



Good v. evil: Predicting sinning with dark personality traits and moral foundations



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ABSTRACT

Using life history theory, we provided ($N = 1236$) insight into individual differences in the engagement in human vice or sin (e.g., lust) by examining individual differences in dark personality traits and morality. Moral foundations were associated with sin through the individualizing aspects of morality. Dark personality traits accounted for almost six times more variance in individual differences in sinning than the moral foundations which suggests that it is personality rather than morality that is responsible for sinning behaviors. While sadism and spitefulness accounted for unique and significantly more variance, this was a small and specialized amount. We replicated effects suggesting men are more strongly embodied by dark personality traits and behaviors than women are, and women are more morally virtuous than men are, but showed these sex differences were a function of dark personality traits—in particular—and moral foundations. Overwhelmingly, dark personality traits trump participant sex and moral foundations in accounting for variance in sin.

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What causes evil? This question has plagued moral philosophers and psychologists for centuries (e.g., Schimmel, 1997). Morality has been thought to play a vital role in the perpetration of evil acts. That is, a person is evil or commits sin because they are morally compromised. In contrast, a personality psychologist would argue that so-called sinful acts are downstream expressions of internal dispositions like “dark” (e.g., psychopathy), heritable personality traits (Campbell et al., 2009) and external influences like childhood conditions (Brumbach, Figueredo, & Ellis, 2009). Whereas prior research has examined the relationship between dark personality traits and sin (Veselka, Giammarco, & Vernon, 2014) and morality (Jonason, Strosser, Kroll, Duineveld, & Baruffi, 2015), little research has attempted to simultaneously examine the role of personality and morality in understanding individual differences in the commission of cardinal sins or vices (e.g., gluttony) as they have been traditionally conceptualized in the Judeo-Christian-Muslim tradition (Medina, 2000).

The commission of “sin” is generally viewed by researchers as a function of behavioral dysregulation driven by limited executive functioning (Gioia, Isquith, Guy, & Kenworthy, 2000). That is, sinning is considered to be a form of pathology caused by psychological or physiological dysfunction. However, evolutionary psychologists might conceptualize sin as pseudopathologies (Crawford & Anderson, 1989)

where they confer benefits to the person at the cost of the group. Sinning, then, may be behavioral manifestations of a *fast* life history strategy that is geared toward the immediate extraction of resources, pleasure (Kajonius, Persson, & Jonason, 2015), and mating success at the cost of long-term sexual and physical health. Life history theory (Wilson, 1975) describes between- and within-species differences in the way individuals allocate and tradeoff energy and time toward survival and reproduction. The engagement in apparent sinning or vice may be manifestations of a life history strategy that is geared more toward the former (i.e., fast, *r*-selected) over the latter (i.e., slow, *K*-selected).

In the last ten years, considerable attention has been drawn to socially undesirable personality traits in subclinical populations (e.g., Jonason, Webster et al., 2012). While originally conceptualized as a triad (i.e., the Dark Triad; narcissism, psychopathy, and Machiavellianism; Paulhus & Williams, 2002), researchers have been expanding the list of “dark” personality traits to include sadism (i.e., enjoyment of the suffering of others; Buckels, Jones, & Paulhus, 2013) and spitefulness (i.e., willingness to incur costs in order to inflict harm on others; Marcus, Zeigler-Hill, Mercer, & Norris, 2014). These darker aspects of personality are meant to better account for elements of human nature that are not adequately addressed by other personality taxonomies (e.g., the Big Five, the HEXACO).

One reason for the new found interest in the dark aspects of personality—the Dark Triad in particular—is their successful integration into the life history paradigm. These traits have been identified as indicators of a pseudopathological (Jonason, Duineveld, & Middleton, 2015)

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fast life history strategy that is correlated with behavior and attitudes that resemble the seven vices such as selfishness (Jonason et al., 2015), short-term and exploitive mating strategies (Jonason, Li, Webster, & Schmitt, 2009), and aggressiveness (Jones & Neria, 2015). In addition, the Dark Triad traits have been found to be directly associated with individual differences in the seven deadly sins—with the exception of a null correlation between sloth and narcissism (Veselka et al., 2014).

However, the work linking dark personality traits with individual differences in vice and morality is limited. First, work that directly linked the Dark Triad traits and the seven deadly sins (Veselka et al., 2014) used a shortened measure of the Dark Triad traits as opposed to longer measures, failed to examine any strong theoretical arguments and, instead, was more descriptive and psychometric in nature. Second, in work that examined traits and behaviors that resemble the seven deadly sins (e.g., lust; Jonason et al., 2009) and morality (Jonason et al., 2015), the researchers failed to provide a particularly comprehensive account of how dark aspects of personality relate to vice and morality. And third, given recent attempts to expand the dark taxonomy of human personality to include spitefulness (Marcus et al., 2014) and sadism (Buckels & Paulhus, 2013), prior researchers were incapable of testing whether the inclusion of these traits is particularly worthwhile in accounting for individual differences in morality and vice, especially given that the Dark Triad traits appear, on their own, to account for apparent sadism in the form animal cruelty (Kavanagh, Signal, & Taylor, 2013) and schadenfreude (James, Kavanagh, Jonason, Chonody, & Scrutton, 2014).

Given our life history framework, we make a number of predictions. First, we expect dark aspects of personality and self-interested (i.e., individualizing) morality (both of which are likely manifestations of a fast life history strategy) to be associated with the commission of the seven deadly sins, but we expect personality to be more important than morality as the likely proximal predictors of behavior with morality being antecedent conditions to both. Second, as men benefit more and pay fewer costs than women do for engaging in a fast life history strategy, we expect (1) men to score higher than women do on the Dark Triad traits and the vices (Jonason, Li, & Czarna, 2013) and (2) women to be more morally virtuous than men are (Jonason et al., 2015), in accordance with their life history strategies, and (3) that these sex differences should be accounted for (i.e., mediated) by individual differences in personality and morality. And third, we expect, the addition of sadism and spitefulness to account for a small-yet-significant amount of variance beyond the Dark Triad traits in individual differences in morality and vice.

1. Method

1.1. Participants and procedure

We used a sample of 1236 undergraduates (24% male) at a university in the Midwestern region of the U.S., who were enrolled in psychology courses and participated in return for partial fulfillment of a research participation requirement. The mean age of our participants was 19.96 years ($SD = 3.04$, Range: 18–55). The majority of the sample was European American (76%), followed by African American (10%), Hispanic (2%), American Indian (6%), Asian (5%), Pacific Islander (<1%), and other (6%). An equal proportion of the sample reported being in their Freshman (35%) and Sophomore (32%) year of college, followed by Junior (21%) and Senior (11%) years. Participants characterized themselves as single (44%), seriously dating (39%), casually dating (10%), cohabitating (3%), married (2%), engaged (2%), or divorced (<1%). The majority of the sample identified as heterosexual (93%) with the remainder identifying as bisexual (3%), homosexual (2%), or Other (2%).

Table 1
Descriptive statistics and sex differences.

	Mean (SD)			t	d
	Overall	Men	Women		
Dark personality					
Narcissism	9.62 (4.72)	11.17 (4.90)	9.13 (4.56)	−6.57**	−0.43
Machiavellianism	2.65 (0.41)	2.76 (0.39)	2.61 (0.41)	−5.25**	−0.37
Psychopathy	1.97 (0.52)	2.27 (0.58)	1.87 (0.47)	−12.24**	−0.76
Sadism	1.75 (0.60)	2.19 (0.66)	1.61 (0.50)	−15.85**	−0.99
Spitefulness	1.83 (0.68)	2.06 (0.73)	1.76 (0.65)	−6.78**	−0.43
Vices and virtues					
Anger	2.33 (0.71)	2.40 (0.70)	2.31 (0.71)	−1.64	−0.13
Envy	2.23 (0.75)	2.38 (0.75)	2.18 (0.75)	−4.03**	−0.27
Gluttony	2.37 (0.55)	2.43 (0.59)	2.35 (0.53)	−2.11*	−0.14
Pride	2.17 (0.67)	2.43 (0.65)	2.09 (0.65)	−7.37**	−0.52
Sloth	2.51 (0.65)	2.64 (0.62)	2.46 (0.66)	−4.00**	−0.28
Lust	2.19 (0.76)	2.50 (0.73)	2.09 (0.75)	−8.01**	−0.55
Greed	2.45 (0.67)	2.62 (0.64)	2.40 (0.67)	−4.77**	−0.34
Moral foundations					
<i>Individualizing</i>	3.46 (0.83)	3.16 (0.88)	3.55 (0.79)	7.07**	0.47
Harm	3.50 (0.91)	3.13 (0.96)	3.62 (0.86)	7.98**	0.54
Fairness	3.41 (0.84)	3.18 (0.90)	3.48 (0.80)	5.24**	0.35
<i>Binding</i>	2.94 (0.75)	2.84 (0.77)	2.97 (0.73)	2.53*	0.17
Ingroup	3.00 (0.84)	2.91 (0.90)	3.03 (0.82)	2.11*	0.14
Authority	3.02 (0.79)	2.92 (0.83)	3.06 (0.78)	2.47*	0.17
Purity	2.79 (0.94)	2.69 (0.92)	2.82 (0.94)	2.00*	0.14

Notes. Italicized variables are higher-order dimensions; d is Cohen's d for effect size.

* $p < 0.05$.

** $p < 0.01$.

1.2. Measures

Narcissism was assessed with the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988). For each item, participants were asked to select between two statements. One of the statements embodies a narcissistic attitude (e.g., “I have a natural talent for influencing people”), whereas the other does not (e.g., “I prefer to blend in with the crowd”). The number of narcissistic responses were summed to act as an index of narcissism (Cronbach's $\alpha = 0.83$).

The MACH-IV (Christie & Geis, 1970) is a 20-item measure of Machiavellianism. Participants rate their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as “It is wise to flatter important people”. Items were summed to create an overall score of Machiavellianism ($\alpha = 0.73$).

The Self-Report Psychopathy Scale-III (Paulhus, Hemphill, & Hare, 2009) is a 34-item measure of psychopathy. Participants are asked to indicate their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as “Rules are made to be broken”. Items were summed to create an overall score of psychopathy ($\alpha = 0.90$).

The Comprehensive Assessment of Sadistic Tendencies (Buckels & Paulhus, 2013) is an 18-item measure of everyday sadism. Participants rate their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as, “I enjoy physically hurting people”. Items were summed to create an overall score of sadism ($\alpha = 0.88$).

The Spitefulness Scale (Marcus et al., 2014) is a 17-item instrument designed to capture individual differences in spitefulness. Participants rate their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with statements such as, “I would be willing to take a punch if it meant that someone I did not like would receive two punches”. Items were summed to create an overall score of spitefulness ($\alpha = 0.91$).¹

Individual differences in morality were measured with the 30-item Moral Foundations Questionnaire (Graham et al., 2011). It assessed the degree to which participants felt different considerations were relevant (1 = *not at all relevant*; 5 = *extremely relevant*) when making

¹ Correlations among the dark personality traits are reported in Appendix A.

Table 2
How dark personality traits and morality correlate with individual differences in the seven deadly sins.

	Anger	Envy	Gluttony	Pride	Sloth	Lust	Greed
Dark personality							
Narcissism	0.17**	0.22**	0.25**	0.43**	0.05	0.29**	0.33**
Machiavellianism	0.46**	0.48**	0.29**	0.44**	0.46**	0.40**	0.45**
Psychopathy	0.44**	0.41**	0.41**	0.50**	0.43**	0.52**	0.45**
Sadism	0.39**	0.39**	0.34**	0.46**	0.37**	0.46**	0.39**
Spitefulness	0.51**	0.53**	0.44**	0.58**	0.45**	0.49**	0.48**
0.5							
Moral foundations							
<i>Individualizing</i>	−0.21**	−0.25**	−0.20**	−0.31**	−0.16**	−0.24**	−0.23**
Harm	−0.22**	−0.26**	−0.19**	−0.32**	−0.17**	−0.25**	−0.24**
Fairness	−0.16**	−0.20**	−0.18**	−0.27**	−0.14**	−0.21**	−0.19**
<i>Binding</i>	−0.06*	−0.04	−0.02	−0.03	−0.12**	−0.14**	−0.00
Ingroup	−0.09**	−0.07*	−0.02	−0.05	−0.14**	−0.12**	−0.02
Authority	−0.08**	−0.07*	−0.08**	−0.07*	−0.12**	−0.13**	−0.01
Purity	−0.01	0.03	0.02	0.02	−0.07*	−0.13**	0.03

Note. Italicized variables are higher-order dimensions.

* $p < 0.05$.

** $p < 0.01$.

moral decisions and their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with various moral statements. These items were used to create indices of Harm (e.g., Whether or not someone suffered emotionally; $\alpha = 0.76$), Fairness (e.g., Whether or not some people were treated differently than others; $\alpha = 0.75$), Ingroup (e.g., Whether or not someone's action showed love for his or her country; $\alpha = 0.70$), Authority (e.g., Whether or not someone showed a lack of respect for authority; $\alpha = 0.65$), and Purity (e.g., Whether or not someone violated standards of purity and decency; $\alpha = 0.72$). In addition, we also included the higher-order moral dimensions of Individualizing² ($\alpha = 0.86$) and Binding³ ($\alpha = 0.86$).⁴

We assessed individual differences in sin with the 70-item Vice and Virtues Scale (Veselka et al., 2014). Participant's reported their agreement (1 = *strongly disagree*; 5 = *strongly agree*) with statements like "I am often annoyed when I see people buy things that I cannot have" and "Sometimes I get so furious I feel the need to hit things" to measure individual differences in the sins of anger ($\alpha = 0.82$), envy ($\alpha = 0.87$), gluttony ($\alpha = 0.74$), pride ($\alpha = 0.82$), sloth ($\alpha = 0.77$), lust ($\alpha = 0.87$), and greed ($\alpha = 0.80$).⁵

2. Results

Men scored higher than women did in all the dark personality traits and the commission of the sins and women scored higher than men did in all the moral foundations (t -tests in Table 1). When examining how dark personality traits and moral foundations were correlated (i.e., r values) with the commission of sin (Table 2), all of the dark personality traits were associated with the commission of sin (with the exception of a near-zero correlation between sloth and narcissism) and individual differences in moral foundations—individualizing in particular—were associated (albeit weaker than dark personality traits were) with the commission of sin. Given this, we tested (using hierarchical multiple regression) the relative contribution of the moral foundations (Step 1) and dark personality traits (Step 2). For efficiency, we only ran tests with the two higher-order moral foundations (Table 3). Dark personality traits were more important; accounting for around six times more variance in individual differences in sinning than the moral foundations.

While the above sex differences are interesting, we wanted to understand what it is that makes the sexes differ in their commission of sin. We conducted a multiple, parallel mediator model using ordinary least squares path analysis with 5000 bootstrap samples (Hayes, 2013;

Table 4).⁶ Collectively, dark personality traits accounted for much of the relationship between participant's sex and individual differences in sin, with sadism only accounting for sex differences in anger. Nevertheless, this suggests participant's sex is a less central variable to understand individual differences in sin than personality. The individualizing moral foundation mediated the associations that sex had with pride and sloth, whereas the binding moral foundation mediated the associations that sex had with pride and greed. There was no evidence that sex had a direct association with these vices independent of its connections with these dark personality traits and moral foundations. With fewer and weaker mediation effects (i.e., ab coefficients) in morality, we would contend that the cognitive systems that characterize the sexes that lead to individual differences in sin are more personality than morality in nature.

We wanted to determine whether the addition of sadism and spitefulness accounted for additional variance (using hierarchical multiple regression) in morality and sin beyond what was accounted for by the Dark Triad traits (Table 5). In the case of sin, spitefulness and sadism accounted for no >8% more variance above the Dark Triad traits, which accounted for between 19 and 38% of the variance in sin. In the case of morality, the addition of sadism and spitefulness only accounted for about 5% more variance in only the individualizing aspects of morality where the Dark Triad accounted for between 5 and 19%.

3. Discussion

The darker side of human nature has become a hot topic in personality psychology over the last 10 years (Jonason, Webster et al., 2012). Much of this increase has been created by its integration into a life history framework (Wilson, 1975). From this framework, human vice, amorality, and dark personality traits may be part of a fast life history strategy (James et al., 2014). Those who engage in such an approach to life are likely to engage in casual sex, be aggressive, have limited self-control, and other aspects that associated with vice, dark personality traits, and amorality. That is, instead of conceptualizing these as pathologies as is traditionally done, it is possible they represent part of a psychological system that has been selected to shape an individual's actions to maximize immediate, selfish returns even when they might cost members of their group/society or even themselves (Crawford & Anderson, 1989). We found evidence of such an organized system in a positive manifold of correlations between sin and dark personality traits and associations between the individualizing form of morality and sin.

⁶ We used the SPSS macro PROCESS that Hayes (2013) developed for our mediation analyses because it offers confidence intervals and may be more robust than the traditional Baron and Kenny approach.

² Composed of Harm and Fairness.

³ Composed of Ingroup, Authority, and Purity.

⁴ Correlations among the moral foundations are reported in Appendix B.

⁵ Correlations among the seven deadly sins are reported in Appendix C.

Table 3
Determining whether dark personality traits (Step 2) accounted for unique variance above the higher-order individual differences in morality (Step 1).

Vices and virtues	Step 1		Step 2	
	ΔR^2	F	ΔR^2	F
Anger	0.05	27.35**	0.29*	100.68**
Envy	0.07	45.20**	0.29	102.99**
Gluttony	0.05	29.57**	0.20	59.14**
Pride	0.13	80.86**	0.36	153.98**
Sloth	0.03	16.26**	0.29	97.44**
Lust	0.06	35.35**	0.29	100.18**
Greed	0.07	45.17**	0.29	104.53**

* $p < 0.05$.
** $p < 0.01$.

Importantly, we provided evidence that personality is more important in accounting for sin than morality. There are a number of possible interpretations of this. First, the moral foundations may be more ancient and, therefore, distal systems that predict personality and behavior (Jonason et al., 2015). This would mean that personality predicts sin better than morality because it is more proximal with more recent origins (Figueredo, Gladden, Sisco, Patch, & Jones, 2015) whereas morality systems may predate the emergence of *Homo sapiens* and may be a feature found in various genera of primates if not mammals (de Waal, 1996). Moral systems may be some of the biases described in and responsible for personality variance. That is, it is through personality traits that individual differences in morality operate in the social world. Second, religious scholars and moral philosophers could be wrong and morality is rather unimportant but academic research on morality seems to disagree with this (Graham et al., 2011). Third, unlike more streamlined and efficient measures of the Dark Triad traits like the Dirty Dozen (Jonason & Webster, 2010), the longer measures we used may have sufficient contamination from downstream constructs to create problematic predictor-criterion overlap. As our analyses cannot disentangle these, we encourage future research to better examine these possibilities.

As expected, we replicated sex differences in dark personality traits (Jonason et al., 2009), behavioral manifestations of a fast life as seen in the seven deadly sins, and morality (Jonason et al., 2015). As per a life history framework, men have ancestrally benefit more from engaging in a fast life strategy than women have which should have acted as a selective pressure on their psychological biases and systems. Sex differences tests alone cannot reveal those biases and systems but our mediation tests can approximate them. We found that sex differences in sin were accounted for by individual differences psychological indicators of a fast life strategy (Jonason et al., 2013). Our mediation tests revealed that sex differences were better and more reliably accounted for by individual differences in dark personality as compared to higher-order morality factors.

Most research on the dark side of human nature has relied on the Dark Triad traits alone to understand various aspects of human vice like lust (Jonason et al., 2009) and anger (Jones & Neria, 2015). A number of candidates have been proposed to add to this list in hopes of expanding the nomological space of individual differences in darker aspects of human nature. The two most promising are sadism (Buckels et al., 2013) and spitefulness (Marcus et al., 2014). However, there are reasons to be cautious about including them on par with the Dark Triad traits. First, they overlap considerably with the Dark Triad traits (see Appendix A) and, thus, may be redundant to them. Their addition to the dark taxonomy of human nature may not appreciably increase the shadow cast by the Dark Triad traits in research. Second, they are narrowband aspects of personality whereas the Dark Triad traits are broadband. Third, when these traits are shown to account for unique variance in a phenomenon beyond what the Dark Triad traits can, that phenomena at hand is logically tied to those additional traits. For instance, the fact that “everyday sadism” accounts for more variance in

Table 4
Results of the multiple mediation analysis concerning whether dark personality traits and the moral foundations mediated the association between sex and the vices.

Mediators	Anger		Envy		Gluttony		Pride		Sloth		Lust		Greed	
	ab	CI_L-CI_U	ab	CI_L-CI_U	ab	CI_L-CI_U	ab	CI_L-CI_U	ab	CI_L-CI_U	ab	CI_L-CI_U	ab	CI_L-CI_U
Narcissism	0.00	-0.02,0.03	0.03*	0.01,0.06	0.04**	0.02,0.08	0.12**	0.08,0.16	-0.06**	0.08,0.16	0.05**	0.03,0.08	0.08**	0.05,0.12
Machiavellianism	0.10**	0.05,0.14	0.10**	0.06,0.16	0.03*	0.01,0.05	0.07**	0.04,0.10	0.10**	0.06,0.15	0.05**	0.02,0.08	0.09**	0.05,0.14
Psychopathy	0.09**	0.03,0.17	0.01	-0.06,0.08	0.17**	0.10,0.25	0.07**	0.02,0.13	0.14**	0.08,0.22	0.18**	0.12,0.26	0.11**	0.05,0.19
Sadism	0.09**	0.01,0.19	0.01	0.00,0.03	0.02	-0.07,0.11	0.02	-0.03,0.06	0.02	0.00,0.04	0.02	0.00,0.04	0.02	-0.05,0.09
Spitefulness	0.14**	0.08,0.20	0.15**	0.09,0.21	0.12**	0.07,0.18	0.15**	0.10,0.21	0.10**	0.06,0.16	0.10**	0.06,0.15	0.10**	0.06,0.16
Individualizing	-0.01	-0.05,0.02	0.02	-0.02,0.06	0.02	-0.02,0.06	0.04**	0.02,0.08	-0.05**	-0.10,-0.02	-0.02	-0.05,0.01	0.02	-0.01,0.06
Binding	-0.01	-0.04,0.00	-0.02	-0.05,0.00	-0.02	-0.05,0.00	-0.03*	-0.06,-0.01	0.00	-0.01,0.02	0.00	-0.01,0.02	-0.03*	-0.06,-0.01

Note. Italicized variables are higher-order dimensions; ab = coefficient for the indirect effect; CI_L = Lower-bound of the 95% confidence interval; CI_U = Upper-bound of the 95% confidence interval.
* $p < 0.05$.
** $p < 0.01$.

Table 5
Determining whether sadism and spitefulness (Step 2) account for unique variance above the Dark Triad traits (Step 1).

	Step 1		Step 2	
	ΔR^2	F	ΔR^2	F
Vices and virtues				
Anger	0.27	141.91**	0.06*	52.50**
Envy	0.28	144.42**	0.08	69.54**
Gluttony	0.19	88.64**	0.05	35.42**
Pride	0.38	235.68**	0.08	86.53**
Sloth	0.28	146.56**	0.03	26.31**
Lust	0.31	173.46**	0.03	29.21**
Greed	0.31	170.14**	0.04	31.75**
0.5				
Moral foundations				
<i>Individualizing</i>	0.18	83.83**	0.05	35.94**
Harm	0.19	91.40**	0.05	37.48**
Fairness	0.13	56.18**	0.04	25.61**
<i>Binding</i>	0.09	36.43**	0.00	0.19
Ingroup	0.09	36.74**	0.00	0.21
Authority	0.07	26.50**	0.00	1.45
Purity	0.05	21.73**	0.00	2.08

Notes. Italicized variables are higher-order dimensions; More details upon request.

* $p < 0.05$.

** $p < 0.01$.

sadistic behavior than the Dark Triad traits (Buckels & Paulhus, 2013) merely acts as a predictive validity test of the sadism construct over indicating a need to create the “Dark Tetrad”. Fourth, there is no way to empirically distinguish whether sadism and spitefulness should be downstream or core aspects of darkness in human nature with factor analytic techniques. Instead, theoretical arguments should be made along with sufficiency tests as we have provided. We have shown that while sadism and spitefulness account for some additional variance in morality and sin (two aspects of personality that should be important tests given their nature) it is small at best and nonexistent at times. Future studies are needed to better test the sufficiency of the Dark Triad traits, the additional variance accounted for by sadism and spitefulness, and where, when, why, and if the addition of these two traits is warranted.

4. Limitations and conclusions

While this study improved on prior work on vices, dark personality, and morality, it is, nevertheless, limited. First, despite adopting a large student sample, it is W.E.I.R.D. (i.e., western, educated, industrialized, rich, and democratic; see Henrich, Heine, & Norenzayan, 2010) in nature. However, as evolutionary psychologists, we see little cause to assume that people from different cultures/countries are qualitatively different and, instead, may merely vary in systematic ways that moderate the associations we report here. Second, all of our assessments were self-report in nature. While self-report is a standard tool used in personality psychology, behavioral tests are warranted. Third, it is possible there is an even wider array of dark personality traits and individual differences that warrant inclusion. We would predict, however, that these would fit within a life history framework and account for negligible but significant variance above the Dark Triad traits.

“Why does evil exist?” is a classic question about the nature of the universe and humankind. In the religious sphere, theologians argue that sin or evil stems from individuals being amoral. As such, it should be of no surprise that we found that individual differences in morality, especially individualizing (i.e., self-interested) morality, were associated with more sin. However, secular researchers might, instead, assert that sin is caused by personality traits and socioecological conditions. In this study, we pitted both of these hypotheses against one another and revealed that overwhelmingly it is personality that best accounts for individual differences in sin. We revealed that while there are sex differences in the engagement in sin, these were better accounted for

by individual differences in dark personality traits over individual differences in morality. And last, we revealed that the addition of sadism and spitefulness accounted for negligible amounts of additional variances in sin and morality over the Dark Triad traits themselves. In sum, we have revealed that personality trumps morality in accounting for sin and sin, like dark personality traits, should be treated within a life history framework.

Appendix A. Appendices

A. Correlations between the dark personality traits.

	1	2	3	4	5
1. Narcissism	–				
2. Machiavellianism	0.14**	–			
3. Psychopathy	0.36**	0.50**	–		
4. Sadism	0.29**	0.39**	0.73**	–	
5. Spitefulness	0.26**	0.48**	0.59**	0.58**	–

* $p < 0.05$, ** $p < 0.01$.

B. Correlations between moral foundations.

	1	2	3	4	5	6	7
1. Harm	–						
2. Fairness	0.78**	–					
3. Ingroup	0.49**	0.49**	–				
4. Authority	0.52**	0.47**	0.71**	–			
5. Purity	0.42**	0.36**	0.57**	0.63**	–		
6. <i>Individualizing</i>	0.95**	0.94**	0.52**	0.52**	0.42**	–	
7. <i>Binding</i>	0.54**	0.50**	0.87**	0.89**	0.86**	0.55**	–

* $p < 0.05$, ** $p < 0.01$.

C. Correlations between the seven deadly sins.

	1	2	3	4	5	6	7
1. Anger	–						
2. Envy	0.72**	–					
3. Gluttony	0.54**	0.53**	–				
4. Pride	0.64**	0.77**	0.61**	–			
5. Sloth	0.67**	0.58**	0.52**	0.54**	–		
6. Lust	0.58**	0.58**	0.63**	0.69**	0.57**	–	
7. Greed	0.63**	0.70**	0.64**	0.75**	0.56**	0.61**	–

* $p < 0.05$, ** $p < 0.01$.

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