



Brief Report

What's mine is mine and what's yours is mine: The Dark Triad and gambling with your neighbor's money



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ABSTRACT

Risking other people's money for personal gain is a growing problem. Three traits (termed the Dark Triad) predicted selfish financial behavior: (a) reckless psychopathy, and (b) overconfident narcissism, and (c) strategic Machiavellianism. Participants in Study 1 completed Dark Triad measures and were randomly assigned to gamble with their own bonus or a bonus belonging to the next participant. Psychopathy correlated with gambling with someone else's money, but not one's own money, in a game of certain loss. Narcissism correlated with losing more of someone else's money. Study 2 produced similar results even when participants' bonuses were untouched. Overall, psychopathy predicted gambling with someone else's bonus, and narcissism predicted greater losses. These findings highlight differential financial consequences among the Dark Triad.

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1. Introduction

Economic and investment practices that risk other people's money are controversial (Harrell, 1993; Zandi, 2010). Risky investment strategies, made with other people's money, by banks (Garling, Kirchner, Lewis, & van Raaij, 2009) and brokers (Livdan & Tchisty, 2011), have proven to be a major contributor to recent economic disasters. For example, Zandi (2010) discusses how it is growing increasingly common for individuals or companies to take chances with other people's money in risky business practices. Practices, such as buying on margin, betting on a failing market, liar's loans, and predatory loans often benefit one individual at the expense of others. The present research attempts to address, on a small scale, the issue of what type of person is comfortable recklessly risking another person's money for personal gain.

1.1. The Dark Triad

The Dark Triad is a term used to describe a cluster of malevolent traits in the psychological literature (Paulhus & Williams, 2002). These traits consist of reckless and selfish psychopathy, grandiose and entitled narcissism, and strategically manipulative Machiavellianism (Jones & Paulhus, 2011a). At their core, these traits share a common element of dishonesty/manipulation and callousness (Jones & Figueredo, *in press*). Of critical importance, however, is that when the core of callous-manipulation is removed, the traits

are unrelated. Nevertheless, given their overlap, all three Dark Triad traits are associated with a willingness to gain at the expense of others. For example, these traits have been linked to stealing (Hare, 1999; Harrell & Hartnagel, 1976), fraud (Babiak & Hare, 2006), and cheating (Bogart, Geis, Levy, & Zimbardo, 1970; Williams, Nathanson, & Paulhus, 2010). The Dark Triad traits have also been linked to poor business outcomes and work behaviors in unique ways (O'Boyle et al., 2012). Specifically, O'Boyle and colleagues found, using a social exchange perspective, that these three traits predicted toxic work behaviors, and narcissistic individuals were especially toxic when in power.

It is important to note that each Dark Triad trait has defining features, making each distinct from the other two (Paulhus & Williams, 2002). For example, psychopathy is linked to poor impulse control (Newman, 1987) and antisocial behavior (Williams & Paulhus, 2004), Machiavellianism is linked to planning and strategic selfishness (Jones & Paulhus, 2009), and narcissism is linked to grandiosity and entitlement (Morf & Rhodewalt, 2001). These unique features lead the Dark Triad to predict unique outcomes.

1.1.1. Machiavellianism: carefully manipulative

Individuals high in Machiavellianism strategize in order to maximize their long-term selfish gains (Jones & Paulhus, 2009). Machiavellianism has no association with short-term thinking, impulsivity (Jones & Paulhus, 2011b), or aggression (Jones & Paulhus, 2010), and has no association with gambling in the literature (see Fehr, Samsom, & Paulhus, 1992; Jones & Paulhus, 2009, for reviews). This lack of association with impulsivity and

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gambling stems from the strategic nature of the Machiavellian character (Jones & Paulhus, 2011a).

In fact, Machiavellianism is linked to antisocial behavior only when there is little to no risk of being caught (Cooper & Peterson, 1980; Fehr et al., 1992). Thus, even though Machiavellianism is associated with helping oneself to someone else's money, such individuals are unlikely to be attracted to high risk situations. Such risk-aversion stems from the fact that Machiavellians only take from others when there is maximal gain with minimal risk.

1.1.2. Psychopathy: reckless impulsivity

In contrast to Machiavellianism, individuals high in psychopathy take needless risks for minimal gain (Cleckley, 1976). Such destruction (even self-destruction) and risk-taking in psychopathy is the result of their erratic lifestyle (Hare, 1999). Individuals who are high in psychopathy cannot regulate impulses effectively and seem attracted to high risk behaviors (Harpur, Hakstian, & Hare, 1988). For example, psychopathy is associated with a preference for gambling (Bechara, Damasio, Damasio, & Anderson, 1994), especially among those high in Socio-Economic Status (SES; Gao, Baker, Raine, Wu, & Bezdjian, 2009). This association with gambling stems primarily from the behavioral factors associated with the psychopathy syndrome such as impulsivity, sensation seeking, and antisocial tendencies (e.g., Patrick, Hicks, Krueger, & Lang, 2005).

Interestingly, however, psychopathy is not directly linked with poor gambling decisions or gambling task performance (Schmitt, Brinkley, & Newman, 1999). For example, Losel and Schmucker (2004) found that criminals high in psychopathy were no more or less likely than others to draw cards from a risky vs. non-risky deck. However, individuals high in psychopathy do have deficits in learning during gambling tasks (Mitchell, Colledge, Leonard, & Blair, 2002). In the end, their erratic and destructive nature often takes its toll on others given their callousness (Hare, 1999).

1.1.3. Narcissism: optimistic egoists

Narcissism is best described as a condition consisting of callous-manipulation, grandiosity, egotism, and entitlement (Emmons, 1987). Narcissistic callousness is ironic considering that those high in narcissism need others to constantly supply them with ego-reinforcement (Morf & Rhodewalt, 2001). Almost everything a narcissist does is in the service of reinforcing their endless identity needs for superiority. Such identity needs set narcissists apart from the more instrumental Machiavellians and psychopaths (Jones & Paulhus, 2011a).

Narcissism, like psychopathy, is associated with risky (Campbell, Goodie, & Foster, 2004) and often self-destructive behavior (Vazire & Funder, 2006). However, it is overconfidence and unrealistic optimism that drives narcissistic individuals to take repeated risks (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). Individuals high in narcissism are highly self-deceptive (Paulhus & Williams, 2002), feel entitled to things they want (Emmons, 1987; Morf & Rhodewalt, 2001), and have cognitive biases in risk perceptions (Lakey, Rose, Campbell, & Goodie, 2008). Narcissism, like psychopathy, is associated with gambling (Lakey et al., 2008). However, those high in narcissism gamble for different reasons from those high in psychopathy. Narcissistic motivations tend to stem from reward seeking and novelty (cf. Miller et al., 2009, see also Miller & Campbell, 2010). Although both narcissism and psychopathy are linked to impulsivity, the type of impulsivity is also quite different. For example, narcissistic impulsivity is associated with approach motivation and overconfidence (Paulhus, Harms, Bruce, & Lysy, 2003), whereas psychopathic impulsivity is associated with poor impulse control (Jones & Paulhus, 2011b). Individuals high in narcissism may have an illusion of control (Burger & Schnerring, 1982; Lagner, 1975), which would further exacerbate their unrealistic optimism (Farwell & Wohlwend-Lloyd, 1998). In

sum, those high in narcissism tend to be biased in their decision-making, over-estimate their chances of winning, and downplay potential consequences of loss, all of which are factors that lead them to gamble (e.g., Lakey et al., 2008).

1.2. Business implications of the Dark Triad and gambling with another person's money

Although business and gambling are different in many respects, both deal with money and risk. Some business risks stem from natural fluctuations of economic trends and prices (e.g., Froot, Scharfstein, & Stein, 1993), whereas others are brought on by more aggressive investment (Foster, Misra, & Reidy, 2009; Foster, Reidy, Misra, & Goff, 2011; Grinblatt, Titman, & Wermers, 1995; see also Holloway, 1981), loaning (Gavin & Hausman, 1998), and trade practices (Barber, Lee, Liu, & Odean, 2009).

Both brokers and investors stand to gain greatly with aggressive investment strategies, when they go well. However, the cost to investors is often higher than it is for brokers when things do not go well (Barber et al., 2009). In fact, individual differences that predict risky decisions in gambling, such as sensation-seeking, also predict risky business decisions under everyday circumstances (Wong & Carducci, 1991). This finding is particularly alarming considering that many risk-takers of modern day business are risking other people's money (Zandi, 2010). High risk investments can pay off in the form of more money faster, but such investments also invite the possibility of financial disaster (Livdan & Tchisty, 2011). The costs of these disasters are usually shouldered by investors. When things go poorly, a broker may lose his/her job (or at least a client). On the other hand, when things go poorly, an investor stands to lose his/her life savings or more. Importantly, literature suggests that when a dishonest business person (e.g., con-artist) attempts at swindling go badly, the con-artist or swindler will simply move to a new area and repeat their malevolent behaviors (Hare, 1999; Pratkanis & Shadel, 2005). Thus, psychopathic or narcissistic brokers may make aggressive trades and simply plan to move onto new areas and start over with new clients if things ever go poorly.

In general, individuals high in narcissism tend to relentlessly approach financial gain, regardless of who may be harmed (e.g., Foster et al., 2009). Such individuals also make risky investments, rather than safe ones, in order to achieve financial success faster (Foster et al., 2011). However, such narcissistic risk does not stop with the individual, and often such individuals risk the resources of a company and shareholders as well (Chatterjee & Hambrick, 2007). In spite of the arrogant and negative interpersonal style of a narcissistic leader (Judge, LePine, & Rich, 2006), such individuals often find themselves in positions of leadership (Brunell et al., 2008). One potential explanation is that narcissistic traits are sometimes confused for being "bright sides" to dark personalities in leadership – such as confidence and creativity (Judge, Piccolo, & Kosalka, 2009). Research has shown that narcissistic leaders, however, are often less effective and do not take into account input from others (Neuvicka, Velden, De Hoogh, & Vianen, 2011). At best, narcissistic overconfidence and emphasis on new ideas is a double-edged sword.

For example, narcissism in CEOs is associated with extreme fluctuations in company profit (Chatterjee & Hambrick, 2007): Their risks pay off when things go well, but those same risks are catastrophic when things do not go well. These findings are likely to translate beyond company profits. The same overconfident style of investing often occurs with household money, frequently to the detriment of one's family (e.g., Barber & Odean, 2001). In sum, narcissistic dispositions seem to predict taking more risk with money that belongs to one's company, investor, and even family. Moreover, individuals with high risk tolerance tend to be

unaffected by failure. In fact, even in the face of massive financial crisis such individuals tend to maintain high risk tolerance and overconfidence (Garling et al., 2009; Roszkowski & Davey, 2010). In addition to high risk proneness and overconfidence, deficits in empathy and high levels of entitlement leave narcissistic individuals willing to exploit others for selfish purposes. Given these dispositions, individuals high in narcissism are likely to lose more of someone else's money when they have control over it.

It is based on these findings that one can assert a gambling game stacked against someone is like a risky business venture, a loan to an unreliable client, or an aggressive investment portfolio. Although individual skill has more to do with these scenarios compared to gambling, there are still individual variations in how much uncertainty and probability of success individuals are willing to risk (Wong & Carducci, 1991). By using a biased game of chance where other people are likely to suffer at the hands of the person who has control over their money, attempts can be made to examine what types of people make poor business choices at someone else's expense.

1.3. Overview of the studies and predictions

1.3.1. Study 1

Participants in Study 1 were randomly assigned to one of two conditions. In the first condition, participants were given the opportunity to gamble with their own bonus. In the other condition, participants were given the opportunity to gamble with a bonus belonging to the next participant (in both conditions the bonus was \$5). The gambling game, used in both studies, was heavily skewed in favor of losses (4/5 chance of loss, and losses always cost half of what a win was worth. Study 1 used \$1 for wins and \$.50 for losses). Participants were provided with five "companies" in which to invest and were told that one company would gain money and the others would lose money. Participants were instructed to click on the company icon that they thought would gain money. No other information about these "companies" was given to participants. It was predicted that psychopathic individuals would be most likely to risk other peoples' money for their own selfish gain. Among those who chose to gamble, however, narcissistic individuals were predicted to lose the most money. It is important to note that because the game was so obviously a losing proposition, none of the selfish Dark Triad traits were predicted to correlate with gambling their own money this paradigm.

1.3.2. Study 2

The purpose of Study 2 was to replicate and extend Study 1. Study 2 used the same gambling paradigm (\$2.50 bonus instead of \$5; \$.50 were the gains, and \$.25 were the losses). In Study 2, participants were also randomly assigned to two conditions. In the first condition, participants were led to think that the previous participant left them with just a \$.25 bonus after gambling away their money. In the other condition, participants were led to believe that the previous participant did not gamble with their bonus, and left the full amount intact. It was predicted, however, that regardless of condition, psychopathy and narcissism should still predict gambling and loss of another person's money (respectively).

2. Study 1

2.1. Method

2.1.1. Participants

A total of 119 adults (55 men, 64 women; *Mean age* = 31.91, *SD* = 11.24; 67% European Heritage, 11% East Asian, 8% South Asian, 2% African Heritage, 12% other mixed ethnicities) were recruited

from Amazon's Mechanical Turk (MTurk, www.mturk.com), for participation in a study entitled "bankers and betting – a game for real money." MTurk is widely used by psychologists as a powerful source of data that surpasses student samples in most respects (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010; Rand, 2012). In fact, other paradigms involving money and amorality have been successfully conducted successfully on MTurk (DeScioli, Christner, & Kurzban, 2011). The MTurk samples reported throughout the manuscript were recruited from all countries.

2.1.2. Design and procedure

MTurk was ideal because of its pay structure. In addition to standard payment, MTurk workers can receive bonuses for exceptional work. Participants were initially given a nominal fee for participation (\$.50 in Study 1 and \$.25 in Study 2), but were told they could also earn a bonus. It should be noted that these participation fees are common amounts given for short surveys on MTurk (Buhrmester et al., 2011; DeScioli et al., 2011). All participants were paid this nominal fee for participation regardless of choosing to gamble or gambling outcomes. It should also be noted that participants were paid bonuses according to the outcome of the game.

After agreeing to the task, participants were redirected to an initial link containing the consent page and baseline measures (in the order presented in the methods section). Participants were told specifically that they would be engaging in a brief survey and then would be given the option to participate in a gambling task for real money. Upon completion of the first half of the survey (demographics and personality measures), participants read the rules of the gambling task and were randomly assigned to their respective conditions. Participants were then asked if they would like to participate in the gambling task. Those who chose to gamble were given a second link containing the gambling game. In the condition where participants were given the opportunity to gamble with their own money, participants were told that their winnings would be added to their bonus and their losses were deducted from their bonus. Those allowed to gamble with the next person's bonus were told that their winnings would be theirs to keep, but their losses would cost the next participant. However, all participants in this condition were made aware that the participant before them was given the same option. Participants were allowed to play a maximum of 10 rounds. After being given these facts, participants were given the option (one more time) to gamble or not. This final decision was the first dependent variable (coded: 1 = yes, 0 = no). For those who chose to gamble, winning choices were randomized and participants saw whether they won or lost each round. After every round, participants were given the option to drop out of the game (i.e., stop gambling) or to continue. The amount lost constituted the second dependent variable. In sum, there were two dependent variables of interest, the first included whether or not participants chose to gamble at all (1 = yes, 0 = no). The second dependent variable, how much money was lost, was analyzed only among those who gambled at least one round.

2.1.3. Measures¹

After filling out basic demographics (e.g., gender, age, and ethnicity), participants filled out measures of the Dark Triad of personality. Number of rounds won was also independently recorded and included in analyses.

¹ It should be noted that the Ten Item Personality Inventory (TIPI) was also included as filler items (Gosling, Rentfrow, & Swann, 2003). Recent research has suggested that the validity of the TIPI is extremely poor and do not represent valid indexes of the "big five" personality traits (Credé, Harms, Niehorster, & Gaye-Valentine, 2012). Nevertheless, it was necessary to include some items that did not have a negative tone in order to balance the presentation to participants.

2.1.3.1. Psychopathy. To assess psychopathy in a brief but reliable fashion, the 29-item short form of the Self-Report Psychopathy Scale (SRP-SF) was used (Paulhus, Neumann, & Hare, in press). The short form of the SRP-SF measures the four psychopathy facets (manipulation, callousness, erratic lifestyle, and antisocial behavior), with fewer items than the full SRP. The SRP-SF were answered on a 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) Likert Scale. Information on the short-form can be obtained by contacting the authors of the SRP manual. After reverse scoring appropriate items, all items were merged into a composite score ($\alpha = .94$, $Mean = 1.94$, $SD = 0.64$). Psychopathy correlated positively with Machiavellianism, $r = .61$, $p < .001$, and narcissism, $r = .45$, $p < .001$.

2.1.3.2. Machiavellianism. The Mach-IV was used to assess Machiavellianism (Christie & Geis, 1970). Similar to the SRP-SF, a 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) Likert Scale was used for the Mach-IV. After reverse scoring appropriate items, the 20-item Mach-IV was merged into a composite ($\alpha = .87$, $Mean = 2.74$, $SD = 0.54$). Machiavellianism correlated positively with narcissism, $r = .35$, $p < .001$.

2.1.3.3. Narcissism. Narcissism was measured using the NPI-16 (Ames, Rose, & Anderson, 2006). The NPI-16 is a short form of items found in the full 40-item NPI (Raskin & Hall, 1979). The NPI-16, like the full NPI, asks participants to choose whether a narcissistic or non-narcissistic option is more self-descriptive. Narcissistic items were coded as “2” and non-narcissistic items were coded as “1.” After reverse scoring appropriate items, all items were averaged to create a composite ($\alpha = .80$, $Mean = 1.25$, $SD = 0.22$).

2.1.3.4. Impulsivity. Impulsivity was assessed and controlled for using a short form of the Barratt Impulsivity Scale (Spinella, 2007). This measure had acceptable internal reliability ($\alpha = .84$, $Mean = 2.55$, $SD = 0.53$).

2.2. Results

Table 1 shows how many participants gambled, and how many rounds they gambled. Across all conditions, the number of rounds played correlated with the money that was lost (referred to as *money left*) at $-.96$, demonstrating that loss was a virtual certainty with choosing to gamble. Across the full sample, none of the independent variables correlated with choosing to risk money, and only rounds won negatively correlated with money lost. However, if the sample was split according to condition (self vs. other gambling), psychopathy positively and significantly correlated with risking someone else's money, $r = .27$, $p = .03$, and narcissism correlated with money lost $r = .39$, $p = .05$ (see Table 2). A closer look at the SRP facets revealed that each facet had a moderate correlation with

Table 1
Gambling percentages by round.

Study 1 (own money gambled) (n = 60)											
# of Rounds	0	1	2	3	4	5	6	7	8	9	10
% Subjects	50	10	0	8	7	0	5	2	0	5	13
Study 1 (other's money gambled) (n = 59)											
# of Rounds	0	1	2	3	4	5	6	7	8	9	10
% Subjects	56	2	2	9	2	9	9	0	7	0	7
Study 2 (received small bonus) (n = 55)											
# of Rounds	0	1	2	3	4	5	6	7	8	9	10
% Subjects	45	2	5	7	2	5	5	0	2	5	23
Study 2 (received full bonus) (n = 54)											
# of Rounds	0	1	2	3	4	5	6	7	8	9	10
% Subjects	53	2	3	5	5	10	5	2	3	3	10

Table 2

Psychopathy and narcissism predicting gambling and losses of someone else's money.

	Study 1 (n = 119)				Study 2 (n = 109)	
	Gamble with own money		Gamble with other's money		Gamble with other's money	
	Risk or not	\$ Lost	Risk or not	\$ Lost	Risk or not	\$ Lost
Age	.23	.06	-.05	.10	-.30*	.13
Gender	-.08	.05	.11	.15	.06	-.27
Psychopathy	-.07	-.03	.27*	.05	.31*	-.17
Narcissism	-.02	.07	.09	-.24	.05	-.22
Mach.	-.05	.07	.09	-.07	.24*	-.16
Impulsivity	-.22	-.24	.11	.14	-	-
Rounds won	-	-.44*	-	-.39*	-	-.10

* $p < .05$.

risking someone else's money (manipulation = .20, callousness = .24, erratic lifestyle = .31, antisocial behavior = .19).

In order to test these findings more thoroughly, all independent variables were entered into a binary logistic regression in two steps (see Table 3), predicting the decision to gamble or not. The first step contained the demographics (age and gender) along with the independent predictors (psychopathy, narcissism, Machiavellianism, impulsivity, condition). The second step contained interactions between the Dark Triad traits and gender (e.g., psychopathy \times gender) and condition (e.g., psychopathy \times condition). Gender interactions were included because previous research has shown that gender can moderate motivations among Machiavellian individuals (Fehr et al., 1992), narcissistic individuals (Morf, Weir, & Davidov, 2000), and psychopathic individuals (Neumann, Schmitt, Carter, Embley, & Hare, 2012). A power analysis was conducted to ensure these interactions could be detected. Using the full sample ($n = 119$) there was over 95% power to detect the predicted effects. As Table 3 shows, across the full sample, no effects were significant.

A similar regression was conducted for how much money was left. Number of rounds won was also included as a predictor to ensure that random luck did not alter the results when predicting money remaining. The regression was conducted in the same manner on money left. With respect to money left, once again, none of the independent variables were significant. Although a power analysis was conducted, it should be noted that the sample size was only 28 for those who chose to gamble and were assigned to gamble with someone else's money. No significant results emerged except that winnings were negatively associated with money remaining.

In sum, the prediction that psychopathic individuals would gamble with someone else's, but not their own, money in a losing game of chance was confirmed only in correlation and when the sample was split. The same was true for the prediction that narcissism would predict how much money was left. It should be noted that sample size could have been an issue in Study 1.

3. Study 2

Study 2 was designed to replicate and extend Study 1. It seems clear that individuals high in the Dark Triad do not carelessly risk their own money in a losing game of chance, but will risk someone else's money in the same game. However, all individuals who gambled with someone else's money were uncertain how much money they would be left with. To address this limitation, Study 2 was designed. Study 2 randomly assigned individuals to believe their bonus was depleted or intact. This procedure would rule out a cynicism explanation for the findings. Specifically, individuals may assume that others would gamble with and lose their money thereby “entitling” them to do the same to the next person.

Table 3
Studies 1 and 2 binary logistic regressions of risking money (or not) across the full samples.

Variable	Study 1 (n = 119)					Study 2 (n = 109)				
	B	Wald	Exp(B)	95% CI	p	B	Wald	Exp(B)	95% CI	p
Age	0.36	2.06	1.43	0.88, 2.32	.15	−0.46	2.48	0.63	0.36, 1.12	.12
Gender	−0.29	0.42	0.75	0.31, 1.81	.52	0.11	0.25	1.12	0.72, 1.76	.62
Psychopathy	0.72	0.00	1.07	0.05, 22.29	.96	2.33	3.43	10.30	0.87, 121.7	.06
Narcissism	1.24	1.31	3.45	0.41, 28.85	.25	0.50	0.28	1.64	0.26, 10.33	.60
Mach.	0.27	0.05	1.31	0.13, 13.40	.82	−1.34	1.60	0.26	0.03, 2.09	.21
Impulsivity	−0.27	1.42	0.76	0.49, 1.19	.23	–	–	–	–	–
Condition	−0.32	0.63	0.73	0.33, 1.60	.43	−0.24	1.03	0.79	0.50, 1.25	.31
Sex * psychop.	−0.74	0.38	0.48	0.05, 5.02	.54	−1.70	2.32	0.18	0.02, 1.63	.13
Sex * Narciss.	−1.05	1.65	0.35	0.07, 1.74	.20	−0.95	1.17	0.39	0.07, 2.17	.28
Sex * Mach.	−0.26	0.07	0.77	0.11, 5.22	.79	1.48	2.16	4.40	0.61, 31.80	.14
Condition * Psychopathy	1.38	2.45	3.97	0.71, 22.25	.12	0.51	1.99	1.67	0.82, 3.41	.16
Condition * Narcissism	−0.20	0.08	0.82	0.21, 3.17	.77	−0.15	0.23	0.87	0.48, 1.56	.63
Condition * Mach.	−0.23	0.08	0.80	0.16, 3.92	.78	−0.10	0.09	0.90	0.46, 1.78	.77

Second, if there are no differences between conditions with respect to the impact of the Dark Triad, it speaks to the selfish nature of the constructs.

3.1. Method

3.1.1. Participants

A unique (based on IP addresses) but similar sample of 135 adults (48% women; 76% European Heritage; mean age = 33.21 $SD = 11.11$) were again recruited from Amazon's Mechanical Turk (MTurk, www.mturk.com), for a study entitled "bankers and betting – a game for real money." This study also included manipulation check questions to ensure that participants understood the paradigm: e.g., "If you do not gamble, how much money does the next participant get as a bonus?" The 26 participants who failed to pass the manipulation check were removed from analyses, leaving a final sample of 109.

3.1.2. Design and procedure

Most procedures were identical to those of Study 1. However, the money dealt with was cut in half (\$2.50 bonus rather than \$5) to see if the findings would generalize to a different and lesser amount of money. However, \$2.50 bonus is still considered a decent sum of money for a single study on MTurk (Buhrmester et al., 2011; DeScioli et al., 2011). In addition, impulsivity was not included because it had no effect on the results in Study 1.

Unlike Study 1 however, participants in Study 2 were only given the option of gambling with the next person's bonus. In addition, participants were able to see how much money the previous participant left them. In other words, participants could see how much of *their* money was gambled away by the previous participant.

Participants were randomly assigned to think the previous participant did not gamble with their money (the \$2.50 condition), or that the previous participant gambled most of it away (the \$0.25 condition). Participants were then given the option to play the same game as in Study 1 (scored the same way as Study 1: 1 = played/gambled, 0 = did not play/gamble). The game was identical except that all values were cut in half. In other words, choosing a losing company (4/5 chance) cost \$.25, whereas choosing a winning company gained \$.50 (1/5 chance).

3.1.2.1. Dark Triad. The same questionnaires were used to assess the Dark Triad of personality, and all had excellent reliabilities (Mach-IV $\alpha = .84$; NPI-16 $\alpha = .79$; SRP-SF $\alpha = .91$). Machiavellianism once again correlated positively and significantly with both narcissism ($r = .30, p = .001$) and psychopathy ($r = .67, p < .001$). Narcissism and psychopathy were also positively and significantly correlated ($r = .50, p = .001$). In addition, all three had similar

means and distributions to Study 1 (Machiavellianism: $Mean = 2.83, SD = 0.52$; narcissism: $Mean = 1.28, SD = 0.22$; psychopathy: $Mean = 1.98, SD = 0.56$).

3.2. Results

Table 1 once again, shows how many participants gambled, and how many rounds they gambled. The money left over was correlated with number of rounds at $-.91$, again demonstrating that the game led to certain monetary loss. As can be seen in Table 2, psychopathy was positively and significantly correlated with choosing to risk someone else's money for personal gain. The sample was combined because there were no significant interactions between condition and any of the Dark Triad traits.

Once again, each facet had a reasonable correlation with risking someone else's money, with the exception of antisocial behavior (manipulation = .28, callousness = .23, erratic lifestyle = .23, antisocial behavior = .04). The same binary logistic regression (without impulsivity, which was not assessed in Study 2) was conducted predicting risking someone else's money or not (see Table 3). No variables were significant, but psychopathy was a marginally ($p = .06$) significant positive predictor. With respect to money lost, narcissism failed to predict losses at the bivariate level or in regression analyses (see Tables 2 and 3).

3.3. Combined sample analyses

The sample sizes predicting money remaining were small in both studies (e.g., 28 in Study 1 and 52 in Study 2) it is possible that the failure to find significant effects for narcissism had to do with sample size. In addition, the results would be far more reliable if the samples were pooled and the hypotheses were supported. In these analyses, only participants given the option to gamble with someone else's money were included.

As Table 5 indicates, Correlational analyses showed that both psychopathy and Machiavellianism positively and significantly correlated with choosing to risk someone else's money. Age was negatively correlated with risking someone else's money (see Table 4). Table 3 shows that in regression analyses, psychopathy was the sole predictor of choosing to risk someone else's money for selfish gain. Correlational analyses show that narcissism was significantly and negatively correlated with money remaining (see Table 4). Regression analyses show that narcissism was a significant negative predictor, and the only predictor, of money remaining (see Table 3).

It should be noted that in the combined sample analyses, narcissism, Machiavellianism, and psychopathy were all positively correlated with risking someone else's money for personal gain, and negatively correlated with money remaining. For example, it

Table 4
Regressions predicting money lost after gambling across Studies 1 and 2.

Variable	Study 1 (n = 54)					Study 2 (n = 51)				
	r	β	SE	95% CI	p	r	β	SE	95% CI	p
Age	.08	−0.02	0.01	−0.03, 0.04	.90	.13	−0.09	0.01	−0.03, 0.04	.61
Gender	.09	−0.07	0.30	−0.62, 1.21	.64	−.27	0.46	0.20	−1.07, −0.17	.01
Psychopathy	−.01	0.77	1.51	−7.30, 3.75	.46	−.17	0.80	0.96	−3.62, 1.37	.26
Narcissism	−.07	−0.77	3.26	−8.39, 14.83	.31	−.22	−0.38	2.12	−3.27, 6.21	.57
Mach.	.02	−0.80	1.42	−3.67, 6.80	.35	−.16	−1.19	0.92	−0.61, 3.46	.06
Rounds won	−.33	0.43	0.08	−0.54, 0.05	.01	−.10	0.21	0.04	−1.09, 0.39	.22
Impulsivity	−.09	0.01	0.30	−0.86, 0.98	.97	−	−	−	−	−
Condition	−.11	0.25	0.30	−1.47, 0.42	.11	.20	−0.15	0.11	−0.14, 0.35	.32
Condition * Psychopathy	−	−0.59	0.63	−1.31, 2.87	.37	−	−0.27	0.32	−1.91, 1.49	.27
Condition * Narcissism	−	0.65	1.40	−7.60, 2.84	.17	−	0.06	0.70	−2.29, 0.34	.79
Condition * Mach.	−	0.40	0.77	−3.22, 1.97	.56	−	0.26	0.29	−0.41, 1.17	.20
Sex * psychop.	−	−0.29	0.68	−2.38, 2.93	.73	−	−0.66	0.66	−6.08, 1.48	.32
Sex * Narcis.	−	0.21	1.48	−5.55, 6.74	.71	−	0.77	1.47	(undefined)	.21
Sex * Mach.	−	0.52	0.81	−3.81, 2.35	.54	−	1.11	0.55	−1.21, 2.66	.06

is not the case that psychopathic individuals do not lose other people's money more often; it is simply the case that narcissism is simply the best predictor of this outcome. In sum, psychopathy is the best predictor of deciding to risk someone else's money for personal gain, and once that decision is made, narcissistic individuals lose more of that money.

4. General discussion

The goal of the present research was to determine if the traits that make up the Dark Triad of personality may have unique consequences in the financial world, using a small behavioral paradigm. Psychopathy was positively associated with choosing to gamble in a game with someone else's money for selfish gain, even when the game was almost certain to bring losses to that other person. It is important to note that none of the Dark Triad traits were associated with gambling with their own money in this game, indicating that such individuals knew it was not a very lucrative choice. Moreover, this effect was consistent regardless of whether these individuals had their money left untouched or not (see Table 5).

Interestingly, among those who made that initial decision to gamble with someone else's money, narcissism predicted greater losses. Once again, this finding did not extend to when narcissistic individuals were gambling with their own money. Moreover, the effect was consistent irrespective of whether narcissistic individuals received all of their money or not. These findings highlight the selfishness of psychopathy and narcissism; such individuals are willing to do poorly unto others, even when they (themselves) have been treated well.

At the core of the Dark Triad lies callousness and manipulation (Jones & Figueredo, in press). When this core is combined with impulsive and antisocial tendencies (i.e., psychopathy) it appears individuals are willing to recklessly gamble with someone else's

money. Interestingly, when this core is coupled with entitlement and overconfidence (i.e., narcissism) individuals appear motivated to persist in risking another person's money in such a game, and lose more money. Although Machiavellianism is linked to callousness and manipulation as well, it has no association with gambling or recklessness, but rather strategy and long-term planning (Jones & Paulhus, 2009).

Machiavellianism had no unique associations with either of the dependent variables. Machiavellians are long-term malevolent strategists. Because the trait shares the common callous-manipulative core, it correlated with willingness to risk someone else's money for personal gain. However, psychopathy was a better predictor because it contains the same core in addition to erratic lifestyle and antisocial tendencies.

It seems clear that individuals high in psychopathy are not concerned with the damage they do to others, and consequently are willing to risk (at a high probability of loss) another person's money for their own selfish gain. The reckless and selfish nature of psychopathy, as highlighted in the present findings, is consistent with preliminary work on psychopathy in the workforce, otherwise known as "Snakes in Suits" (Babiak & Hare, 2006). Research has begun to examine psychopathy in the workforce (Babiak, Neumann, & Hare, 2010), and even create unique assessments for "corporate psychopathy" (Mathieu, Hare, Jones, Neumann, & Babiak, 2013). One fruitful avenue of research in this area would be examining the risky use of other people's money in real corporate contexts.

Interestingly, however, psychopathy had little correlation with gambling and losing more money. Although it was predicted that narcissism would be the stronger predictor of this phenomenon because of the added aspect of overconfidence, it is unclear why psychopathy was not a stronger predictor. Some possible explanations might include boredom and frustration. The gambling task was tedious and had a maximum of ten rounds. Psychopathic individuals do have an extremely high proneness

Table 5
Combined sample analyses.

	Risk or not (n = 168)							Money left (n = 76)				
	r	B	SE	Wald	Exp(B)	95% CI	p	r	B	SE	95% CI	p
Age	−.21	−0.03	.02	2.37	0.98	0.94, 1.01	.12	.12	.07	.01	−0.02, 0.04	.59
Gender	.09	0.22	.34	0.41	1.24	0.64, 2.40	.52	−.04	−.15	.23	−0.72, 0.13	.19
Psychopathy	.30	1.15	.46	6.43	3.17	1.30, 7.73	.01	−.06	.21	.30	−0.19, 1.11	.14
Narcissism	.06	−1.25	.99	1.61	0.29	0.04, 1.98	.20	−.24	−.27	.63	−2.85, −0.33	.03
Mach.	.19	0.01	.44	0.00	1.01	0.43, 2.39	.98	−.20	−.21	.30	−1.14, 0.23	.19
Rounds won	−	−	−	−	−	−	−	−.31	−.31	.05	−0.22, −0.07	.01

Note: Significant correlations are in bold.

to boredom and they may not have perceived the extra time as being worth the extra money. Similarly, psychopathic individuals may have grown easily frustrated if they lost the first few rounds. These explanations are post hoc, however, and should be further tested.

In contrast, narcissism did not predict choosing to gamble, but did, however, predict high losses when that decision was already made. These findings make sense given the nature of narcissism. It is not that they are averse to risking someone else's money, but when they do, it is likely to be done with an aura of overconfidence and unrealistic certainty. Narcissistic individuals, who take huge risks with their clients' money, are likely to see severe fluctuations in profits, very often to the detriment of the client or company (see Chatterjee & Hambrick, 2007; Foster et al., 2011).

There are several explanations for this finding that narcissism predicts high losses. The first two, and most obvious explanations, are that individuals high in narcissism feel entitled to things that are not theirs (Emmons, 1987) and are generally overconfident and self-deceptive, leading to biased perceptions of likelihood of success (Paulhus & Williams, 2002). This combination of entitlement and over-confidence may lead narcissistic individuals to believe that they are unlikely to lose even when the odds are stacked against them. In sum, narcissism might be linked with the faulty belief that gambling with someone else's money will do no harm.

Another explanation comes from the fact that business decisions are made based on probability only with respect to one's comprehension of knowledge at hand (e.g., Grable & Lytton, 1999). A deficit in knowledge, stemming either from a lack of research or an impossible amount of factors, will lead to poor or irrational decisions. Interestingly, narcissism is one variable that is linked to thinking one knows more than one does (Paulhus et al., 2003). As a result of this association, narcissism is very likely to be linked with faulty business decisions that lead to risk (e.g., Campbell et al., 2004). In other words, those high in narcissism are likely to rush into business decisions thinking they have all the knowledge necessary, when they do not.

5. Implications

Recent economic events have led to questions surrounding the personality of individuals responsible for economic turmoil (e.g., Campbell, Hoffman, Campbell, & Marchisio, 2011). In other words, what type of disposition would lead a person to be willing to profit at a cost to someone else? The answer seems to lie within two sub-clinical personality traits: psychopathy and narcissism. Individuals high in psychopathy were willing to take risks with another person's money for personal payoffs, so long as the cost was at the expense of someone else. When faced with the identical gambling scenario with their own money, such individuals opted not to gamble. In many ways one can see parallels to recent discussions over housing markets, bank loans, stock investments, and other recent dubious business practices. So long as the individual high in psychopathy or narcissism stands to gain, even a small amount, such individuals seem to be willing to take detrimental risks with another person's money.

A larger issue for society comes from the culture of uncertainty that has been developed by these business practices. The recent movement known as "Occupy Wall Street" speaks to the frustration the US population has with the business practices of banks and corporations. Individuals who are uncertain of whether someone else is taking unnecessary risks with their money may make to fewer investments resulting in a negative impact on business. In essence, risky investment stemming from antisocial dispositions may be creating a culture of financial uncertainty.

6. Limitations and future directions

One drawback to the present research was that there were no studies examining what would happen when the risk was in favor of the participant. It is likely that more individuals might take a chance with someone else's money, should there be small risks involved. Future research should examine a condition where gains are more certain to see if others (besides those high in a Dark Triad trait) would risk someone else's money. Moreover, in "bull markets" narcissistic brokers, who take huge risks with their clients' money, could end up making substantially more money for those clients than non-narcissistic brokers (Foster et al., 2011). However, when things go wrong, a narcissistic broker could spell disaster.

A second limitation deals with the monetary amount dealt with in the present research. To risk \$500,000 of someone's life savings compared to \$5 of someone's bonus is qualitatively different. However, both psychopathy and narcissism were measured in the normal range as well. Recent research has shown that there is a 4–5 time increase in the prevalence of psychopathy among fast rising business professionals (Babiak et al., 2010). As a result, extreme scores on narcissism and psychopathy may predict extreme business risks. Consequently, the present findings suggest that psychopathy and narcissism may be good candidates for further research on business risk.

A third limitation was the lack of ability or skill involved in the task. In fact, it should be emphasized that wise or experienced investors may take risks that would be inappropriate by novices. In spite of the lack of skill involved in the gambling task, many parallels can be drawn from the current research to modern financial situations. Individuals with power and access to funds may use those funds for selfish purposes, and the risks become the burden of those who had no part in the decisions. Finally, it should be noted that the sample was not a business sample. Given that the sample was simply a group of internet participants from a crowdsourcing website, there may be substantive differences among those who have worked their whole lives in order to understand financial risk and investment. Future research is needed on individuals with careers in financial markets.

7. Conclusion

The traits that comprise of the Dark Triad of personality each predict different but important gambling outcomes with real consequences. Using a unique experimental paradigm with real money and behavioral/economic outcomes, psychopathy was linked to risking another person's money for selfish gain, and narcissism predicted how much money was lost. Psychopathy was the strongest predictor of gambling losses in the face of possible retribution. This study provides indications of how certain individuals, given the opportunity to make "cost-free" risky investments, when someone else is left with the cost. In the end, the minority of individuals with psychopathic and narcissistic traits are likely to dis-proportionally cost society a great deal. In the end, it is unlikely that antisocial individuals will be stuck with the bill they run up. Instead, that bill is likely to be paid by the next person.

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