love and relationship thinkers: Experimental evidence for acute cortisol elevations in women. *Psychoneuroendocrinology*, *34*, 939–946.
- Mazur, A. (2005). *Biosociology of dominance and deference*. Lanham, MD: Rowman and Littlefield.
- Mazur, A., & Booth, A. (1998). Testosterone and dominance in men. *Behavioral and Brain Sciences*, *21*, 353–397.
- Mazur, A., Halpern, C., & Udry, R. J. (1994). Dominant looking male teenagers copulate earlier. *Ethology & Sociobiology*, *15*, 87–94.
- Nettle, D. (2002a). Height and reproductive success in a cohort of British men. *Human Nature*, *13*, 473–491.
- Nettle, D. (2002b). Women's height, reproductive success and the evolution of sexual dimorphism in modern humans. *Proceedings of the Royal Society of London. Series B*, *269*, 1919–1923.
- Ostovich, J. M., & Sabini, J. (2004). How are sociosexuality, sex drive, and lifetime number of sexual partners related? *Personality and Social Psychology Bulletin*, *30*, 1255–1266.
- Oswald, L. M., Zandi, P., Nestadt, G., Potash, J., Kalaydjian, A. E., & Wand, G. S. (2006). Relationship between cortisol responses to stress and personality. *Neuropsychopharmacology*, *31*, 1583–1591.
- Patzer, G. L. (1996). Understanding the causal relationship between physical attractiveness and self-esteem. *Journal of Esthetic Dentistry*, *8*, 144–147.
- Paulhus, D. L., Neumann, C. S., & Hare, R. D. (in press). *Manual for the Self-Report Psychopathy (SRP) scale*. Toronto: Multi-Health Systems.
- Pawlowski, B., Dunbar, R. I. M., & Lipowicz, A. (2000). Tall men have more reproductive success. *Nature*, *403*, 156.
- Persky, H., Lief, H. I., Strauss, D., Miller, W. R., & O'Brien, C. P. (1978). Plasma testosterone level and sexual behavior of couples. *Archives of Sexual Behavior*, *7*, 157–172.
- Pollet, T. V., der Meil, L., Cobey, K. D., & Buunk, A. P. (2011). Testosterone levels and their associations with lifetime number of opposite sex partners and remarriage in a large sample of American elderly men and women. *Hormones and Behavior*, *60*, 72–77.
- Puts, D. A. (2010). Beauty and the beast: Mechanisms of sexual selection in humans. *Evolution and Human Behavior*, *31*, 157–175.
- Rhodes, G., Simmons, L. W., & Peters, M. (2005). Attractiveness and sexual behavior: Does attractiveness enhance mating success? *Evolution and Human Behavior*, *26*, 186–201.
- Romano-Torres, M., Phillips-Farfan, B. V., Rodriguez-Manzo, G., & Fernandez-Guasti, A. (2007). Relationship between sexual satiety and brain androgen receptors. *Neuroendocrinology*, *85*, 16–26.
- Roney, J. R., Lukazewski, A. W., & Simmons, Z. L. (2007). Rapid endocrine responses of young men to social interactions with young women. *Hormones and Behavior*, *52*, 326–333.
- Roney, J. R., Mahler, S. V., & Maestripieri, D. (2003). Behavioral and hormonal responses of men to brief interactions with women. *Evolution and Human Behavior*, *24*, 365–375.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Sadalla, E. K., Kenrick, D. T., & Vershure, B. (1987). Dominance and heterosexual attraction. *Journal of Personality and Social Psychology*, *52*, 730–738.
- Schmitt, D. P., Alcalay, L., Allik, J., Angleitner, A., Ault, L., Austers, I., et al. (2004). Patterns and universal of mate poaching across 53 nations: The effects of sex, culture, and personality on romantically attracting another person's partner. *Journal of Personality and Social Psychology*, *86*, 560–584.
- Schmitt, D. P., & Buss, D. M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing mateships. *Journal of Personality and Social Psychology*, *80*, 894–917.
- Schommer, N. C., Kudiela, B. M., Hellhammer, D. H., & Kirschbaum, C. (1999). No evidence for a close relationship between personality traits and circadian cortisol rhythm or a single cortisol stress response. *Psychological Reports*, *84*, 840–842.
- Singh, D., & Young, R. K. (1995). Body weight, waist-to-hip ratio, breasts, and hips: Role in judgements of female attractiveness and desirability for relationships. *Ethology and Sociobiology*, *16*, 483–507.
- Terburg, D., Morgan, B., & van Honk. (2009). The testosterone-cortisol ratio: A hormonal marker of proneness to social aggression. *International Journal of Law and Psychiatry*, *32*, 216–223.
- Thompson, A. P. (1983). Extramarital sex: A review of the research literature. *Journal of Sex Research*, *19*, 1–22.
- Trivers, R. L. (1985). *Social evolution*. Menlo Park, CA: Benjamin/Cummings.
- Vaillancourt, T., de Catanzaro, D., Duku, E., & Muir, C. (2009). Androgen dynamics in the context of children's peer relations: An examination of the links between testosterone and peer victimization. *Aggressive Behavior*, *35*, 103–113.
- Vaillancourt, T., Duku, E., de Catanzaro, D., Macmillan, H., Muir, C., & Schmidt, L. A. (2008). Variation in hypothalamic-pituitary-adrenal axis activity among bullied and non-bullied children. *Aggressive Behavior*, *34*, 294–305.
- Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). The four facet structure of psychopathy in non-forensic samples. *Journal of Personality Assessment*, *88*, 118–129.
- Williams, K. M., Spidel, A., & Paulhus, D. L. (2005). *Sex, lies, and more lies: Exploring the intimate relationships of subclinical psychopaths*. Paper presented at the meeting of the Society for the Scientific Study of Psychopathy, Vancouver, BC.