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<b>Contents:</b>			
	551	The International Society for the Study of Individual Differences (ISSID)	
	553	Call for 12th Annual Award Applications To The H.J. Eysenck Memorial Fund	
<b>Review</b> A. Martins, N. Ramalho and E. Morin	554	A comprehensive meta-analysis of the relationship between Emotional Intelligence and health	
<b>General Articles</b> J.D. Royall and J.L. Kurtz	565	I ate what?! The effect of stress and dispositional eating style on food intake and behavioral awareness	
D.D. Riso, S. Salcuni, D. Chessa, A. Raudino, A. Lis and G. Altoè	570	The Strengths and Difficulties Questionnaire (SDQ). Early evidence of its reliability and validity in a community sample of Italian children	
Ö.F. Şimşek and B. Yalınçetin	576	I feel unique, therefore I am: The development and preliminary validation of the personal sense of uniqueness (PSU) scale	
J.J. Flynn, T. Hollenstein and A. Mackey	582	The effect of suppressing and not accepting emotions on depressive symptoms: Is suppression different for men and women?	
J.A. Terrizzi Jr., N.J. Shook and W.L. Ventis	587	Disgust: A predictor of social conservatism and prejudicial attitudes toward homosexuals	
C. Papageorgiou, I.N. Beratis, A.D. Rabavilas, E.D. Nanou, C.D. Hountala, A.E. Maganioti, C.N. Capsalis, G.N. Papadimitriou and C.N. Stefanis	593	Pre-attentive operation and psychoticism: A P50 event related potential study	
<i>[Continued on outside back cover]</i>			
<small>Person. Individ. Diff. is indexed/abstracted in: ASSIA, Curr. Cont. Soc. &amp; Behav. Sci., PASCAL-CNRS Data, Psychol. Abstr., PsycINFO, PsycLIT, Res. Alert, Soc. Sci. Cit. Indx. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.</small>			
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## The dark side of love: Love styles and the Dark Triad

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### ABSTRACT

Little work has examined the manner in which the Dark Triad may function in relationship contexts. In this online, international study ( $N = 302$ ), we correlated the Dark Triad with love styles. Individuals who scored high on the Dark Triad appear to have a *ludus* – game playing – and a *pragma* – cerebral – love style. *Game playing* may allow these individuals to keep others at an emotional distance to maintain their short-term mating style. The Dark Triad composite partially mediated the gender difference in the adoption in the *ludus* love style, suggesting that the psychological systems that underlie this love style may relate to the adoption of an agentic social style. Similarly, loving with one's head and not one's heart may be an expression of the limited empathy/emotional systems characteristic of these individuals.

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### 1. Introduction

The Dark Triad – narcissism, psychopathy, Machiavellianism – are personality traits that reflect an orientation to the world that favors short-term, immediate gains over long-term ones (e.g., Jonason, Li, Webster, & Schmitt, 2009). According to Life History Theory (see Figueredo et al., 2006), psychological systems work in concert to solve adaptive tasks like mating. In this study, we examine the love styles correlated with the Dark Triad (e.g., Paulhus & Williams, 2002), to understand how the Dark Triad manifest themselves beyond the traditionally negative approach of those studying them (e.g., Chabrol, Van Leeuwen, Rodgers, & Séjourné, 2009; Hodson, Hogg, & MacInnis, 2009), and how they jointly and independently provide means to aid people to solve adaptive tasks like mating, by carving up the multidimensional niche space, or the complicated social spheres individuals find themselves in during their lives.

In particular, we are interested in how the Dark Triad relates to love styles or the colors of love (see Lee, 1973). There are six colors of love, all of which represent a different approach or underlying motivation to serious romantic relationships (e.g., Berscheid & Walster, 1978; Dion & Dion, 1988; Hendrick & Hendrick, 1986, 1989). The *eros* or erotic style of love is manifested in high scores on items like “my lover and I have the right physical ‘chemistry’ between us”. Individuals who score high on items like “I enjoy playing the ‘game of love’ with a number of different partners”

are characterized as having a *ludus* or game-playing love style. The *pragma* or pragmatic love style is characterized by high scores on questions like “one consideration in choosing a partner is how he/she will reflect on my career”. The *storage* or enduring love style is manifested through high scores on questions like “my most satisfying love relationships have developed from good friendships”. The *agape* or selfless love style is manifested in high scores on questions like “I would endure all things for the sake of my lover”. Lastly, the *mania* or manic love style is manifested in high scores on items like “when my lover doesn't pay attention to me, I feel sick all over”. Love styles have real-life consequences, including relationship satisfaction (e.g., Davis & Latty-Mann, 1987) and, therefore, more work on them is warranted.

We expect a number of associations. The Dark Triad has a strong bias towards short-term, sexual relationships (e.g., Campbell & Foster, 2002; Foster, Shrira, & Campbell, 2006; Jonason et al., 2009) and short-term mating is primarily driven by the physical attractiveness of the partner (e.g., Li & Kenrick, 2006), therefore, we expect the Dark Triad to be manifested in an *eros* love style. Both the *ludus* love style (Richardson, Medvin, & Hammock, 1988) and the Dark Triad are characterized by high levels of sensation-seeking (e.g., Emmons, 1987; McHoskey, Worzel, & Szyarto, 1998), therefore, we expect the Dark Triad to be manifested in a *ludus* love style. The Dark Triad is characterized by emotional and empathetic deficiencies (Ali, Amorim, & Chamorro-Premuzic, 2009; Andrew, Cooke, & Muncer, 2008; Barlow, Qualter, & Stylianou, 2010) and therefore, it should manifest itself in a *pragma* love style. Relatedly, the emotionless style, characteristic of the Dark Triad (Paulhus & Williams, 2002) likely

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prevents a correlation with the adoption of the *mania* love style. Lastly, the Dark Triad is unrelated to a long-term mating style (e.g., Jonason et al., 2009), which is characterized by closeness, intimacy, and selflessness. These characteristics can be observed in both *agape* and *storage* love styles. Therefore, we expect the Dark Triad to not be related to either of these love styles.

We also expect to replicate a number of gender differences. When it comes to the Dark Triad, men have reliably scored higher than women have (e.g., Jonason, Li, & Buss, 2010; Jonason et al., 2009). Therefore, we expect that men will score higher than women do on the Dark Triad. There are at least two relevant gender differences in love styles. Men tend to score higher than women do on their adoption of the *eros* and *ludus* love styles (Hendrick, Hendrick, Foote, & Slapion-Foote, 1984). We expect to replicate these gender differences as well.

We do not feel that it is sufficient to simply provide evidence of gender differences in love styles because to say men and women differ says nothing about the psychological mechanisms that underlie these differences. Prior work suggests that the Dark Triad – when treated as a composite – mediates the gender difference in the adoption of a short-term mating orientation (Jonason et al., 2009). Such a research suggests that men and women differ vis-à-vis psychological systems that facilitate certain lifestyles. Presently, we expect that the Dark Triad should function as a mediator between the gender of the participant and the adoption of love styles.

In this study, we extend the growing literature on the Dark Triad of personality traits. Most research to date has focused on accounting for the shared variance among the three. In this case, we examine the interpersonal consequences of the Dark Triad as manifested in love styles. By doing so, we attempt to describe how these traits, which have been traditionally considered aversive, may actually facilitate the carving up of the complex multidimensional niche space. In short, we are examining the “dark side” of love.

## 2. Method

### 2.1. Participants and procedure

Three-hundred and twenty-five participants (65 males, 260 females) from unique IP addresses initially started the survey; however, 23 participants did not complete all of the measures. Consequently, a reduced sample of 58 men ( $M_{Age} = 29.84$ ,  $SD_{Age} = 12.31$ ) and 244 women ( $M_{Age} = 27.23$ ,  $SD_{Age} = 9.68$ ) were included in the analyses. The majority of the final sample was (92%) identified as heterosexual, 4% as homosexual, and 4% as bisexual. Thirty-nine percent indicated that they were single, 27% were dating someone seriously, 4% were engaged to be married, 26% were married, and the remaining 4% were divorced. The sample was 15% Australian, 3% Canadian, 9% New Zealander, 70% American, and less than 1% German, British, Italian, Dutch, Puerto Rican, Turkish, and from the United Arab Emirates.<sup>1</sup> Upon completion, the participants were debriefed and thanked.

### 2.2. Measures

Narcissism was assessed with the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988). For each item, participants chose one of two statements that they felt applied to them more. One statement reflected a narcissistic attitude (e.g., “I have a natural talent for influencing people”), whereas the other did not (e.g., “I am not good at influencing people”). We summed

the total number of narcissistic statements the participants endorsed to measure overall narcissism (Cronbach's  $\alpha = .84$ ).

The 31-item Self-Report Psychopathy Scale-III (Paulhus, Hemphill, & Hare, in press) was used to assess subclinical psychopathy. Participants rated how much they agreed (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as: “I enjoy driving at high speeds” and “I think I could beat a lie detector”. The items were averaged to create an index of psychopathy ( $\alpha = .86$ ).

Machiavellianism was measured with the 20-item MACH-IV (Christie & Geis, 1970). Participants were asked how much they agreed (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as: “It is hard to get ahead without cutting corners here and there” and “It is wise to flatter important people”. The items were averaged to create a Machiavellianism index ( $\alpha = .64$ ).

We also treated the three Dark Triad measures as a composite measure (Jonason et al., 2009). We first standardized (*z* scored) overall scores on each measure. Then we averaged all three together to create a composite Dark Triad score. All three measures loaded well ( $>.47$ ) on a single factor that accounted for 51.49% of the variance (Eigen  $> 1.54$ ). Machiavellianism was not correlated with narcissism ( $r = .10$ ). Psychopathy was correlated with Machiavellianism ( $r(302) = .22$ ,  $p < .01$ ) and narcissism ( $r(302) = .44$ ,  $p < .01$ ).

Six love styles were measured using the Hendrick and Hendricks (1986) love attitudes scale. Participants were asked 42 questions that assessed the degree to which individuals adopted different love styles. The styles are labeled *eros* or an erotic love style ( $\alpha = .82$ ), *ludus* or a game-playing love style ( $\alpha = .80$ ), *storage* or an affectionate love style ( $\alpha = .78$ ), *pragma* or a rational love style ( $\alpha = .82$ ), *mania* or a volatile love style ( $\alpha = .78$ ), and *agape* or a selfless love style ( $\alpha = .88$ ). For instance, to measure *eros*, participants were asked how much they agreed with the statement (1 = *strongly disagree*; 5 = *strongly agree*): My lover and I were attracted to each other immediately after we first met. Alternatively, to measure *ludus*, participants were asked how much they agreed with the statement: I try to keep my lover a little uncertain about my commitment to her/him.

## 3. Results

In Table 1, we report descriptive statistics and gender differences tests. We report the unbiased measure of Hedge's *g* to account for sample size differences across men and women. The interpretation of Hedge's *g* is the same as that of Cohen's *d*. We also report *t*-tests where we did not assume equal variance because of the grossly uneven sample sizes across men and women. Perhaps as a result of this sampling error, we were only able to replicate one significant gender difference in the Dark Triad – men scored higher than women did on psychopathy ( $p < .01$ ). However, the means for narcissism ( $p > .26$ ) and Machiavellianism ( $p > .11$ ) were in the proper direction but were not able to pass the arbitrary threshold of a *p* value. Men scored significantly higher on the Dark Triad composite than women did ( $p < .05$ ), which is likely driven by the rather strong difference in psychopathy rates. Men showed a significantly greater adoption of the *ludus* ( $p < .05$ ) and *agape* ( $p < .01$ ) love style than women did. No other significant gender differences were revealed in love styles (*p*'s .10–.81).

In Table 2, we report zero-order correlations between the Dark Triad and love styles. The Dark Triad appear to be linked by two common love styles: *ludus* and *pragma*. Individually the Dark Triad measures showed some unique correlations with love styles. Machiavellianism was associated with all love styles except *eros*. Narcissism was only associated with the *ludus* and *pragma* styles. Psychopathy was positively associated with only the *ludus* style.

<sup>1</sup> We found no meaningful differences across the countries we sampled.

**Table 1**  
Descriptive statistics and gender differences for the Dark Triad and love styles.

	Mean (SD)			t	g
	Overall	Men	Women		
<b>Dark Triad</b>					
Machiavellianism	2.87 (0.35)	2.92 (0.29)	2.87 (0.32)	1.11 [1.18]	0.16 [0.17]
Narcissism	12.08 (6.48)	13.22 (7.47)	11.74 (6.13)	1.59 [1.41]	0.23 [0.21]
Psychopathy	2.07 (0.43)	2.33 (0.51)	2.01 (0.38)	5.39** [4.51*]	0.79 [0.66]
Dark Triad composite	-0.01 (0.76)	0.21 (1.07)	-0.06 (0.66)	2.56* [1.94]	0.37 [0.28]
<b>Love styles</b>					
Eros	3.46 (0.84)	3.44 (0.93)	3.47 (0.82)	-0.23 [-0.21]	-0.03 [-0.03]
Ludus	1.84 (0.75)	2.25 (0.90)	1.74 (0.68)	4.78** [4.03**]	0.70 [0.59]
Storage	2.88 (0.81)	2.81 (0.83)	2.90 (0.80)	-0.78 [-0.76]	-0.11 [-0.11]
Pragma	2.55 (0.82)	2.67 (0.90)	2.53 (0.80)	1.14 [1.06]	0.17 [0.16]
Mania	2.57 (0.82)	2.73 (0.91)	2.53 (0.79)	1.64 [1.51]	0.24 [0.22]
Agape	3.28 (0.87)	3.57 (0.86)	3.22 (0.87)	2.76** [2.78**]	0.40 [0.41]

Note: g is Hedge's g; values in brackets are where equal variance was not assumed.

\*  $p < .05$ .

\*\*  $p < .01$ .

**Table 2**  
Zero-order correlations and betas predicting love styles with the Dark Triad.

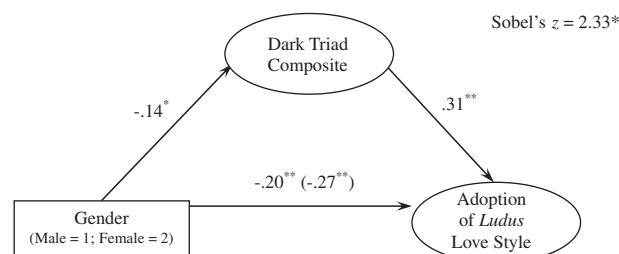
	r (β)			
	Machiavellianism	Narcissism	Psychopathy	Dark Triad
Eros	.08 (.09)	.07 (.10)	-.02 (-.09)	.06
Ludus	.19** (.10)	.14* (-.05)	.41** (.41**)	.35**
Storage	.22** (.23**)	-.06 (-.07)	-.01 (-.03)	.06
Pragma	.23** (.25**)	.16** (.20**)	.00 (-.14*)	.18**
Mania	.17** (.16**)	-.04 (-.10)	.08 (.09)	.10
Agape	.18** (.21**)	-.03 (.00)	-.08 (-.13*)	.02

\*  $p < .05$ .

\*\*  $p < .01$ .

In Table 2, we also report betas from regressions where all three measures of the Dark Triad were entered to predict scores on the various love styles. Such analyses provide insights into the amount of unique variance in each love style by each part of the Dark Triad. This is an important analysis because of the shared variance between the Dark Triad (e.g., Jonason et al., 2009; Paulhus & Williams, 2002). In each case, all three measures of the Dark Triad were entered into a regression to (1) predict the adoption love styles and (2) examine the unique contribution of each part of the Dark Triad in accounting for variance in the adoption of a given love style. The *ludus* love style was localized to psychopathy and not the other two. The *pragma* love style was positively associated with Machiavellianism and Narcissism but negatively with psychopathy. The *mania* love style was positively associated with Machiavellianism. The *agape* love style was positively associated with Machiavellianism but negatively with psychopathy.

Next, we ran a series of regression models to ascertain whether the sex of the participant moderated any of the correlations from Table 1. To do so, we entered the gender of the participant (male = 1; female = 2), one of the three measures of the Dark Triad, and an interaction term we created by multiplying each measure of the Dark Triad by the gender of the participant. Using this analysis, if the interaction term accounts for more variance than the two simple effects, moderation is present. There was little evidence for moderation by the sex of the participant. Indeed, this technique only revealed one moderation effect by the gender of the participant. Moderation was present for the *ludus* love style and the psychopathy measure. The interaction term was significantly associated with the rates of the *ludus* love style ( $\beta = .66$ ,  $t = 2.56$ ,  $p < .05$ ). Indeed, in this model, the gender of the participant predicted the scores on the *ludus* love style ( $\beta = -.75$ ,  $t = -3.06$ ,  $p < .01$ ), but psychopathy did not ( $\beta = -.13$ ,  $t = -0.62$ , *ns*).



\*  $p < .05$ ; \*\*  $p < .01$

**Fig. 1.** Dark Triad partially mediates the gender difference in the adoption of the *ludus* love style.

Last, bootstrap mediational analyses were conducted to test the hypothesis that the Dark Triad mediates the association between gender and the *ludus* love style.<sup>2</sup> The results confirmed a mediational model. That is, men, compared to women, reported significantly higher levels of the Dark Triad ( $\beta = -.14$ ,  $t = 2.68$ ,  $p < .01$ ) and higher levels of the *ludus* love style ( $\beta = -.27$ ,  $t = -3.68$ ,  $p < .01$ ). In addition, higher levels of the Dark Triad were associated with significantly higher levels of the *ludus* love style ( $\beta = .31$ ,  $t = 5.68$ ,  $p < .01$ ), independent of gender. With the inclusion of the Dark Triad in the model in Fig. 1, the path from gender of the participant to the *ludus* love style dropped from  $-.27$  to  $-.20$ , indicating partial mediation (Sobel's  $z = 2.33$ ,  $p < .05$ ). Following the procedures of Shrout and Bolger (2002), we determined that 34% of the gender difference in the adoption of a *ludus* love style was mediated by scores on the Dark Triad composite.

#### 4. Discussion

What characterizes the “dark side” of love? Individuals high on the Dark Triad traits appear to love in many ways. For instance, *agape* love – self-sacrificing love – was positively associated with Machiavellianism. As a group, the characteristic love styles appear to be *ludus* and *pragma*. In this study, we have described the love life of those high on these socially undesirable traits. Such a study is valuable in that it aids researchers in understanding the nature of these personality traits and the individuals who have them and, more importantly, in providing insight into how these traditionally aversive personality traits function to help individuals

<sup>2</sup> It was only for this love style the prerequisites for mediational analyses were met.

carve up the multidimensional niche space. That is, how these personality traits manifest themselves in the social world of individuals.

There appear to be two important love styles in describing the love lives of those who score high on these antisocial personality traits. At first glance, a *ludus* love style appears to describe the Dark Triad as a whole. This suggests that all the traits of the Triad are linked by a *ludus* love style. Finding what links the Dark Triad has been part of the traditional work on the Dark Triad (e.g., Paulhus & Williams, 2002). However, once we ran regression analyses, accounting for the shared correlation among the items, the story changed. The *ludus* love style was localized to psychopathy only. Game playing may be characteristic of those high on psychopathy in that it provides the sufficient excitement and sensation these individuals hunger for (e.g., Mealey, 1995) or may keep individuals at arms length to maintain a short-term mating style (Jonason et al., 2009). The Dark Triad composite was also related to the adoption of the *ludus* style but this is likely the result of the psychopathy association. However, this is insightful to those who view the Dark Triad as a cluster of personality traits that may be part of a coordinated life strategy (Jonason et al., 2009). Indeed, if we adopt this life strategy approach, the picture is more easily interpreted; the Dark Triad, latent measures of an exploitive cheater strategy, is manifested through only two love styles: *ludus* and *pragma*.

The *pragma* love style is also instructive about the role the Dark Triad play in how individuals manifest a *fast* life strategy, or a life-style characterized by a pursuit of short-term gains, aggressiveness, deviance, and selfishness as per Life History Theory (see Figueredo et al., 2006). Such a love style is characterized by a cerebral love style where individuals love with their heads and not their hearts. The Dark Triad is related to numerous emotional, empathy, and theory of mind deficiencies (e.g., Ali et al., 2009). Individuals who score high on the Dark Triad may not pursue “love” relationships because of their affections for someone but, instead, the usefulness they see the other person serving. Indeed, the Dark Triad does evidence an individualistic and competitive social style (Jonason, Li, & Teicher, in press); such a style is likely a departure from how most people love in a giving and perhaps reasonably prosocial fashion. The *pragma* love style is manifested in all three of the Dark Triad both in the zero-order correlations and regression results. This suggests that the *pragma* love style not only characterizes the love life of those with high levels of any of the Dark Triad traits, but also suggests that this love style actually accounts for some of the shared variance among the three. In other words, this love style provides theoretical and empirical insight into the nature of the Dark Triad.

We predicted that the *eros* love style would be associated with the Dark Triad. There is good evidence documenting that those characterized by the Dark Triad are short-term maters (Jonason et al., 2009) and short-term mating is predominantly about the physical attractiveness of the participants (e.g., Li & Kenrick, 2006). However, the *eros* love style was not associated with the Dark Triad. It may be that the sexual and romantic lives of these individuals are characterized by a selfish orientation (e.g., Jonason et al., in press). These individuals may go into relationships of any kind because of their own needs; the other individual may be immaterial or irrelevant. That is, the features of the other person are not the determining factors that lead to relationships emerging for those who are high on the Dark Triad. Instead, these individuals may “use” others to get what they want. We do not contend that these individuals are ambivalent to the attractiveness of their partners, but instead, their short-term mating lifestyle may be expressed in a “whatever I can get” attitude. However, this question does deserve future attention.

We were also able to provide insight into the underlying psychological systems that may be related to the *ludus* love style. The latent construct of the Dark Triad partially mediated the

gender difference in the adoption of the *ludus* style. This suggest that it is not that men and women are patently different in their love styles but, instead, men and women differ in their psychological systems. It is these differing psychological systems that lead to the adoption of different love styles. Such results are consistent with prior work demonstrating that the Dark Triad partially mediates the gender difference in short-term mating (Jonason et al., 2009). Taken together, the results are consistent with the work on Life History Theory (see Figueredo et al., 2006) that men and women differ in their coordinated psychological systems that relate to different life strategies.

Machiavellianism did present some interesting findings worth discussing. Somehow it was positively related to all the love types except *eros*. Love styles like *ludus* and *storage* appear to be opposite traits when assessed in conjunction with the Big Five of personality (Heaven, Da Silva, Carey, & Holen, 2004; White, Hendrick, & Hendrick, 2004). One possibility is that Machiavellian individuals may respond in a socially desirable fashion (Wilson, Near, & Miller, 1996). Indeed, despite the above prediction that the Dark Triad will not be correlated with the *agape* love style, Machiavellianism was. Being selfless may be a virtue in numerous cultures and therefore, the association we found. Alternatively, the results may be a function of error; a position we prefer given the rather small correlation. Whatever the case may be future research on the Dark Triad and love styles is warranted, perhaps with alternative measures of each.

We were also able to replicate some gender differences from prior work. We have added to the considerable data that demonstrate that men score higher than women do on the Dark Triad traits (e.g., Jonason et al., 2009). Although we did not replicate all of them, we feel this is the result of the grossly imbalanced sample sizes across the sexes. We urge caution in the overreliance on the rather flawed method of using the *p* value as a demarcation of truth (see Trafimow, 2003). It is rather telling, however, that even with such a small sample of men we could detect the gender difference in psychopathy. This suggests that psychopathy may be tapping into something more characteristically male than the other two.

We also replicated gender differences in the adoption of love styles (Hendrick et al., 1984). Men scored higher than women did on the *ludus* and *agape* love styles. The gender difference in *ludus* is a common one but in *agape*, it is less common and may be the result of the grossly imbalanced sample sizes for the sexes. We urge caution in the over interpretation of this gender difference which suggests that men are more self-sacrificing than women are. Such a result is inconsistent with research suggesting that women are more altruistic than men are (e.g., Rushton, Fulker, Neale, Nias, & Eysenck, 1986).

Future research should move beyond the standard self-report data used to study the Dark Triad. Instead, future work should do a number of studies that further elucidate the role these personality traits play in the social lives of others as well as examining the biological underpinnings of each one. For instance, a study using existing romantic couples would be beneficial in that it would demonstrate the impact of these traits in relationship contexts. Other work should examine how these traits are evoked in a large range of social contexts including mating, work, and family relations. Furthermore, studies examining relationships with testosterone levels, Behavioral Activation/Inhibition Systems, and polymorphisms in dopamine receptors will also provide further evidence of the adaptive significance of these traits.

Antisocial personality traits like the Dark Triad have been studied throughout the history of psychology, but have been studied with the eye for dysfunction. There is a growing movement to consider these traits part of the normal variation in human personality. In this study, we have added to this discussion, examining how those with the Dark Triad traits express themselves through their styles of love. In other words, we have studied the “dark side

of love.” This dark side appears to be characterized by a heartless, game-playing love style.

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