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How happiness expectations relate to the Dark Triad traits

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ABSTRACT

In samples of Americans ($N = 273$) and Indians ($N = 194$) paid through Mechanical Turk (Study 1) and British ($N = 132$) volunteers contacted through Reddit (Study 2), we examined how the Dark Triad traits (i.e., psychopathy, narcissism, and Machiavellianism) were associated with happiness expectations when participants imagined solving adaptive tasks. In Study 1, the traits were linked to forecasted happiness in achieving status and power and mate-seeking, with psychopathy demonstrating less happiness when pursuing slow life history tasks (e.g., avoiding diseases), whereas the other two traits led to expectations of happiness when forming social bonds, retaining mates, and avoiding pathogens. In Study 2, the traits were associated with choosing to pursue mating opportunities to induce happiness. Women expected more happiness in response to ensuring their safety over pursuing mating opportunities. We suggest happiness might be an affective feedback system that rewards people for pursuing their life history goals.

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The Dark Triad traits have become a topic of interest for researchers around the world (Jonason et al., 2017). They are characterized by grandiosity and self-centeredness (i.e., narcissism), manipulation and cynicism (i.e., Machiavellianism), and callous social attitudes and impulsivity (i.e., psychopathy). These traits result in individualistic behaviors (Jonason & Fletcher, 2018) such as intimate partner violence (Jones & Olderbak, 2014), counterproductive workplace behavior (Spain, Harms, & LeBreton, 2014), and petty theft (Lyons & Jonason, 2015). These traits allow researchers to capture some of the darker aspects of human nature, unlike the more socially desirable Big Five traits (see Zeigler-Hill & Marcus, *in press*). One of the boons for research on the Dark Triad traits in the last decade has been its integration into evolutionary psychology (Koehn, Okan, & Jonason, 2018)—in particular, life history theory (Wilson, 1975).

Life history theory was originally used to describe differences between species in terms of how organisms make tradeoffs of limited metabolic energy and time to solve their mating and survival goals, which are often in conflict. Effort spent mating (including seeking mates and status) cannot be spent on somatic effort to protect one's kin and avoiding threats. For instance, mice are considered to have a fast (i.e., *r*-selected) life history strategy—mature, fast, short lives, many offspring, small—whereas elephants are considered to have a slow (i.e., *K*-selected) life history strategy—slow to mature, invest heavily in a few offspring, long-lived, large. Mice are said to have traded-off survival and somatic effort for immediate reproduction of many offspring to offset ecological threats. Elephants, in contrast, are said to have traded off mating effort for somatic effort, which is why females have a gestation period longer than humans do and are so cognitively advanced. When this theory is applied to people (Figueredo et al., 2006), it suggests that personality traits may orient people toward investing more in mating effort or somatic effort. Most people prioritize motives that involve their safety and helping family over mating and status (Neel, Kenrick, White, & Neuberg, 2016), but this is to be expected because humans are characterized by a slow life history speed (Mace, 2000). In contrast, others, like those characterized by traits like psychopathy, may have different motivational priorities; priorities that better resemble a fast

life history strategy (Jonason, Koenig, & Tost, 2010). Consistent with this, the Dark Triad traits are associated with a more promiscuous mating style (Jonason, Li, Webster, & Schmitt, 2009) and not characterized by motivations for avoiding diseases (Jonason & Zeigler-Hill, 2018) and mate retention (Jonason, Li, & Buss, 2010). In this study, we attempt to better understand the Dark Triad traits through an examination of happiness expectations in relation to achieving relevant adaptive outcomes.

Unsurprisingly, given the popularity of the Dark Triad traits and positive psychology (Diener, 1999) in modern research, there is considerable research attempting to link the Dark Triad traits to some measure of dispositional happiness (Aghahabaei & Blachino, 2015; Zajenkowski & Czarna, 2015). Unfortunately, this research is equivocal, suggesting narcissism might be unrelated to positive mood, whereas psychopathy and Machiavellianism are negatively associated with positive mood (Egan, Chan, & Shorter, 2014), all the Dark Triad traits might be unrelated to happiness (Aghahabaei, Mohammadtabar, & Saffrania, 2014), and narcissism is linked with happiness (Giacomin & Jordan, 2016). One reason for these inconsistent findings may be that researchers have used general trait measures of happiness. Instead, happiness might be a response to events in one's life more than a disposition (Rhodewalt & Morf, 1998). Given our evolutionary perspective, we examine happiness projections to solving adaptive fundamental social problems. The fundamental social problems that have been identified to date include: self-protection, disease avoidance, group affiliation, exclusion concern, independence, status, mate seeking, mate retention, and kin care (Neel et al., 2016).

It is already clear that the Dark Triad traits are associated with the fundamental social motives of status- and mate-seeking and less so with disease avoidance and having good relationships with family (Jonason & Zeigler-Hill, 2018). In this study, we attempt to understand the projected happiness associated with the Dark Triad traits when participants are asked to imagine success when solving adaptive tasks. In general, we expect the three Dark Triad traits to be associated with happiness in response to mate- and status-seeking given their sexual agenda (Jonason et al., 2009) and power motivations (Semenya & Honey, 2015). Despite these overall predictions, the traits are sufficiently distinct to warrant an examination of each trait on its own. However, psychopathy is the most antisocial (Jonason, Strosser, Kroll, Duineveld, & Baruffi, 2015) and risk-taking (Jonason et al., 2010) trait of the three, which might translate into limited expectations for happiness for doing prosocial things like caring for family and limited concern for matters related to safety (e.g., pathogen avoidance). In contrast, narcissism is the lightest (i.e., socially positive) of the three traits (Jonason et al., 2015, 2017), and this lightness might be revealed in affective responses to engaging in prosocial activities and ensuring personal safety. And last, Machiavellianism, is often seen as synonymous with psychopathy (Miller, Hyatt, Maples-Keller, Carter, & Lynam, 2016), but this might be confusing outcomes with motivations, both having antisocial outcomes (Jonason et al., 2015). If they are redundant (Miller et al., 2016), we would expect the correlations with psychopathy and Machiavellianism to line up. Instead, we expect Machiavellianism to be distinct from psychopathy because it may orient people to long-term strategizing as opposed to impulsive self-destruction (Jones & Paulhus, 2011). As such, it should be associated with expected happiness in response to long-term goals like building social and family alliances and maintaining survival.

As a further way of understanding the relationships between the Dark Triad traits and happiness projection when solving adaptive tasks is to examine the role of participant's sex as well. There is considerable evidence that men are better characterized by the Dark Triad traits than women are from various countries (Jonason et al., 2017), which may be because ancestral women who were high on these traits might have faced reproductive costs that ancestral men did not (Jonason & Lavertu, 2017). Conversely, women are more motivated to engage in self-protective and familial bonding—motivations that are species-typical (Mace, 2000)—than men are (Neel et al., 2016). If true, there might be (1) sex differences in expected happiness in response to solving adaptive tasks, and (2) the Dark Triad traits might facilitate the pursuit of mate- and status-seeking in men, but low levels of these traits may facilitate engaging in somatic effort in women. That is, women should report more expected happiness in response to “playing it safe” (e.g., avoiding pathogens, bonding with family), whereas men should report more happiness in

response to “playing it fast” (i.e., status- and mate-seeking) and these effects may be a function of lower rates of the Dark Triad traits in the former and higher rates in the latter.

In two studies, adopting two different methods to examine projected happiness, we examine individual differences in what people think will induce happiness in relation to the Dark Triad traits. We contend that part of the motivational systems connected to the Dark Triad traits are affective feedback systems that activate when success at important adaptive tasks are achieved. By adopting a life history paradigm, we examine the affective responses people have to “playing it safe” (i.e., *K*-selected) and “playing it fast” (i.e., *r*-selected) in relation to the Dark Triad traits.

Study 1: the Dark side of happiness in America and India

In Study 1, we cast a wide net (i.e., exploratory) on the fundamental social problems people face using a series of single-item measures. We link responses to them with the Dark Triad traits and examine the role of participant’s sex. Importantly, we do this in samples drawn from America and India and, thus, we explore (but expect no meaningful differences) the potential moderating influence of culture/country in happiness expectations in relation to the Dark Triad traits.

Method

Participants and procedures

Study 1 was composed of two samples collected independently. Sample 1 was composed of 273 participants (50% male), between the ages of 19–69 ($M = 34.33$, $SD = 10.98$), who were recruited from the United States on Mechanical Turk (MTurk) for US\$1. Sample 2 was composed of one hundred and ninety-four participants (67% male), between the ages of 21–47 ($M = 31.65$, $SD = 8.56$) who were recruited from India on MTurk for US\$.50.¹ In both samples, participants completed a short-demographic questionnaire where they reported their age on a sliding scale from 18–100, their sex (male = 1, female = 2), and their relationship status (1 = not in a committed relationship, 2 = in a committed relationship). In both samples, only those participants who completed the measures from unique IP addresses were included. In both cases, participants were informed of the nature of the study, completed a series of measures where the items within each cluster were presented in random order, and were debriefed and thanked upon completion. The minimum sample size (i.e., $N^* = 194$) in each country was determined based on power analysis for the average effect size in social and personality psychology ($r \approx .20$; Richard, Bond, & Stokes-Zoota, 2003).

Measures²

The 27-item Short Dark Triad questionnaire (Jones & Paulhus, 2014) was used to assess the Dark Triad traits. Participants indicated how much they agreed (1 = *Strongly disagree*; 5 = *Strongly agree*) with items such as “It’s not wise to tell your secrets” (i.e., Machiavellianism), “People see me as a natural leader” (i.e., narcissism), and “Payback needs to be quick and nasty” (i.e., psychopathy). Items were summed for the corresponding measures of Machiavellianism (Cronbach’s $\alpha = .82$; .78), narcissism ($\alpha = .78$; .73), and psychopathy ($\alpha = .78$; .81) in the American and Indian samples, respectively.³

To measure happiness in response to success in achieving adaptive goals, we developed eight single items based on Fundamental Social Motives measure (Neel et al., 2016). These face-valid items reflected similar content in a more efficient manner and serve as projective tests of happiness in response to imagined events. Participants were told “in this section we would like to know what makes you happy. Imagine the following happened to you and rate how happy you would feel” (1 = *Not at all*; 5 = *Very much*) (1) “making new friends,” (2) “earning status/power,” (3) “making sure you are safe,” (4) “finding new mates for sexual/romantic relationships (when you need one),” (5) “making sure your

present mate is faithful/happy (when you have one),” (6) “avoided diseases, viruses, and colds,” (7) “having a good relationship with family members,” and (8) “having autonomy.”

Results and discussion

Our data analytic strategy moves from basic tests to more advanced tests. We start with testing for sex differences and examine their country-specificity. Then we move on to correlational analyses at both the zero-order level and the standard multiple regression level to partial the shared variance in the three traits. Last, we ensure the correlations are robust across sex and sample and determine whether any of our detected sex differences in happiness projections are a function of (i.e., mediated) individual differences in the Dark Triad traits.

Table 1 contains descriptive statistics by sex and country for what people think will make them happy based on the fundamental social motives. The primary causes of happiness reflected adaptive needs characteristic of a species that is better characterized by somatic effort (i.e., *K*-selected; Mace, 2000). We conducted a series of 2 (participant’s sex) × 2 (country) ANOVAs for each of the items to measure happiness with alpha set at .01 (because of the single-item nature of our measure of happiness). The Indian sample scored high than the American sample in earning status/power ($F(1, 462) = 45.21, p < .01, \eta_p^2 = .08$) and making sure one is safe ($F(1, 462) = 6.76, p = .01, \eta_p^2 = .02$). Earning status may be one way of finding safety in a poor landscape, but as these were not predicted, we urge caution in their interpretation. Women scored higher than men did in self-reports of happiness derived from ensuring safety ($F(1, 462) = 11.91, p < .01, \eta_p^2 = .03$) and having a good relationship with family members ($F(1, 462) = 9.70, p < .01, \eta_p^2 = .02$). In contrast, men reported more happiness expected when finding new mates ($F(1, 462) = 13.07, p < .01, \eta_p^2 = .03$). This suggests women were more likely than men were to feel that happiness is derived from *K*-selected options, and men’s happiness may be more focused on their *r*-selected, mating motives. These sex differences were not moderated by country (see Table 2), suggesting that despite these two samples being from culturally distinct places, the aforementioned sex differences—albeit weak in effect size—were constant.⁴

Table 3 contains correlations between the Dark Triad traits and the expectations of happiness ($p < .01$), along with beta weights for the residuals for each trait in standard multiple regression. Machiavellianism was associated with happiness in response to safety, pathogen avoidance, autonomy, making new friends, earning status and power, and mate-seeking. Narcissism was associated with the happiness in response to safety, pathogen avoidance, earning status and power, and mate-seeking. Psychopathy, on the other hand, was associated with *less* happiness in response to mate retention and family concerns and the residual of psychopathy was associated with limited happiness in response to safety, pathogen avoidance, and making new friends. All three of the Dark Triad traits were linked by projected happiness in response to imagining they would gain status and power (Semenya & Honey, 2015) and mate-seeking (Jonason, Valentine, Li, & Harbeson, 2011).⁵

When examining the residuals, after controlling for the shared variance, we found several effects worth mentioning. In terms of mate retention, family concerns, safety, and making friends,

Table 1. Descriptive statistics by country and sex for what participants think will make them happy (Study 1).

	Mean (<i>SD</i>)			
	USA	India	Men	Women
Mate retention	4.14 (0.89)	4.06 (0.85)	4.02 (0.88)	4.21 (0.86)
Family concerns	4.06 (0.91)	4.18 (0.85)	3.70 (1.10)	3.95 (1.04)
Safety	3.82 (0.99)	4.02 (0.88)	3.77 (0.87)	3.89 (0.90)
Pathogen avoidance	3.76 (1.14)	3.89 (0.99)	3.98 (0.89)	4.21 (0.90)
Autonomy	3.74 (1.08)	3.63 (0.89)	3.78 (0.89)	3.93 (0.84)
Making new friends	3.67 (0.92)	3.84 (0.84)	4.35 (1.07)	4.54 (0.91)
Earning status/power	3.29 (1.20)	3.92 (0.87)	3.44 (0.95)	3.66 (0.95)
Mate-seeking	3.27 (1.38)	3.10 (1.35)	3.61 (1.07)	3.35 (1.03)

Table 2. Sex differences and similarities in American and Indian samples (Study 1).

	American		Indian	
	Men	Women	Men	Women
Mate retention	4.01 (0.88)	4.30 (0.85)	4.04 (0.89)	4.09 (0.77)
Family concerns	3.88 (0.96)	4.26 (0.77)	4.12 (0.88)	4.28 (0.80)
Safety	3.58 (0.99)	4.05 (0.96)	3.95 (0.95)	4.15 (0.73)
Pathogen avoidance	3.55 (1.14)	3.95 (1.11)	3.84 (1.05)	3.94 (0.88)
Autonomy	3.72 (1.09)	3.78 (1.06)	3.63 (0.86)	3.62 (0.95)
Making new friends	3.59 (0.86)	3.76 (0.97)	3.81 (0.91)	3.89 (0.77)
Earning status/power	3.32 (1.18)	3.26 (1.22)	3.84 (0.89)	4.06 (0.83)
Mate-seeking	3.58 (1.26)	2.98 (1.43)	3.22 (1.29)	2.86 (1.47)

Table 3. Associations between the Dark Triad traits and individual differences projected happiness (Study 1).

	<i>r</i> (β)		
	Machiavellianism	Narcissism	Psychopathy
Mate retention	.01 (.12)	.03 (.18**)	-.14** (-.32**)
Family concerns	-.06 (-.01)	.08 (.31**)	-.16** (-.35**)
Safety	.20** (.24**)	.18** (.19**)	.04 (-.23**)
Pathogen avoidance	.20** (.27**)	.13** (.10)	.04 (-.20**)
Autonomy	.12* (.15*)	.09 (.09)	.02 (-.13*)
Making new friends	.18** (.18**)	.20** (.23**)	.05 (-.21**)
Earning status/power	.40** (.32**)	.40** (.33**)	.25** (.15**)
Mate-seeking	.21** (.09)	.20** (.06)	.23** (.14*)

* $p < .01$, ** $p < .001$

narcissism was associated with more happiness in response, but psychopathy was negatively associated. This suggests the residuals of these traits are quite different (Jonason et al., 2015). The residuals of Machiavellianism aligned with the residuals for psychopathy for status only and with the residuals for narcissism for safety, pathogen avoidance, autonomy, and making friends. This suggests that Machiavellianism may not be redundant to psychopathy (Miller et al., 2016).

We tested whether sex (male = 1, female = 2) differences in what people thought would make them happy were mediated by each of the Dark Triad traits using hierarchical multiple regression; our tests were confined to those cases in which we found sex differences only (i.e., the American sample). Given the quasi-exploratory nature of our tests, we opted for a more liberal approach to mediation than provided in bootstrapping. Step 1 contained participant's sex, which was related to expected happiness in response to success in attaining a new sex partner, suggesting it was men who expected more happiness ($\beta = -.22$, $p < .01$). The independent addition of Machiavellianism ($\Delta R^2 = .03$, $F(1, 271) = 7.41$, $p < .01$), psychopathy ($\Delta R^2 = .05$, $F(1, 271) = 14.02$, $p < .01$), and narcissism ($\Delta R^2 = .05$, $F(1, 271) = 13.12$, $p < .01$) in Step 2, suggests there was partial mediation for each trait when examining the betas for participant's sex in Step 2 ($\beta = -.18, -.15, -.18$, $p < .05$). When examining sex differences (Step 1; $\beta = .17$, $p < .01$) in expected happiness in response to mate retention, psychopathy partially mediated ($\Delta R^2 = .03$, $F(1, 271) = 7.80$, $p < .01$) those sex differences such that the beta shrunk at Step 2 ($\beta = .14$, $p < .05$), suggesting that it was women who were low in this trait who were especially likely to expect happiness in response to mate retention. And last, sex differences (Step 1; $\beta = .17$, $p < .01$) in expected happiness in response to having good familial relations was partially mediated by psychopathy ($\Delta R^2 = .08$, $F(1, 271) = 22.56$, $p < .01$), where the beta for participant's sex shrunk in Step 2 ($\beta = .12$, $p < .05$), suggesting like in the case of mate retention, women who were low on this traits were especially likely to expect happiness in response to having good family relationships. No other mediation effects were found, and we did not test for suppression of effects that did not reveal sex differences in Step 1.

Study 2: Dark choices towards happiness

In Study 1, we presented novel data on the relationships between the Dark Triad traits and expected happiness in response to solving fundamental social problems using normative data from two countries. In Study 2 we attempt to conceptually replicate these effects in a sample of volunteers from a third country. We focus, here, on the two most general fundamental social problems in relation to evolutionary psychology; survival (i.e., *K*-selected) and mating (i.e., *r*-selected). We present participants with a forced-choice question assessing happiness priorities, correlate their choices with the same measure of the Dark Triad traits, and examine the role of participant's sex as above.

Participants and procedure

The sample was composed of 132 volunteers (45% male), between the ages of 18–72 ($M = 35.09$, $SD = 12.37$), who were recruited from the United Kingdom through various Reddit sites for cities like London and Manchester and larger groupings like Great Britain and the United Kingdom. Participants completed a short demographic questionnaire, in which they reported their age on a sliding scale from 18–100, their sex (female = 1, male = 2, other = 3), relationship status (1 = single, 2 = in a relationship, 3 = other), sexual orientation (1 = heterosexual, 2 = homosexual, 3 = bisexual, 4 = other), and race/ethnic ancestry (1 = European descent, 2 = African descent, 3 = Middle-Eastern descent, 4 = Asian descent, 5 = Hispanic descent, 6 = Indigenous, 7 = other). The sample was 86% heterosexual (3% homosexual, 8% bisexual), 30% single (70% in a serious relationship/married),⁶ and 89% of European descent (5% Asian, 4% other/mixed, 2% Africa). Only those participants who completed the measures from unique IP addresses were included. Participants were informed of the nature of the study, completed a series of measures, and were debriefed and thanked upon completion.⁷

Measures

To measure individual differences in the Dark Triad traits we, again, used the Short Dark Triad (Jones & Paulhus, 2014). Items were averaged to create indices of Machiavellianism (Cronbach's $\alpha = .79$), narcissism ($\alpha = .74$), and psychopathy ($\alpha = .75$).⁸

To measure individual differences in happiness in a forced-choice manner, participants completed a single, simple question. They were asked to “imagine it is a random Saturday afternoon and you are not dating any one. Which of the following would you choose to maximize your happiness?” The options (1 = fast, 2 = slow) were “doing things to find a new sexual/romantic partner” or “doing things to improve your safety/health.” The order these options were presented were randomized. This method was used (1) to provide methodological heterogeneity to our study, (2) to force people to make trade-offs as is required by the life history paradigm, and (3) to augment power given expectations that our sample would not be that large (i.e., forced-choice effects can be more powerful than normative effects).

Results and discussion

The data analytic strategy followed that of Study 1. The number of people who chose the *K* option (76%) was slightly more ($\chi(1)^2 = 3.30$, $p < .10$) than the number who chose the *r* option (56%), albeit in the proper direction. When we examined whether this effect depended on participant's sex it did ($\chi^2(1) = 6.62$, $p < .01$, $\Phi = -.23$). Women chose the *K* option (68%) more than the *r* option (32%) where men did not differ in their choice for the *K* (46%) or *r* (54%) options. Again, we see people lean toward the *K* option, with a stronger tendency in women as compared to men.

When examining the Dark Triad traits, we found support for our hypothesis that the traits would be associated with choosing the *r* option. Choosing mating effort in hopes of improving one's

happiness was correlated with Machiavellianism ($r(130) = -.18, p < .05$), narcissism ($r(130) = -.23, p < .01$), and psychopathy ($r(130) = -.18, p < .05$). When the shared variance among the Dark Triad traits was accounted for in a binary logistic regression, only narcissism had a significant residual ($B = -0.73, SE = 0.35, p < .05$, Wald's $\chi^2 = 4.40, p < .05$, $\text{Exp}(B) = .48, 95\%CI[.25, .95]$). These correlations did not differ in the sexes.

When we examined whether sex differences in the fast-slow choice were mediated by individual differences in each of the Dark Triad traits, we used a binary logistic regression. Step 1 contained participant's sex, which predicted choice ($B = -0.93, SE = 0.36$, Wald's $\chi^2 = 6.49, p < .05$, $\text{Exp}(B) = .40, 95\%CI[.19, .81]$; Nagelkerke $R^2 = .07$) such that men were more likely to choose the "fast" option. Machiavellianism and psychopathy did not mediate this sex difference with an increased amount of variance accounted of only about 1% (Nagelkerke $R^2 = .08$). Narcissism ($B = -0.86, SE = 0.37$, Wald's $\chi^2 = 6.49, p < .05$, $\text{Exp}(B) = .40, 95\%CI[.19, .81]$), on the other hand, did mediate this sex difference with nearly a doubling of the variance accounted for when narcissism was added (Nagelkerke $R^2 = .12$), suggesting men who were narcissistic were especially likely to choose the "fast" mating option when trying to maximize their expected happiness.

General discussion

What makes people happy depends on their personality (Argyle & Lu, 1990; Cheng & Furnham, 2003). In two studies, adopting two methods, using two sampling frames, and drawing data from three countries, we extended what is known about the relationships between the Dark Triad traits and happiness (Aghahabaei & Blachino, 2015; Aghahabaei et al., 2014; Egan et al., 2014; Giacomini & Jordan, 2016; Zajenkowski & Czarna, 2015). In contrast to most previous research, which often relied on trait measures of happiness, we examined how the Dark Triad traits are associated with projected happiness to imagined success in solving adaptive tasks. These adaptive tasks were taken from the fundamental social motives paradigm and reflect survival (e.g., avoiding pathogens), interpersonal (e.g., making friends), and sexual (e.g., finding mates) tasks that will have shaped people's psychology given the ultrasocial nature of humans (Neel et al., 2016). In Study 1, we assessed how forecasted happiness to solving eight fundamental social problems was correlated with the Dark Triad traits. In Study 2, we focused on the primary adaptive tasks of mating and survival, using a forced-choice paradigm to assess how the relationship between participant's choice between the two was correlated with the Dark Triad traits.

Overall, we found that those high in psychopathy derived happiness from only "playing it fast," whereas those high in narcissism and Machiavellianism derived happiness from "playing it safe" and "playing it fast." Across the studies, we found that the Dark Triad traits were associated with expected happiness from finding new mates, consistent with the idea that these traits motivate people to pursue sex partners (Jonason et al., 2009, 2011). Across both studies, we also found that the traits were associated with lower expectations of happiness in response to "playing it safe" (e.g., avoiding pathogens), consistent with the idea that these traits orient people toward a fast life (Jonason et al., 2010) but also consistent with work suggesting that the traits link to impulsiveness and lack self-control (Jonason & Tost, 2010; Jones & Paulhus, 2011). This was especially pronounced in Study 1 for psychopathy, but this was also revealed in Study 2 for the other traits, likely as a function of the trade-off style of the question. That is, when those high in all three of the Dark Triad traits are forced to choose between safety and sex, they choose sex. In Study 1, we also found that those high on the Dark Triad traits felt they would be happy if they achieved status, which may be related to their motives of prestige, power, and social dominance (Jonason & Ferrell, 2016; Semanya & Honey, 2015) and may translate into greater access to resources and mates over ancestral time (Buss & Schmitt, 1993). And last, those characterized by psychopathy in Study 1 (and not the other traits) had an aversion to "playing it safe" by not feeling they would be happy spending time with family, staying safe, or avoiding pathogens. Such an effect is consistent with the motivational priorities associated with

psychopathy and not the other two traits (Jonason & Zeigler-Hill, 2018), but also associated with the antisocial nature of those characterized by this trait (Jonason et al., 2015). In contrast, those high in narcissism and Machiavellianism appear to be willing to “play it safe,” but the reasons behind this might differ. The narcissist needs others around to satisfy her/his ego needs, and, therefore, treating others well and forging alliances serves that goal. In the case of the narcissist, he/she is not playing it safe as much as he/she is trying to conform to normative expectations of social engagement to feed his/her ego. In contrast, the Machiavellian is likely to be “playing the long game,” building alliances and ingratiating oneself to others to serve their long-term power motivations. In this case, the Machiavellian person may play it safe because he/she needs others to take advantage of and to serve as minions in any diabolical schemes in the future.

To further our understanding of the potential happiness responses associated with the Dark Triad traits, we considered sex differences and the mediating role of the Dark Triad traits in accounting for sex differences in projected happiness. Other work has tested such mediation models but, instead focused on interest in casual sex (Jonason et al., 2009), agentic/communal behavior (Jonason & Fletcher, 2018), and fundamental social motives (Jonason & Zeigler-Hill, 2018). In sum, we found women were more likely to expect happiness in response to “playing it safe” (e.g., investing family, staying safe) whereas men were more likely to expect happiness in response to “playing it fast” (i.e., seeking mates) and were higher in the Dark Triad traits than women (in the British and American samples only). From a life history perspective (Figueredo et al., 2005; Wilson, 1975), this makes sense because natural selection will have fashioned men and women’s psychology around the differential costs men and women experienced over generations. Because men benefit more (Jonason et al., 2009) and women pay more costs (Jonason & Lavertu, 2017) for engaging in fast approaches to life, the sexes diverged in their personality and the related expectations regarding happiness. Indeed, consistent with this idea, we found that sex differences in expected happiness were mediated by the Dark Triad traits, suggesting it is not just being a man or a woman that matters here in understanding happiness expectations, but it was men who were high on the Dark Triad traits who expected happiness when “playing it fast” and women who were low on the Dark Triad traits who expected happiness when “playing it safe”. These mediation effects reveal some of the psychological differences responsible for sex differences.

What is important here is that our effects were rather consistent across two studies, with three samples, with two different methods. Prior work examining the relationships between the Dark Triad traits and happiness failed to provide consistent evidence (Aghahabaei & Blachino, 2015; Aghahabaei et al., 2014; Egan et al., 2014; Giacomini & Jordan, 2016; Zajenkowski & Czarna, 2015). One reason for this might be that researchers focused on trait-level happiness and the work was not conceptualized in an evolutionary paradigm. While happiness is a popular topic (Diener, 1999) and it is, therefore, no surprise that the Dark Triad traits have been assessed in relation to various measures of happiness, why there would be a link between the Dark Triad traits and happiness is unclear. An evolutionary framework suggests that features related to happiness (e.g., optimism) might serve as expectancy biases that are informed by prior events and can lead to behavioral tendencies (Jonason, Foster, Csathó, & Gouveia, 2018). These expectancy biases are evident here in that those characterized by the Dark Triad traits tended to expect certain events to result in happiness. Importantly, these expectancies were specific and consistent with life history models of the traits. We contend that a more fruitful approach to understanding the affective nature of the Dark Triad traits might call for a detailed analysis of the evolutionary history of such fast life history strategies.

Limitations and conclusions

Despite the methodological and sampling heterogeneity and conceptual novelty, the study is, nevertheless, limited. First, given the large number of comparisons, we may have suffered from some Type 1 error inflation. We used a more conservative alpha in Study 1 ($p < .01$) to attempt to address this while not imposing too heavy of a correction like that associated with Bonferroni (i.e., $.05/8 = .006$). Second, we failed to make a distinction between new short-term and long-term relationships (Buss & Schmitt, 1993). Third,

while we would contend that what makes people happy should be rather culturally invariant at the macroscopic level, our data is limited in its ability to test such a contention as it is composed solely of American, British, and Indian participants. While we have apparent variety in our sampling, they all may still constitute W.E.I.R.D. (i.e., Western, education, industrialized, rich, and democratic; Henrich, Heine, & Norenzayan, 2010) samples as online data collection was used throughout. Fourth, we relied on affective forecasting to capture individual differences in happiness which can be problematic (Gilbert & Wilson, 2000). Fifth, both of our measures of happiness forecasting were unvalidated despite being based on related measures of motivations (Neel et al., 2016). Sixth, the Indian sample might not have had a sufficiently large sample ($N \approx 250$) to ensure the correlations stabilized (Schönbrodt & Perugini, 2013) despite power analysis, indicating its sufficiency and data for Study 2 might have been underpowered, but it was sufficient to find effects consistent with predictions. Seventh, we have relied on a four-letter word in psychology; self-reports. We have self-reports of the Dark Triad traits and of expectations of happiness. In the first case, we assert that personality traits like the Dark Triad may be egosyntonic (Hart, Torttoriello, & Richardson, 2018), meaning those with the Dark Triad traits are not bothered by having the traits and, thus, lack the shame required to hide their dark nature in self-reports. In the second case, a better study would be to use some experimental or quasi-experimental treatments to test how responses to adaptively relevant events are related to the Dark Triad traits. Instead, what we have here are simply forecasts of what would make those high/low on the Dark Triad traits happy. While these effects are consistent with an evolutionary model, only Study 2 approximates a behavioral choice, which is what would have evolutionary consequences. That said, it is likely that beliefs about what will make one happy should predict, at least mildly, engaging in that behavior (Wilson & Gilbert, 2005). Affective forecasting does not need to be accurate to be adaptive. Putting these limitations aside, we have provided two studies adopting different methods, samples, and measures to advance our case that the Dark Triad traits predict happiness expectations when solving adaptive tasks.

In conclusion, we have provided a unique set of tests of how the Dark Triad traits can be understood using evolutionary psychology by examining the associated forecasts of happiness in response to solving fundamental, adaptive tasks. We contend that, as part of the motivational systems associated with the Dark Triad traits should be affective feedback systems that help guide people's behavior. We found that these affective responses were consistent with the *fast* and *slow* life history strategies associated with the Dark Triad traits. These traits mediated sex differences in projected happiness in response to success in solving adaptive tasks.

Notes

1. The American participants were paid more than the Indian sample because the former contained twice as many measures collected in Sample 1.
2. These methods include enough detail such that a researcher could fully replicate the methods, see Appendix A for items not available in previous publications as noted. Data from this study were extracted from a larger set of unpublished data collected for an Honors Thesis by James Middleton at Western Sydney University.
3. In the American sample, Machiavellianism was correlated with narcissism ($r = .42, p < .01$), and psychopathy ($r = .45, p < .01$) was correlated with narcissism ($r = .28, p < .01$). In the Indian sample, Machiavellianism was correlated with narcissism ($r = .52, p < .01$) and psychopathy ($r = .54, p < .01$) and psychopathy was correlated with narcissism ($r = .73, p < .01$).
4. In the American sample there were sex differences in Machiavellianism ($t = 3.57, p < .01$, Cohen's $d = 0.44$), narcissism ($t = 2.91, p < .01, d = 0.41$), and psychopathy ($t = 4.42, p < .01, d = 0.54$), replicating prior work (2017; Jonason et al., 2009) and also consistent with the idea that men are more *r*-selected than women are, but there were none in the Indian sample. This created a multivariate interaction ($F(2, 451) = 5.99, p < .01, \eta_p^2 = .04$) of sex and location on a linear composite of the Dark Triad traits.
5. Only three of these correlations were moderated by country, all of which were for autonomy—with the correlations in the Indian sample having higher correlations than the American sample—and Machiavellianism (Fisher's $z = -2.53, p < .01$), narcissism ($z = -3.86, p < .01$), and psychopathy ($z = -2.90, p < .01$). In the Indian sample, participant's sex did not moderate these relationships. In the American sample, we found one case of moderation. Psychopathy was more strongly ($z = 3.00, p < .01$) correlated with happiness in response to finding a new sexual or romantic partner in men ($r = -.23, p < .01$) than in women ($r = -.14$). As

such, we conclude that the correlations reported in Table 2 were generally robust to cultural differences across the samples and potential sex differences as well.

6. As a check, we tested whether this factor predicted choice, and it did not.
7. These methods include enough detail such that a researcher could fully replicate the methods, see Appendix A for items not available in previous publications as noted. The methods reported here constitute the entirety of the data collected.
8. Machiavellianism was correlated with psychopathy ($r = .46, p < .01$) but not narcissism ($r = .12, ns$), and narcissism was correlated with psychopathy ($r = .35, p < .01$).

Disclosure statement

No potential conflict of interest was reported by the authors.

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APPENDIXES

Appendix A. Previously unpublished items to capture individual differences in predicted happiness.

Not at all	A little	Somewhat	A lot	Very much
1	2	3	4	5

Study 1

In this section we would like to know what makes you happy. Imagine the following happened to you and in rate how happy you would feel.

- (1) Making new friends
- (2) Earning status/power
- (3) Making sure you are safe
- (4) Finding new mates for sexual/romantic relationships (when you need one)
- (5) Making sure your present mate is faithful/happy (when you have one)
- (6) Avoided diseases, viruses, and colds
- (7) Having a good relationship with family members
- (8) Having autonomy

Demographics

What is your sex?: male = 1, female = 2

How old are you in years? (18–100)

What is your relationship status?: 1 = not in a committed relationship, 2 = in a committed relationship

Study 2

Imagine it is a random Saturday afternoon and you are not dating any one. Which of the following would you choose to maximize your happiness?

- (A) Doing things to find a new sexual/romantic partner
- (B) Doing things to improve your safety/health

Demographics

- (1) What is your sex?: female = 1, male = 2, other = 3 (specify)
- (2) What is your age in years? (18–100)
- (3) What is your sexual orientation?: 1 = heterosexual, 2 = homosexual, 3 = bisexual, 4 = other (specify)
- (4) What is your relationship status?: 1 = single, 2 = in a relationship, 3 = other (specify)
- (5) Which race/ethnic ancestry classifies you the best? 1 = European descent, 2 = African descent, 3 = Middle-Eastern descent, 4 = Asian descent, 5 = Hispanic descent, 6 = Indigenous, 7 = other (specify)