

Mating Strategies among the Dark Triad:
Relationship Focus, Retention, and Infidelity

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Abstract

Members of the Dark Triad -- Machiavellianism, narcissism, psychopathy -- share a callous predisposition. Based on their differences in other domains, however, we hypothesized that the Dark Triad members would differ systematically with respect to three components of mating strategies: (a) short vs. long-term relationship focus, (b) use of mate retention tactics, and (c) rates of infidelity. Four studies (total N = 1,773) on broad community samples confirmed these predictions. Study 1 replicated familiar gender differences in the Dark Triad (psychopathy was the largest). For both genders, psychopathy was uniquely associated with a short-term relationship focus. In Study 2, only psychopathy was related to frequent use of control tactics in mate retention (tactics known to undermine relationships). To clarify the latter finding, Study 3 subjects were randomly assigned to contemplate how they would cope with a threat to either a short-term or long-term relationship. Only Machiavellians reported different tactics across the two situations. In Study 4, psychopaths and Machiavellian women reported high rates of infidelity. However, infidelity led to relationship dissolution only for psychopaths. Despite the overall gender differences (especially in psychopathy), the pattern of associations with mating strategies was generally consistent across gender. For different reasons, the members of the Dark Triad tend to be especially untrustworthy in the mating context.

Mating Strategies among the Dark Triad: Relationship Focus, Retention, and Infidelity

The Dark Triad comprises three conceptually distinct but statistically overlapping personality variables (Paulhus & Williams, 2002). They are the impulsive thrill-seeking psychopath (Hare, 1970), the manipulative Machiavellian (Christie & Geis, 1970), and the grandiose narcissist (Kohut, 1977). These three variables are investigated here in their subclinical form -- as found in non-institutionalized samples (LeBreton, Binning, & Adorno, 2005). In such samples, the Dark Triad variables are moderately intercorrelated and normally distributed (Williams, Paulhus, & Hare, 2007).¹

Conceptually, the members of the Dark Triad share the same quadrant (unmitigated agency) in interpersonal space (Horowitz & Strack, 2011; Markey et al., 2005). This combination of callous and acquisitive traits predisposes Dark Triad members to exploit others for selfish purposes (Jones & Paulhus, 2011). Not surprisingly, such callousness influences mating behavior (e.g., Harms, Williams, & Paulhus, 2001; McHoskey, 2001; Reise & Wright, 1996, Schmitt, 2009). Its impact on the duration of interpersonal relationships is not straightforward but depends on a complex interplay of selfishness and trust (Clark & Waddell, 1985; Kenrick & Trost, 1989; Simpson, 2007).

Not unrelated is the fact that callous mating strategies appear to facilitate high rates of sexual activity (Eysenck, 1976; Harms et al., 2001; Jonason, Li, Webster, & Schmitt, 2009; Linton & Weiner, 2001). Among the callous behaviors likely to facilitate sexual activity are insincere commitment, feigned mate value, and other forms of sexual deception (Seto, Khattar, Lalumiere, & Quinsey, 1997; Tooke & Camire, 1991). Another possibility is that possible mates are attracted to those with a dominant, but nasty side (Hawley, Little, & Card, 2007; Visser,

¹ We will use categorical terms such as narcissist and psychopath solely for ease of communication -- not to imply any typology or cutoff.

Pozzebon, Bogaert, & Ashton, in press).

Despite their common callousness, members of the Dark Triad can be differentiated by distinctive interpersonal tactics (Paulhus & Williams, 2002; Jones & Paulhus, 2011). Such differences should also be evident in mating strategies.

We follow Gangestad and Simpson (2000) in using the term *mating strategies* to refer to “integrated sets of adaptations that organize and guide an individual’s reproductive effort” (p.575). We will focus on three key variables relevant to mating strategies: Long vs. short-term relationship focus, mate retention, and infidelity. The commonalities as well as the distinct inclinations of the Dark Triad members should be reflected in all three of these strategies. Moreover, these inclinations are likely to vary with gender (e.g., Kenrick, Sadalla, Groth, & Trost, 1990; Buss & Schmitt, 1993).

Short-term vs. long-term relationship focus

The contrast between short- and long-term focus is a common theme in research and theory on sexual and romantic relationships (e.g., Buss & Schmitt, 1993, Figueredo et al., in press; Gangestad & Simpson, 2000; Kenrick et al., 1990; Kenrick et al., 1993). Long-term or ‘slow’ reproductive strategies involve selective partner choice, secure attachment, and investment in offspring (e.g., Figueredo, et al., 2005; 2007; Simpson & Belsky, 2008). Short-term or “fast” strategies² involve indiscriminant partner choice and immediate sexual gratification (e.g., Rowe, Vazsonyi, & Figueredo, 1997; Simpson & Gangestad, 1991). The concurrent pursuit of both strategies, *strategic pluralism*, is also possible (Gangestad & Simpson, 2000; Hawley, 2003; 2006). However, individuals deficient in impulse control are only capable of short-term tactics (Figueredo et al., 2006).

² Arguably, the term ‘tactics’ is more appropriate for short-term focus and ‘strategies’ for long-term focus.

The Dark Triad. As noted earlier, the available research points to high rates of casual sex among all of the Dark Triad members (e.g., Harms et al., 2001, Jonason et al., 2009; McHoskey, 2001; Reise & Wright, 1996). Undoubtedly, the callousness common to the Dark Triad members facilitates a short-term focus: Empathy with partner emotions would not be a barrier.

However, short-term mating is also facilitated by factors other than sheer exploitation. The impulsivity of psychopaths (Hare, 1996; Gladden, Figueredo, & Jacobs, 2009) further amplifies a short-term focus.³ The evidence includes studies linking psychopathy to aggressive sexual behavior (Lalumiere & Quinsey, 1996), coercion (Williams et al., 2009), and promiscuity (Fulton, Marcus, & Payne, in press; Harris, et. al., 2007). Narcissists are also on the impulsive side of this continuum (Vazire & Funder, 2006). They too should show a short-term mating focus (Reise & Wright, 1996).

By contrast, long-term and pluralistic strategies require impulse-control, planning, and future orientation (Figueredo et. al., 2006). Such behavior is most compatible with Machiavellianism: There is evidence that Machiavellians possess greater cognitive complexity (Hawley, 2003; Jones & Paulhus, 2009) and developmental plasticity (Vernon et al., 2008) than either psychopaths or narcissists. Therefore, we would expect Machiavellians to be able to vary their mating tactics depending on their long-term goals and the interpersonal context.

The Machiavellian repertoire is also *bi-strategic*: By this term, Hawley (1999) refers to the ability to use both prosocial and antisocial tactics. Rigid adherence to one of these strategies limits latitude for improvisation (Christie & Geis, 1970) and would not maximize control of resources (Hawley, 2003). Especially in the long-run, the Machiavellian's ability to manipulate is likely to facilitate access to sexual partners (Harms et al., 2001, McHoskey, 2001). Indeed,

³ Impulsivity is included as a facet in both popular questionnaire measures of psychopathy -- the Psychopathic Personality Inventory (PPI: Lilienfeld & Andrews, 1996), and the Self-Report Psychopathy Scale (SRP: Paulhus, Neumann, & Hare, in press).

they might even be able to exploit short-term sexual opportunities while maintaining a long-term relationship. In short, Machiavellians may be unique in navigating a pluralistic relationship focus.

Mate Retention

Obtaining sexual partners is only the first step in successful reproduction. One must retain a mate long enough to ensure conception. A wide range of mate retention tactics were circumscribed and systematized by Buss (1988). Paramount among the motivations triggering mate retention is the threat of losing one's partner to a competitor.

The original Mate Retention Inventory (MRI) comprised 104 items tapping direct tactics, intersexual tactics, public display tactics, positive inducements and intrasexual negative inducements (Shackelford, Goetz, & Buss, 2005). Following Shackelford and Goetz (2006), the items were categorized into tactics that correlate with control tendencies and those that do not. A shorter version (MRI-SF) comprised 19 tactics with two items each (Buss, Shackelford, & McKibbin, 2008).

The more aggressive behaviors (referred to here as *control* tactics) may work in the short-run. In the long run, they are likely to drive partners away (Buss, 2000). One reason is that partners subjected to such tactics are likely to feel constrained and threatened (Shackelford & Goetz, 2006). For example, Sheets, Fredenall, and Claypool (1997) found that purposeful jealousy evocation led to greater relationship conflict. Such conflict eventuates in relationship dissolution for many couples. Thus use of control tactics entails a trade-off: They may deter infidelity in the short-run, but at a cost for relationship duration.

The non-control tactics include behaviors such as appearance enhancement and love & care. They are likely to be adaptive in the long run because they increase the partner's

commitment to the relationship.

The Dark Triad. Shackelford and Goetz (2006) argued that mate retention activity was observed primarily in individuals with an exaggerated sense of propriety over their partners. That hypothesis suggests that narcissists would feel justified in using aggressive mate retention tactics. On the other hand, narcissists tend to be optimistic about their relationships and skeptical that their partners would ever leave (Foster & Campbell, 2005).

Given their callous impulsiveness, psychopaths should have no qualms about using any and all mate retention tactics deemed necessary to retain a partner. The strategic sensibility of Machiavellians, by contrast, is likely to constrain their tactics. They should avoid tactics that endanger their serious relationships. Moreover, their choice of tactics is more likely to be dictated by the relationship context (Hawley, 2003).

Infidelity

In spite of its destructive impact on both partners and relationships, sexual infidelity remains commonplace. Although sometimes symptomatic of a specific relationship conflict (e.g., Weeks, Gambescia, & Jenkins, 2003), the persistence of sexual infidelity seems to implicate a fundamental reproductive drive (see Buss, 2000; Simpson & Belsky, 2008).

Some individuals seem to be predisposed to stray – whether or not they are satisfied with their current relationship (Barta & Kiene, 2005). Known personality predictors of infidelity include callousness, antisocial dispositions, and a lack of empathy (Schmitt, 2004b). Given these associations, one would expect all three of the Dark Triad members to engage in infidelity. Research supporting this case is already accumulating (e.g., Buss & Shackelford, 1997; McHoskey, 2001; Schmitt, & Shackelford, 2008).

In the case of psychopaths, it is impulsivity that triggers infidelity (Egan & Angus, 2004).

For narcissists, it is a sense of superiority over their partners (Krizan & Bushman, 2010; Foster, Shrira, & Campbell, 2006). Exacerbated by their impulsivity, both psychopaths are likely to act on their fantasies (Williams et al., 2009). Hence, they are likely to undermine their current relationships as a result of extra-pair mating behavior.

Some unfaithful partners, however, *do* fully intend to maintain their primary relationships and sometimes successfully do so (e.g., Belsky, Steinberg, & Draper, 1991). This strategy is most compatible with Machiavellianism: Instead of the indiscriminate pursuit of many sexual affairs, it involves a few calculated ones. Because such infidelity is more guarded, it is less likely to undermine the primary relationship.

Why this research is needed

Previous work on mating behavior of the Dark Triad has investigated these predictors one at a time or lumped them together. As a result, the distinctiveness of their mating behavior has been obscured. In the studies presented below the three variables are analyzed simultaneously, thereby taking into account their statistical overlap.

Another handicap in most previous studies is the use of college samples. For most students, their sex lives have only begun. Moreover, at that age, reproductive strategies are less subject to later trade-offs. College students can indulge in casual sex while fully intending to later marry and commit to one partner. The consequences of infidelity and mate retention activities are less serious because of the large dating pool and lack of responsibility attached to relationships: A minority of students have children or serious financial investments. To avoid these limitations, we opted to collect our data from Mechanical Turk, an on-line survey community of varying ages. There is now sufficient evidence that data from Mechanical Turk are (at least) as valid as data from traditional sources (Buhrmester, Kwang, & Gosling, in press;

Paolacci, Chandler, & Ipeirotis, 2010).

Another difficulty with many previous studies is the unwillingness of some individuals to disclose personal information such as their mating attitudes and behavior (see Paulhus, 1991). In our on-line research, anonymity was assured at all stages. The fact that respondents were paid for participating also helped minimize selection bias often created by choosing to participate out of a personal interest in a research topic. In sum, the present studies were designed to minimize known drawbacks in previous research while exploring new territory in the human mating literature.

Overview

The four studies reported here investigate associations between the personalities of the Dark Triad and their mating strategies. Given the overlap in their callousness, there are likely to be similarities: In general, they should share an unrestricted approach to mating. When their unique associations are isolated with regression analysis, however, predictable differences should emerge.

If narcissists are motivated by egotistical needs, Machiavellians by strategic manipulation, and psychopaths by impulsive thrill-seeking, then there should be detectable differences in their mating strategies. Here, we report on three major aspects of mating strategies: (1) relationship focus (short- vs. long-term), (2) mate retention (controlling vs. non-controlling), and (3) infidelity (faithful or not). These correspond to three questions about the Dark Triad: what types of relationships do they seek?; how do they maintain partner fidelity?; and how likely are they to remain faithful to their primary relationship?

In light of the overwhelming evidence for gender differences in mating and sexual behavior (e.g., Buss & Schmitt, 1993; Kenrick & Trost, 1989), we analyzed men and women

separately or evaluated interactions with gender in all studies. In general, we predicted main effects for gender but similar patterns of correlations.

STUDY 1: SHORT- VS. LONG-TERM RELATIONSHIP FOCUS

Study 1 investigated whether members of the Dark Triad pursue short-term or long-term relationships (or both). Included in the on-line questionnaire package were standard measures of the Dark Triad and an established instrument tapping short- and long-term mating styles (Jackson & Kirkpatrick, 2007). Also included were questions concerning number of lifetime sexual partners and proportion of sexual relationships involving commitment.

We predicted that psychopaths would be exclusively short-term focused. In other words, psychopathy should be positively associated with all short-term indicators, and negatively associated with all long-term and commitment indicators. We also predicted that overlap with psychopathy would account for any predictive power of the other two Dark Triad members.

Consistent with previous research, we expected that men would score higher on all three of the Dark Triad variables. Nonetheless, we expected the same pattern of associations within the male and female subsamples.

Method

Participants

Given the need for a broader sample, we turned to Mechanical Turk, the Amazon web recruitment site. Mechanical Turk has been shown by several studies to be just as good – if not better – in data quality as student samples (Buhrmester, Kwang, & Gosling, in press; Paolacci et al., 2010). Our sample consisted of 379 participants (148 men, 231 women). 69% reported being in a relationship. Mean age = 31.70, SD = 10.68, minimum = 18, maximum = 71. The sample

ethnicity distribution was: 66% European-heritage, 18% East Asian, and 16% other ethnicities. Yearly incomes ranged from \$12,000 to over \$100,000. The pattern of associations did not change when ethnic minorities were excluded from our analyses.

Measures

Psychopathy. Psychopathy was measured with the Self-Report Psychopathy scale (SRP; Paulhus, Neuman, & Hare, in press). The SRP is a 64-item questionnaire that taps the four primary facets of psychopathy: erratic lifestyle, interpersonal manipulation, callous affect, and criminal tendencies. The overall scale demonstrated excellent reliabilities for both men ($\alpha = .91$) and women ($\alpha = .88$). Across the four studies in this research, correlations with the SRP were moderate to strong with Machiavellianism ($r = .50$) and with narcissism ($r = .27, p < .01$).

Machiavellianism. Machiavellianism was measured with the 20-item MACH-IV (Christie & Geis, 1970). In the present sample, internal reliabilities were solid for both men ($\alpha = .81$) and women ($\alpha = .78$). Over the four study sample, Machiavellianism and narcissism showed a moderate intercorrelation ($r = .18, p < .01$).

Narcissism. We assessed narcissism with the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The NPI is administered in 40-item forced choice format. In the present sample, the NPI demonstrated good reliabilities for men ($\alpha = .86$) and women ($\alpha = .88$).

Multidimensional Sociosexual Orientation Inventory (MSOI; Jackson and Kirkpatrick, 2007). The MSOI contains 25 items scored into three facets of reproductive strategy. Two 10-item attitude subscales are presented in 5-point Likert format. They are *short-term mating attitudes* (men $\alpha = .92$, women $\alpha = .93$) and *long-term mating attitudes* (men $\alpha = .91$, women $\alpha = .93$). Finally, a set of four items refer to short-term behaviors (STSB; men $\alpha = .64$, women $\alpha = .74$).

One of the MSOI items (total number of lifetime sexual partners) was scored separately because it accumulates with age. In addition, participants were asked how many of their sexual encounters involved commitment on the part of their partner and how many of these could be characterized as brief sexual encounters. These last three variables were re-coded to 12-point scales (ranging from 0 - 10 and 11 or more).

Results and discussion

The overall means for men and women are provided in Table 1. As expected, men scored higher on all three of the Dark Triad variables, with psychopathy showing the largest effect size. Also expected was the fact that men scored higher on variables related to short-term relationship focus and women higher on long-term focus.

The lack of overall gender difference in number of sexual partners makes more sense than the large sex difference typically found in student surveys: In those studies, males claim higher rates of intercourse (Brown & Sinclair, 1999). Presumably, the anonymity of our data collection and the age breadth of our adult sample served to even out the gender differences.

The correlational results are provided in Table 2. In both men and women, psychopathy predicted high scores on all short-term variables and low scores on all long-term variables. For the most part, the unique components of Machiavellianism and narcissism were unrelated to both long-term and short-term variables for both men and women.

Interestingly, regression results among men revealed that the raw correlations of psychopathy with relationship focus were being suppressed by overlap with other Dark Triad variables (see Paulhus, Robins, Trzeszniewski, & Tracy, 2004). When all three were entered in a regression, psychopathy became even more strongly associated with fewer committed relationships, more lifetime partners, and more short-term sexual behaviors. These results add

further support to our assertion that psychopaths are the only exclusively short-term focused of the three Dark Triad members.⁴

STUDY 2: MATE RETENTION CORRELATES

We now turn to mate retention, an element of mating strategies that is linked even more closely to antisocial outcomes (Shackelford et al., 2005). The standard measure in the field is the Mate Retention Inventory developed by Buss (1988) and later refined by Buss, Shackelford and McKibbin (2008).

Based on their behavior in other domains, members of the Dark Triad should show unique patterns of mate retention activity: The impulsivity of psychopaths leads us to predict high overall rates of retention activity. Although narcissists are likely to feel a sense of propriety over their romantic partners (e.g., Emmons, 1987), they are unlikely to doubt their partner's fidelity (Foster & Campbell, 2005). These facets of narcissism may nullify any overall link with mate retention. Machiavellians, in spite of their callous tendencies, should be discriminating in their use of tactics. After all, many retention tactics are known to undermine relationships (Buss, 2000) and lead to partner violence (Shackelford et al., 2005).

To date, only one study has been published on the Dark Triad and mate retention (Jonason, Li, & Buss, 2010). However, this study had several limitations that limit the interpretability of the findings. The sample consisted of younger college students – mostly unmarried: Mate retention activities are yet to be fully explored. The authors pooled genders in a largely female sample. The authors failed to ask whether participants were in current

⁴ In addition to multiple regression analyses, we also analyzed the data in a way that addresses the claim that the Dark Triad can be treated as a unified construct (e.g., Jonason et al., 2009). Further analyses of Study 1 indicated that psychopathy contributed to the prediction of relationship focus even after controlling for the latent variable underlying the Dark Triad. Application of this procedure did not change the overall results of any of our four studies. In short, important variance is lost when the Dark Triad variables are forced in a composite. To clarify the unique contributions of the Dark Triad, multiple regressions are the centerpiece of our analyses.

relationships or the length of the relationship. Finally, the authors forced the Dark Triad into a composite instead of conducting regressions.

To ensure a more informative study on mate retention tactics in the Dark Triad, we addressed these limitations in Study 2. First we exploited Mechanical Turk to ensure a diversity of ages, backgrounds, and relationships. Relationship status and length were assessed. The data were analyzed in such a fashion that disattenuation was unnecessary and multiple regression was used to determine the unique contribution of each member of the Dark Triad.

Method

Participants

An online community sample of 352 individuals were recruited from Mechanical Turk (128 men; 224 women). Of these, 79% were of European-ancestry, 7% African-ancestry, 5% East Asian, 9% other mixed ethnicities). The solicitation indicated a study on “sex and romance”. The sample ranged in age from 18 to 67 (mean age = 30.57, SD=9.95). Of these, 28% were married, 6% were engaged, 15% lived with a partner, 19% were in a relationship, and 27% were single. Of those in a relationship, 62% had maintained it for at least a year. The pattern of results reported below did not change when minorities were excluded from the analyses.

Measures

Dark Triad. We used the same instruments as in Study 1 to measure the Dark Triad. In this study, all three had acceptable alpha reliabilities: For men: Mach-IV $\alpha = .78$; NPI $\alpha = .87$; SRP $\alpha = .92$. For women: Mach-IV $\alpha = .81$; NPI $\alpha = .85$; SRP $\alpha = .92$. Intercorrelations ranged from .19 to .36.

Mate Retention Inventory: Short-Form (MRI-SF) (Buss, Shackelford, & McKibbin,

2008). The 38-item MRI-SF is a reduced version of the original MRI (Buss, 1988). We analyzed the MRI-SF in terms of five composites: Direct tactics, intersexual tactics, public display, positive inducements and Intrasexual tactics (Shackelford, Goetz, & Buss, 2005). We also assembled the items into overall control and non-control tactics based on Shackelford and Goetz's (2006) data showing that a subset of tactics are related to intimate partner violence.

Results and discussion

To evaluate possible gender differences in associations of the Dark Triad with the MRI-SF, we analyzed male and female participants separately. The three members of the Dark Triad were used as predictors in a series of regressions predicting the five categories of mate retention, as well as overall control and non-control tactics.

We also isolated the portion of the sample for which mate retention was most relevant -- namely, those currently in a relationship that has lasted for more than one year. We present results for both the whole sample, and for this subsample.

Table 3 reports the beta coefficients of the Dark Triad members predicting mate retention. Regardless of relationship length or status, psychopathy was the best predictor of control tactics for both men and women. It is notable that, among men, Machiavellianism was a weaker predictor of public display tactics than were the other Dark Triad members. One potential reason could be that Machiavellians, who are also likely to be seeking other partners, avoid broadcasting the fact that they are in a relationship. Given that they are the only member of the Dark Triad with reasonable impulse control, Machiavellian men may back off in consideration of future mating opportunities.

STUDY 3: MATE RETENTION EXPERIMENT

Some readers may be surprised about the lack of association between Machiavellianism

and mate retention tactics. After all, the manipulative tendencies of Machiavellians should be evident in the use of mate retention tactics. The answer may be traced to the flexibility of the Machiavellian's repertoire.

To confirm this flexibility in Study 3, we compared conditions where Machiavellians should and should not exhibit aggressive mate retention. Specifically, they should use aggressive mate retention tactics in short-term but not in long-term relationships. This prediction stems from the fact that there is no cost to such tactics in a short-term relationship: Relationship dissolution is not a concern, but fidelity still is.

By manipulating the relationship context, Study 3 also addresses a major limitation of cross-sectional mate retention research: There is a likely to be a confound between personality differences and the type of relationship the participant is contemplating. When asked about mating behavior, psychopaths are more likely than non-psychopaths to reflect on a short-term situation.

A final concern noted by Shackelford and Goetz (2006) is that the some behaviors on the Mate Retention Inventory may be habitual styles rather than reactions to infidelity threat. For example, behaviors such as affection and partner care are not always manipulative. To address this limitation, all participants were asked to assume that the scenario involved a a threat of infidelity. In this way we are able to be assured that responses addressed potential infidelity, in the true spirit of mate retention literature (Buss, 1988).

Although the threat of losing a romantic partner causes intense negative affect in most people (Besser & Priel, 2009), we predicted different mate retention behaviors among the Dark Triad members. Psychopaths and narcissists should show a more automatic and rigid mate retention style: Therefore, we should see no difference across relationship conditions.

Machiavellians, however, are predicted to temper their overt control tactics for long-term relationships, because such behavior would undermine their long-term goals. When it is useful and harbors no cost (i.e., in short-term relationships), Machiavellians should freely exploit control-oriented tactics.

Method

Participants

The online sample consisted of 190 individuals recruited from Mechanical Turk (90 men; 100 women). Of these, 57% were of European-ancestry, 25% East Asian, 18% other ethnicities). The sample ranged in age from 18 to 66 (mean age = 33.88, SD=9.84) and 70% reported currently being in a romantic relationship. Exclusion of ethnic minorities did not change the pattern of results.

Design and procedure

Participants first completed demographic items and measures of the Dark Triad. They were then randomly assigned to consider either (a) a long-term relationship with someone they wanted to remain with, or (b) a short-term relationship. They were then asked how they would react to a suspected infidelity.

To accommodate both experimental conditions, the short-form Mate Retention Inventory was modified slightly. Questions were framed in the present rather than past tense (e.g., “Snooped through my partner’s personal belongings,” was changed to “Snoop through my partner’s personal belongings.” “Did not take my partner to a party where other women would be present,” was changed to, “Not take my partner to a party where other women would be present.”). As a result, every question was compatible with the hypothetical format “How likely would you be to engage in the following behaviors?” Each item was measured on a scale of 1

(not at all likely) to 5 (extremely likely).

Measures

Dark Triad. We used the same instruments as Study 1 to measure the Dark Triad. All three had solid alpha reliabilities (Men: MACH-IV $\alpha = .79$; NPI $\alpha = .89$; SRP $\alpha = .93$; Women: MACH-IV $\alpha = .76$; NPI $\alpha = .87$; SRP $\alpha = .91$).

Mate Retention Inventory Short-Form (MRI-SF; Buss, Shackelford, & McKibbin, 2008). In its new hypothetical format, the MRI-SF showed high alpha reliabilities for both men ($\alpha = .94$), and women ($\alpha = .91$).

Results and discussion

If our hypothesis is correct that Machiavellians are flexible and context dependent in their use of mate retention, then there should be a significant interaction between the manipulation and Machiavellianism. This interaction should not be significant for the other Dark Triad variables. We used hierarchical moderated regression with four predictor variables in Step 1 and three interactions in Step 2. At Step 1, the three Dark Triad variables were entered as continuous predictors and the experimental manipulation as a two-level categorical predictor. At Step 2, we entered the interaction between the experimental condition and each of the Dark Triad.

As predicted, regression results for men indicated that the only significant interaction was that between Machiavellianism and condition ($\beta = -.64, p < .01$, two-tailed). Neither the psychopathy x condition interaction ($\beta = .47, ns$) nor the narcissism x condition interaction ($\beta = .11, ns$) reached significance. The pattern of results is illustrated in Figure 1 by showing the effect of the manipulation on high scorers on each of the Dark Triad.

Among women, none of the interactions reaching significance. In retrospect, this gender difference is consistent with the fact that mate retention tactics primarily reflect male strategies

(Shackelford & Goetz, 2006).

These findings highlight the flexibility of Machiavellian men when it comes to mate retention. Machiavellians can apply zealous control tactics -- but only when it is beneficial to do so. Psychopathic and narcissistic men, on the other hand, seem to persist in mate retention tactics even when it is not beneficial to do so, for example, in long-term relationships.

STUDY 4: INFIDELITY AND ITS CONSEQUENCES

Finally, we turn our attention to (arguably) the most serious threat to relationships, namely, *infidelity*. Literature reviewed in the introduction gave us reason to believe that all three members of the Dark Triad would report a greater likelihood of sexual infidelity, (i.e., 'cheating') while in a committed relationship. In the head-to-head competition of a regression equation, however, we anticipated that the impulsivity of psychopaths would emerge as the predominant contributor.

We also expected that infidelity would result in different relationship outcomes for each of the Dark Triad. Psychopathic recklessness should eventuate in relationship dissolution (Williams et al., 2009). On the other hand, Machiavellians should be sufficiently manipulative to navigate an infidelity (Jones & Paulhus, 2009). Finally, narcissistic infidelities are not beyond repair: With sufficient intervention, they can full commit (Finkel et al., 2009). In sum, Machiavellians and narcissists who commit infidelity may still be able to sustain their relationships.

Method

Participants

An online community sample of 852 individuals were recruited from a Mechanical Turk (436 men; 416 women; 60% Caucasian, 19% East Asian, 10% South Asian, 11% mixed

ethnicities) for a study on “sexual behavior”. The sample ranged in age from 18 to 74 (mean age = 30.53, SD=9.38) and 72% reported currently being in a romantic relationship. The pattern of associations did not change when ethnic minorities were excluded from the analyses.

Measures

Dark Triad. The Dark Triad variables were measured with the same instruments as in Studies 1 to 3 -- with one exception. Instead of the 40-item NPI, we used the NPI-16 to measure narcissism (Ames, Rose, & Anderson, 2006). All three measures showed acceptable alpha reliabilities in both men (Mach-IV $\alpha = .78$; NPI-16 $\alpha = .73$; SRP $\alpha = .92$) and women (Mach-IV $\alpha = .82$; NPI $\alpha = .74$; SRP $\alpha = .92$).

Infidelity questions. Participants were asked two questions with respect to infidelity: “Have you ever been unfaithful to your current (or most recent) partner?” and “Did the infidelity cause the end of the relationship?”

Results

Participants were scored “1” if they reported having committed an infidelity and ‘0’ if they had not. Overall, the infidelity rates of men (24%) and women (20%) did not differ significantly, $\chi^2(839) = 2.17, p = .14$. Prediction of this dichotomous outcome required binary logistic regression with the Dark Triad variables as predictors. To index effect sizes, we report standardized beta weights (β) along with Odds Ratios (OR).

Results for men indicated that psychopathy was associated with infidelity ($\beta = .48, OR = 9.29, p < .002$). Neither narcissism ($\beta = .12, OR = .88, p = .35$) nor Machiavellianism ($\beta = .03, OR = .04, p = .85$) made independent contributions.

Results for women were more complex. Both psychopathy ($\beta = .53, OR = 8.64, p < .01$) and Machiavellianism ($\beta = .32, OR = 4.09, p < .05$) were independent predictors of infidelity.

Predicting dissolution

In order to predict who experienced relationship dissolution, we isolated the subset of participants who reported having committed an infidelity. Once again binary logistic regression was used with the Dark Triad (plus their interactions with gender) as predictors and relationship dissolution as the outcome.

Results indicated that psychopathy was a significant predictor of relationship dissolution following an infidelity ($\beta = .64$, OR = .05, $p < .03$). Narcissism was not uniquely related to dissolution ($\beta = .25$, OR = 1.27, $p > .20$). Machiavellianism was a marginally significant negative predictor, in other words it was a *protective* factor of relationship dissolution ($\beta = -.61$, OR = -3.54, $p = .06$). In other words, among those who had committed an infidelity, Machiavellianism tended to help keep a relationship together. Given that none of these effects interacted with gender, there was no evidence for a sex difference in these associations.

Discussion

For both men and women, psychopathy was a risk factor for both infidelity and loss of one's relationship as a result. As with relationship focus and mate retention tactics, psychopaths seem to epitomize the stereotypic male mating strategy.

Only for women, did Machiavellianism have an impact. Hi-Mach women were predisposed to committing an infidelity. Yet, among the unfaithful, hi-Mach women were less likely than low-Mach women to have lost their relationship. That combination of impulsivity and callousness is especially likely to predispose a form of female infidelity referred to as *gene capturing*⁵ (see Buss, 2000 for a review).

Once again, Machiavellians behaved differently from the other Dark Triad members in terms of mating strategies. The overall pattern of correlates indicates behavioral flexibility,

⁵ Gene capturing refers to the female strategy of manipulating a man into raising another man's offspring.

impulse control, and long-term thinking.

GENERAL DISCUSSION

By surveying four adult samples, we sought to elucidate mating strategies among the Dark Triad. In Study 1, we found that psychopathy was the predominant predictor of short-term relationship focus. Study 2 suggested that psychopaths were predisposed to use of control mate retention tactics. Study 3 showed that psychopaths and narcissists were consistent in their mate retention behavior whereas Machiavellians were flexible. In Study 4, psychopathy was the primary predictor of infidelity. Psychopathy predicted relationship dissolution following infidelity whereas Machiavellianism actually seemed to be a protective factor.

Short- vs. long-term relationship focus

Our findings suggest that psychopaths are the only members of the Dark Triad that are exclusively short-term oriented. These results are consistent with work presented recently by Schmitt (2009). He reported on an international survey indicating that psychopathy outperformed both narcissism and Machiavellianism in predicting preferences for short-term mating.

Neither Machiavellians nor narcissists showed an overall preference for short- or long-term relationship focus. As with other aspects of Machiavellians' behavior, their relationship focus is likely to depend on the context: Overall, any predisposition would be masked. Similarly, the overall lack of association with narcissism may result from competing tendencies. Although narcissists have an impulsive side (Vazire & Funder, 2008), they are optimistic that their relationships will last.

Infidelity

Previous studies on individual members reported that each of the Dark Triad variables are

prone to infidelity (e.g., Buss & Shackelford, 1997; Harris et al., 2007; McHoskey, 2001).

Along with substance abuse, such risky behavior is common to those in the callous-dominant quadrant of the interpersonal circumplex (Markey et al., 2005).

However, when we controlled for their overlap, the impact of the Dark Triad members became more differentiated. Such differences can again be explained by different combinations of the common element (i.e., callousness) and degree of impulse control. The psychopaths's combination of callousness plus impulsivity is lethal: It leads to infidelity that destroys relationships.

Interestingly, Machiavellian women also engaged in infidelity but did not suffer the consequences. Their ability to sustain their relationships stands in stark contrast to psychopaths and (to a lesser extent) narcissists, who both report relationships ruined over infidelity.

How do Machiavellian women pull it off? Presumably their strategic (cautious and flexible) nature play a role. Because they are cautious, their infidelity may go largely undetected. Even when caught, their interpersonal flexibility may allow them to smooth over conflicts (Jones & Paulhus, in press).

Mate Retention Tactics

The unrestricted sexuality of the Dark Triad also surfaces in mate retention. Psychopathy was the only unique predictor of control tactics in Study 2. In Study 3, however, narcissists and psychopaths seemed inflexible in their mate retention strategies, whereas Machiavellians seemed to adjust their strategies in a way that would be most beneficial to their long-term goals. In this way, we see how the callous core of the Dark Triad, coupled with a strategic disposition, leads the Machiavellian to be flexible and only use such tactics when they are beneficial. The other two members of the Dark Triad do not seem to have such strategic dispositions. Therefore,

psychopaths and narcissists do not adjust their use of control tactics based on relationship type, whereas Machiavellians do.

Gender differences

We have not yet addressed the issue of gender differences in elevation across the Dark Triad. Specifically, why is psychopathy so much more prevalent in males compared to females? Indeed, the observed effect size of .75 (Cohen's d) is unheard of in basic personality research (Costa, Terraciano & McCrae, 2001). However, this large sex difference is consistent with the clinical literature on psychopathy (Hare, 1970).

The explanation may simply be that psychopathy is more consistent with the male reproductive agenda (Buss, 2000). The facets of the questionnaire used here (SRP) include a number of well-known gender differences favoring male reproduction (e.g., impulsivity, antisociality, callousness). All of these would contribute to short-term relationship focus (Figueredo et al., 2005). The results imply that the psychopathic mating strategies are simply an exaggeration of the typical male mating preference.

Then why do we often see the same pattern of mating correlates in females? The variation within genders indicates that both high and low-psychopathy mating styles can be adaptive within gender.

By contrast, gender differences in the other Dark Triad members are much weaker and: In fact, they disappear once their overlap with psychopathy is controlled. With regard to mating behaviors, it seems that psychopathy predominates. Nonetheless, we did find one provocative gender difference: Infidelity was unrelated to Machiavellianism in men, but highly related to Machiavellianism in women.

CONCLUSIONS

Individual differences in mating strategies can be organized around the distinction between restricted and unrestricted sexual styles (Gangestad & Simpson, 2000). Our results point to a more elaborate set of individual differences based on the Dark Triad. Four studies suggest that, despite their overlapping callousness, these three personalities have distinctive elements in their mating strategies. The differences become clear when regression analysis is applied to distinguish their independent contributions.

Our research contributes to the mating literature by differentiating three exploitative mating strategies. One derives from grandiose entitlement; the second from selfish manipulation; and the third from impulsive thrill-seeking. The latter is consistent with both the psychopathic personality and the traditional male mating profile (i.e., short-term relationship focus, controlling mate retention, reckless infidelity) and requires both the common element of the Dark Triad (callousness) and impulsivity.

Because they are strategic, Machiavellians show the most complex profile of mating strategies, one that entails flexibility. A combination of the common core (callousness) and strategic complexity leads Machiavellians to pursue more open, flexible, pluralistic strategies in the realm of mating.

Although self-report in nature, the present data have several advantages over the typical student samples. Our participants were adults representing a wide range of occupation, education and age. As such, their experiences are more extensive and their attitudes more stable than those reported by students still in the early stages of their mating history. Accordingly, we believe that our results provide a more clear picture of variation in human mating strategies.

Implications for relationships

Exploitation and trust are intimately intertwined. A wealth of social psychological

research has already elucidated the processes involved in trusting others (e.g., Clark & Waddell, 1985; Jones, Couch, & Scott, 1997). Those processes play a critical role in the success or failure of mating tactics (Kenrick et al., 1993; Simpson, 2007). Only a handful of studies have investigated what types of people are trustworthy in mating contexts (Figueredo et al., 2007; Schmitt, 2005). Our four studies have clarified the behavior of three distinctly untrustworthy characters, namely, the Dark Triad of personality traits. All three are prone to betrayal in mating contexts because of their common callousness. In the mating context, this untrustworthiness plays out differently in the triad members. Psychopaths are untrustworthy because they are so impulsive (Jones & Paulhus, 2011) and narcissists, because their entitlement justifies exploitation of others (Krizan & Bushman, 2010). The strategic gaming of Machiavellians, we would argue, make them the least trustworthy of the three.

Alas, it appears that untrustworthiness may have adaptive benefits (Mealey, 1995; Wilson, Near, & Miller, 1996). Although some of these benefits apply similarly across men and women (Mikach & Bailey, 1999), others interact with gender in a coherent fashion. In evolutionary terms, each member of the Dark Triad seems to have a unique reproductive niche.

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Table 1

Study 1: Descriptive Statistics for Key Variables in Men and Women

Variable	Men (n = 147)		Women (n = 229)		t-test	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Psychopathy	2.52	.44	2.22	.36	6.86**	.75
Narcissism	.38	.19	.32	.19	3.35**	.29
Machiavellianism	2.93	.48	2.80	.44	2.80**	.28
Short-term Attitudes	3.20	.97	2.37	1.03	7.75**	.83
Short-term Behavior	1.98	1.90	2.46	0.64	2.70**	.29
Long-term Attitudes	4.06	.78	4.27	.78	-2.54*	-.27
% Relationships Committed	49.3	16.6	53.2	16.7	-2.28*	-.24
# Lifetime partners	6.68	5.08	6.14	4.70	1.04	.11

Note: * = $p < .05$, ** = $p < .01$, two-tailed. Values for the personality and attitude variables are item means on 5-point scales.

The two numerical variables (Short-term behavior items, # lifetime partners) were binned from 0 – 10 and 11 or more.

Table 2

Study 1: Predicting Short and Long-term Relationship Focus from Dark Triad Variables

<i>Criterion</i>	Men (n = 144)			Women (n = 227)		
	Psychopathy	Narcissism	Machiavellianism	Psychopathy	Narcissism	Machiavellianism
<i>Short-term focus</i>						
Attitudes	.43** (.43**)	.12 (-.12)	.33** (.09)	.38** (.40**)	.14* (-.04)	.22** (.01)
Behavior	.31** (.49**)	.15 (.02)	.01 (-.29**)	.28** (.31**)	.20** (.09)	.10 (-.09)
# Lifetime partners	.15 (.23*)	.01 (.07)	.02 (-.10)	.16* (.31*)	.06 (-.01)	.06 (-.06)
<i>Long-term focus</i>						
Attitudes	-.38** (-.39**)	-.12 (.16)	-.30** (-.09)	-.20** (-.31**)	-.01 (.10)	-.09 (.03)
Percent committed relationships	-.20 (-.29*)	.01 (.10)	-.09 (.06)	-.19* (-.20)	-.10 (-.02)	-.09 (.02)

Note: * = $p < .05$, ** = $p < .01$, two-tailed. Entries are raw correlations with beta weights in parentheses. Age was covaried out of all correlations and regressions.

Table 3. *Study 2: Predicting Mate Retention from the Dark Triad*

Mate retention	Relationship > 1 year			Total Sample		
	Mach	SRP	NPI	Mach	SRP	NPI
<i>Men (total sample = 128, > 1 year sample = 71).</i>						
Direct tactics	.27	.15	-.13	.11	.08	-.04
Intersexual tactics	.21	.23	-.09	.00	.27**	-.07
Public display	-.24	.11	.18	-.26*	.14	.04
Positive inducements	-.02	.09	.04	-.19	.07	.01
Intraseexual tactics	-.07	.42**	-.02	-.06	.35**	-.04
Overall non-control tactics	.02	-.01	.19	-.16	-.01	.09
Overall control tactics	.06	.28*	-.04	-.10	.27*	-.04
<i>Women (total sample = 213, > 1 year sample = 120)</i>						
Direct tactics	-.06	.27*	-.09	-.06	.33**	-.05
Intersexual tactics	.00	.17	-.07	-.01	.24**	-.08
Public display	-.15	.07	.02	-.04	.12	-.10
Positive Inducements	-.09	.02	.05	-.03	-.04	.13
Intraseexual tactics	-.03	.37**	-.01	-.02	.37**	-.07
non-control tactics	-.22*	.06	.01	-.12	-.02	.07
control tactics	-.06	.23**	-.03	-.04	.21**	.02

Note: Entries are betas from regressing each tactic on the Dark Triad variables.

* = $p < .05$, ** = $p < .01$, all two-tailed.

Figure 1.

Study 3: Control Mate Retention for High scorers on each of the Dark Triad (males only).

