

THE PLEASURES OF HURTING OTHERS:  
BEHAVIORAL EVIDENCE FOR EVERYDAY SADISM

by

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## **Abstract**

Past research on malevolent personalities has centered on subclinical psychopathy, narcissism, and Machiavellianism, which together comprise the Dark Triad of personality. The present research introduces everyday sadism—a dispositional tendency to take pleasure in others’ suffering—as an additional dark personality operating in the subclinical domain. Two studies examined everyday sadism as a unique predictor of antisocial outcomes. Study 1 examined sadistic behaviors using a bug-killing paradigm. Participants chose between several noxious tasks, including, (1) killing bugs, (2) helping the experimenter kill bugs, (3) cleaning toilets, or (4) ice water pain tolerance. As expected, sadists were more likely to choose to kill bugs over the other tasks. Study 2 examined the relationship between sadism and aggression using a white noise aggression paradigm. When aggression was not costly, sadism, psychopathy, narcissism, low empathic concern, and low perspective-taking predicted unprovoked aggression. However, as expected, only sadists were willing to work to aggress against an innocent person. In both studies, sadism emerged as an independent predictor of antisocial behavior when controlling for its overlap with the Dark Triad. Together, these findings support the incorporation of everyday sadism into the new Dark Tetrad of personality.

## **Preface**

This research received ethics approval from the University of British Columbia's Behavioural Research Ethics Board (certificates H97-80414, H05-80514).

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## The pleasures of hurting others: Behavioral evidence for everyday sadism

To see others suffer does one good, to make others suffer even more: this is a hard saying but an ancient, mighty, human, all-too-human principle ... Without cruelty there is no festival ... and in punishment there is so much that is festive!

—Nietzsche, *Genealogy of Morals*

For most people in most situations, the experience of hurting others causes undesirable feelings of personal distress, shame or guilt, and apologetic concern for the other's welfare. Indeed the cost of caused suffering is so great that some people will do everything in their power to avoid it. Yet for others—Nietzsche among them—hurting affords a very different emotional experience: it is exciting, pleasurable, perhaps even sexually arousing. Instead of avoiding causing pain, these people may actually seek opportunities to exercise brutality and indulge their appetites for cruelty. How may we reconcile these two conflicting views on the value of human suffering?

From a personality perspective, the fact that some people crave cruelty, while others abhor it, indicates that they differ in dispositional sadism, or a tendency to enjoy the suffering of others. As an individual difference variable in the subclinical range of personality, sadism has been surprisingly neglected in psychological research. Conceptions of sadism have rarely extended beyond those of narrowly defined sexual fetishes or severe criminal behavior (Davies & O'Meara, 2007). Yet enjoyment of cruelty is certainly evident in mundane situations and among normal, everyday people. In fact, cruelty is so commonplace that some researchers argue that humans have an innate readiness to find it pleasurable (Nell, 2006).

The issue of innateness aside, it is hard to dispute the observation that humans differ in both (a) their reactions to others' suffering (i.e., their degree of callousness versus empathic concern), and (b) the motivational qualities attributed to suffering (e.g., approach versus avoidance). One important consequence of this variation is individual differences in "everyday sadism". This thesis reviews the current theory and research on everyday sadism and related constructs informing research on this topic. I then present data from two studies that document correlational and experimental evidence for sadism in a normal, nonclinical population.

### **Sadism in Sexual, Clinical, and Forensic Contexts**

To date, the bulk of the literature on sadism centers on sexual sadism, which refers to a forensic psychiatric disorder where sexual pleasure is derived through the pain, suffering, and/or humiliation of others (Krueger, 2010). Sexual sadism is often implicated in sex crimes and sexual murder (Kirsch & Becker, 2007; Marshall & Kennedy, 2003) and it occurs more frequently among those with malevolent characteristics like psychopathy (e.g., Mokros, Osterheider, Hucker, & Nitschke, 2011). These violent proclivities are supported by cognitive distortions such as expecting victims to enjoy forced sexual activity (Wilson, Holm, Kelly, & Borowiak, 2002). There is also emerging evidence that sexual sadists experience heightened perception of others' pain (Harenski, Thornton, Harenski, Decety, & Kiehl, 2012), which may foster even greater gratification from sadistic acts.

How does sexual sadism relate to more mundane forms of sadomasochism? From the standpoint of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000), the distinction between sexual sadism and sadomasochism

(or S/M) is that the former involves non-consensual activities with an unwilling victim, while the latter involves fantasy-play between mutually consenting individuals (Krueger, 2010). However, the distinction between those who have a proclivity towards S/M and those who enjoy criminally sadistic behavior is often fuzzier than it seems. While the majority of normal individuals (up to 95% of men) entertain at least one sexually deviant fantasy during their lifetime, overall deviant fantasies—especially those involving bondage and sadism—are associated with malevolent trait characteristics such as psychopathy (Williams, Cooper, Howell, Yuille, & Paulhus, 2009). Furthermore, deviant fantasies are associated with an increased risk of sexual offending (Greendlinger & Byrne, 1987; Williams et al., 2009) and fantasizers with malevolent traits are the ones most likely to translate fantasy into reality (Williams et al., 2009). Carrying out sadistic sexual fantasies also remains a primary motivator of sexual murders (Beech, Fisher, & Ward, 2005). These findings suggest that S/M practitioners may differ from their criminal counterparts only in degree, rather than kind.

One method of assessing subclinical sexual sadism is through self-report measures of sexual aggression, which is an individual difference variable—applied almost exclusively to men—associated with interpersonal dominance, delinquent behaviors, acceptance of violence in relationships, hostility toward women, calloused sexual beliefs, and sexual arousal to depictions of forced sex (Malamuth, 1983; Malamuth, 1986; Malamuth & Ceniti, 1986). Sexual aggression also predicts aggressive behavior in laboratory white noise aggression tasks (Bernat, Calhoun, & Adams, 1999). The sexual aggression literature has focused on the role of controlled inhibition of arousal as a protective factor against sexually aggressive behavior (Bernat et al., 1999). Specifically, non-sexually aggressive men tend to suppress sexual arousal when cues of non-consent and force are introduced, while sexually aggressive

men do not. Non- sexually aggressive men also indicate that the non-consensual activity should stop sooner than do sexually aggressive men. Yet normal inhibitory control of arousal seems to require sufficient cognitive resources, as normal college men's arousal to rape surges in the presence of situational factors such as alcohol intoxication and provoked anger (Bernat et al., 1999). Although it is unclear whether normal inhibition is motivated by social desirability concerns or a true empathic response to the victim's suffering, it is apparent that sexually-aggressive men lack the capacity and/or motivation to inhibit arousal to depictions of forced sex. This antisocial response may reflect a chronic tendency to indulge in sadistic pleasures.

### **The Dark Triad: Noxious Traits in the Normal Range of Personality**

While minimal research exists on subclinical and non-sexual forms of sadism, there is already a comprehensive literature on the socially aversive traits of subclinical psychopathy (Hare, 1970), narcissism (Kohut, 1977), and Machiavellianism (Christie & Geis, 1970), which comprise the so-called "Dark Triad" of personality (Paulhus & Williams, 2002). Briefly, psychopaths are impulsive thrill-seekers; narcissists are self-centered boasters; and Machiavellians are strategic manipulators (Paulhus & Williams, 2002). Together the Dark Triad have substantial predictive power over many antisocial behaviors, including aggression (Jones & Paulhus, 2010), acts of revenge (Nathanson, Paulhus, & Williams, 2004), romantic stalking (Lau & Paulhus, 2008), cheating (Williams, Nathanson, & Paulhus, 2010), self-enhancement (Paulhus & Williams, 2002), and lying (Paulhus, 2002).

The Dark Triad share a common callousness and malevolence (Jakobwitz & Egan, 2006; Lee & Ashton, 2005), yet they do not represent a unified personality factor (Jones &

Figueredo, in press; Jones & Paulhus, 2011a; Vernon, Villani, Vickers, & Harris, 2008). Instead, each member has its own motivational and behavioral profile. For example, Jones and Paulhus (2010) found that psychopaths were most likely to aggress when physically attacked (i.e., revenge driven aggression), while narcissists aggressed in response to ego-insults (i.e., insecurity driven aggression). In contrast, Machiavellians resisted provocation when there was no personal benefit in violence. As a callous trait with a unique flavor of (pleasure driven) aggression, everyday sadism seems well poised to join this cast of malevolent characters. Still, it must first be shown that everyday sadism is indeed a “leading actor” and not a “stand-in” for one of the Dark Triad.

### **A Dark Tetrad? Defining and Measuring Everyday Sadism**

In their research on the role of callous-unemotional traits in adolescent delinquency, Chabrol, Van Leeuwen, Rodgers, and Séjourné (2009) found evidence that sadistic characteristics were not only present in (a minority of) normal high school students, but that these tendencies also predicted delinquent behaviors above and beyond the Dark Triad. Spurred by their findings, Chabrol et al. (2009) proposed the expansion of the Dark Triad to a Dark *Tetrad* of personality, with sadism as the fourth and newest member. This paper is notable because it is one of the first to discuss and present evidence for non-sexual sadism as a distinct personality trait, i.e., for what I have been calling “everyday sadism.” But are Chabrol and colleagues correct in their claim that everyday sadism is a dark personality trait in its own right? The first step in answering this question is to explicitly define a set of criteria for everyday sadism. Before doing so, I review a number of other definitions that are relevant to this goal.

**Schadenfreude: taking pleasure in the misfortune of others.** On October 27, 2007, Chase Sampson appeared as a contestant on the television show, *Who Wants to Be a Millionaire*? The first question was relatively easy: “Homeowners buy surge protectors to protect their possessions from unexpected surges of what? A) Electric current, B) Water flow, C) Air pressure, or D) Buyer's remorse”. Sampson quickly answered, “B) Water Flow” as his final answer, which resulted in him losing the game on the first round and cemented his fate as being remembered as one of the worst *Millionaire* contestants of all time.<sup>1</sup> Viewers could not help but snicker at his embarrassing failure. This reaction is a prototypical example of *schadenfreude*, or pleasure felt at the misfortune of others.

Like sadism, *schadenfreude* involves an inappropriately pleasant reaction to someone else’s suffering. From this description, *schadenfreude* might seem like a good starting point for investigating everyday sadism, but it is more of a natural human response than something sinister. Researchers explain *schadenfreude* as a normal response to certain properties of situations. For example, Smith, Powell, Combs, and Schurtz (2009) discuss three common circumstances in which feelings of *schadenfreude* arise. *Schadenfreude* tends to occur when, (a) we stand to gain from the other’s misfortune, e.g., via downward social comparison boosts in self-esteem or through more tangible gains; (b) the person deserved to be punished, particularly if there is symmetry between the original offense and the subsequent misfortune (i.e., “poetic justice”); or (c) the target is enviable and we witness their fall from grace (again reflecting pleasure at the correction of an felt injustice).

The literature on *schadenfreude*, therefore, takes a social psychological perspective on the phenomenon—focusing on the causal situational factors that make the experience more

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<sup>1</sup> The correct answer was obviously, A) Electric current.



likely to occur in all people. Individual differences are not discussed; or if they are, they are limited to variables such as self-esteem and group identification (Smith et al., 2009) instead of callous-unemotional traits. Additionally, the misfortunes associated with feelings of schadenfreude are usually relatively minor. If the misfortune is more serious, the pleasure is mixed with negative emotions. For instance, Combs, Powell, Schurtz, and Smith (2009) examined reactions to a news story about a roadside bombing and killing of American soldiers in Iraq during a time when the Democrats were pushing to withdraw U.S. troops. All participants reported feelings of negative affect after reading the story, but Democrats—especially highly identified Democrats—reported more feelings of schadenfreude than did Republicans. Thus mixed reactions of schadenfreude can occur in more serious situations.

Despite occasional occurrences in response to extreme suffering, schadenfreude is clearly distinguishable from sadism because it involves reaping benefits from minor misfortunes *after* they occur. A person who feels schadenfreude does not necessarily go out of their way to *create* misfortune as a sadist might. Additionally, the associated aspects of righteousness and restoration of justice/balance give schadenfreude an almost prosocial flavor. In contrast, sadism goes beyond schadenfreude to something more malicious, less universal, and less context dependent.

**Baumeister's concept of sadism.** Baumeister (1996) discusses sadism not as a personality trait per se, but more of an experience that everyone has the capacity to indulge in: “sadism can be used to describe getting enjoyment or pleasure from hurting others, as well as the desire for that pleasure.” (p. 285). He postulates that sadistic acts are pleasurable because of opponent processes designed to maintain psycho-physiological equilibrium. Specifically, hurting others is a distressing and negative experience, which forces the body to

work to return to its emotional set point via a rush of pleasure (Baumeister describes this as “pleasure in the backwash”). Obtaining this rush of pleasure can become like an addiction; but, importantly for his theory, Baumeister notes that moral conscience and feelings of guilt prevent most people from becoming addicts, i.e., true sadists. So for Baumeister, the sadist is someone who has (a) had repeated experiences with the pleasurable rush afforded by hurting others, and (b) is lacking in the necessary conscience to keep an addiction to sadistic pleasure under control. To my knowledge, these ideas have not been empirically tested, but they are influential due to the paucity of theory on subclinical sadism.

**DSM-III-R criteria for sadistic personality disorder.** The third revised edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association, 1987) included a now-defunct diagnosis for sadistic personality disorder, which describes an enduring and maladaptive pattern of dominating and abusing others with cruel, humiliating, or aggressive behavior (Millon, Grossman, Millon, Meagher, & Ramnath, 2004). Although it was removed in subsequent editions—partially due to political concerns over a male diagnostic bias and its potential to be used as a defense in domestic violence cases—many clinical practitioners still believe in the validity of such a diagnosis (Meloy, 1997). As one psychiatrist put it, “Sadistic personality disorder: not in the DSM, but still in the USA” (Meloy, 1997, p. 631).

Figure 1 presents the DSM-III-R diagnostic criteria for sadistic personality disorder (sadistic PD). Notably, the criteria highlight that the behaviors can involve the infliction of *either* physical (e.g., aggression) or psychological (e.g., humiliation, intimidation) suffering. The criteria also specify that the primary goals of the behavior must be dominance and inflicting pain; sadistic behaviors for instrumental purposes do not count toward a diagnosis

of sadistic PD. Intriguingly, the criteria also discuss a “fascination with violence, injury or torture”, suggesting that those with sadistic PD might turn to fantasy and violent media in the absence of an opportunity to personally inflict pain. These personality disorder criteria are informative because they likely portray the extremes of everyday sadism. In other words, they capture the manifestation of sadistic traits just outside the normal range of personality.

Millon et al. (2004) further proposed four specific subtypes of sadistic PD: tyrannical, spineless, explosive, and enforcing sadism. Figure 1 also presents the characteristics of each of these four subtypes, as measured by the Millon Clinical Multiaxial Inventory-III, Third Edition (MCMI-III; Millon, Millon, Davis, & Grossman, 2009). Out of the four subtypes, the “tyrannical sadist” is, perhaps, the most prototypical portrayal of sadistic PD. Unfortunately, there has been little work to empirically validate the proposed subtypes (Hagger-Johnson & Egan, 2010) and from a measurement standpoint, the MCMI-III is hampered by a simplistic true/false rating scale.

<b>Sadistic Personality Disorder</b>	
<p>A) A pervasive pattern of cruel, demeaning, and aggressive behavior, beginning by early adulthood, as indicated by the repeated occurrence of at least four of the following:</p> <ol style="list-style-type: none"> <li>1. Has used physical cruelty or violence for the purpose of establishing dominance in a relationship (not merely to achieve some non-interpersonal goal, such as striking someone in order to rob him/her).</li> <li>2. Humiliates or demeans people in the presence of others.</li> <li>3. Has treated or disciplined someone under his/her control unusually harshly.</li> <li>4. Is amused by, or takes pleasure in, the psychological or physical suffering of others (including animals).</li> <li>5. Has lied for the purpose of harming or inflicting pain on others (not merely to achieve some other goal).</li> <li>6. Gets other people to do what he/she wants by frightening them (through intimidation or even terror).</li> <li>7. Restricts the autonomy of people with whom he or she has a close relationship, e.g., will not let spouse leave the house unaccompanied.</li> <li>8. Is fascinated by violence, weapons, injury, or torture.</li> </ol> <p>B) The behavior in A has not been directed toward only one person (e.g., spouse, one child) and has not been solely for the purpose of sexual arousal (as in sexual sadism).</p>	
<p><b>Tyrannical Sadist</b> (Negativistic features)</p> <p>Relishes menacing and brutalizing others, forcing them to cower and submit; verbally cutting and scathing, accusatory and destructive; intentionally surly, abusive, inhumane, unmerciful.</p>	<p><b>Spineless Sadist</b> (Avoidant features)</p> <p>Basically insecure, bogus, and cowardly; venomous dominance and cruelty is counterphobic; weakness counteracted by group support; public swaggering; selects powerless scapegoats.</p>
<p><b>Explosive Sadist</b> (Borderline features)</p> <p>Unpredictably precipitous outbursts and fury; uncontrollable range and fearsome attacks; feelings of humiliation are pent-up and discharged; subsequently contrite.</p>	<p><b>Enforcing Sadist</b> (Compulsive features)</p> <p>Hostility sublimated in the "public interest;" cops, bossy supervisors, deans, judges; possesses the "right" to be pitiless, merciless, coarse, and barbarous; talk is to control and punish, to search out rule breakers.</p>

*Figure 1.* DSM-III-R diagnostic criteria for sadistic personality disorder and Millon's sadistic personality disorder subtypes. Adapted from Millon et al. (2004).

**Sadistic personality.** Now that sadistic personality disorder has been removed from the DSM, there has been a recent surge of interest among non-clinicians over the measurement of non-disordered sadistic personality, that is, of more everyday forms of sadism. Definitions of sadistic personality closely resemble those of sadistic personality disorder, albeit with a slightly less extreme flavor to them. According to Chabrol, van Leeuwen, and Rodgers (2011), sadistic personality centers “on the will to disparage and humiliate (Horney, 1945), or to establish absolute power and unrestricted control over a person (Fromm, 1973), or on the satisfaction derived from the other’s suffering (Shapiro, 1981)” (p. 225). O’Meara, Davies, and Hammond (2011) provide a similar definition obtained through a series of qualitative studies (e.g., Davies & O’Meara, 2007): “the term sadistic personality describes a person who humiliates others, shows a longstanding pattern of cruel or demeaning behavior to others, or intentionally inflicts physical, sexual, or psychological pain or suffering on others in order to assert power and dominance or for pleasure and enjoyment” (p. 523). These definitions reflect the attempt of researchers to broaden conceptualizations of sadism into the normal range of personality. Therefore, of all the definitions reviewed thus far, they are most intimately tied with the concept of everyday sadism.

A reliable self-report tool of sadistic personality—the Short Sadistic Impulse Scale (SSIS; O’Meara et al., 2011)—has grown out of these programs of research. The final scale (presented in Appendix A) has a single factor structure and contains 10 items that capture the definition of sadistic personality proposed by O’Meara and colleagues. In developing their scale, O’Meara et al.’s analysis of endorsement frequencies in a sample of 407 Irish undergraduates revealed that 6.9% considered themselves to be “sadistic,” while a smaller

percentage of people (5.6%) actually admitted to *enjoying* hurting others (O’Meara, Davies, & Barnes-Holmes, 2004).<sup>2</sup> Similarly, O’Meara et al. (2011) reported that the SSIS items involving anger-motivated and instrumental use of hurting were endorsed most frequently, while the less popular items involving fantasy, enjoyment, and gratification from hurting were endorsed only by those with high total SSIS scores. This pattern may indicate that provoked and instrumental hurting is less diagnostic of sadistic personality than is pleasure-motivated hurting.

The authors’ preliminary validation work (O’Meara et al., 2011) documented an expected negative relationship between SSIS sadism and Baron-Cohen and Wheelwright’s (2004) empathy quotient total scores. However, there was some evidence that sadistic personalities retain sensitivity to the thoughts and feelings of others: specifically, there was a substantial (-.41) negative correlation between SSIS sadism and an empirically derived “insensitivity” factor in the empathy quotient scores. This finding suggests that sadists may require cognitive mentalizing abilities to obtain gratification from others’ suffering (cf. Baumeister, 1996; Millon et al., 2004). The SISS was also related to dysfunctional attachments in childhood and a dominant and tyrannical interpersonal style.

**Everyday sadism defined.** Taken together, previous theories of nonclinical sadism seem to converge on a picture of the everyday sadist as experiencing callous enjoyment of the physical, sexual, and/or psychological suffering of others. This definition is consistent with the definitions reviewed thus far. However, more critically to the current definition of everyday sadism, I assert that true sadism reflects an *appetitive motivation* for cruelty where

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<sup>2</sup> This latter figure closely resembles previous estimates of the percentage of undergraduates with a sadistic personality disorder (i.e., 5.7% in a sample of 198 undergrads; Coolidge, Moor, Yamazaki, Stewart, & Segal, 2001; as cited by Chabrol et al., 2011)

hurting is craved for the sake of hurting alone. This is slightly different from previous conceptualizations of sadistic personality (e.g., Chabrol et al., 2011; O’Meara et al., 2011), which also include dominance and instrumental motives for cruelty. True sadists do not aggress to assert dominance; they dominate because crushing others is a form of cruelty, therefore, it provides sadistic pleasure. That is, dominance is an especially effective method of causing interpersonal suffering, so sadists tend to engage in it. Yet dominance is just one of many methods of hurting others. It is a means to an end.

The SSIS is a good starting point for measuring everyday sadism, but it does have some limitations: particularly the inclusion of content related to anger-motivated aggression and hurting to establish dominance in relationships. While a sadist would likely endorse using hurting for dominance or hurting in anger-related contexts—simply because these behaviors involve hurting others—non-sadists may also endorse these items (e.g., psychopaths, who are known to aggress after provocation; Jones & Paulhus, 2010). A purer measure would focus on intrinsic enjoyment and exclude reactive and instrumental forms of aggression. That said, the majority of the SSIS content does involve intrinsic enjoyment, therefore it is still a useful index of everyday sadism.

A second limitation of the SSIS is that it only addresses situations where suffering is personally inflicted on others. However, sadistic enjoyment may be achieved not only through direct perpetration of suffering (*core sadism*), but also through more indirect means such as watching others commit sadistic acts (*vicarious sadism*). Vicarious sadism (e.g., interest in violent sports like the UFC, slasher films, graphic murder mystery novels, etc.) may be important to examine in parallel with core forms of everyday sadism, and may even predict divergent outcomes. Furthermore, Millon et al.’s (2004) “enforcing sadist” subtype

suggests that sadism may also be expressed in harsh and merciless political attitudes. Thus it is desirable to measure the tripartite of everyday sadism: core, vicarious, and political sadism.

To this end, our lab (Paulhus, Jones, Dutton, Klonsky, & Buckels, in preparation) is currently developing the Varieties of Sadistic Tendencies inventory (VAST; presented in Appendix A) to capture sadism in all its forms. Preliminary validation research using the VAST indicates that core sadism is indeed positively associated with more vicarious interests, such as enjoying sadistic content in video games, sports, and movies. Yet while related, core and vicarious forms of sadism predict somewhat divergent outcomes: core sadism is more strongly associated with antisocial behaviors like self-reported arson and domestic violence than is vicarious sadism. Furthermore, both core and vicarious sadism are positively associated with political sadism, which appears to be intimately tied to politically conservative social attitudes. Finally, the VAST core sadism scale is also strongly correlated with SSIS sadism, thus providing convergent validity evidence for the scale. However, as the VAST is a new measure, further validity evidence is needed.

In summary, there are currently three potential methods of assessing self-reported sadistic traits in subclinical populations: (1) measures of sadistic personality disorder, such as Millon et al.'s (2009) MCMI-III scales, which likely capture the extremes of everyday sadism; (2) the SSIS (O'Meara et al., 2011) measure of sadistic personality; and (3) the VAST (Paulhus et al., in preparation) measure of everyday sadism in its various forms. Each has advantages and limitations pertaining to its use in capturing everyday sadism. So far, I have reviewed some preliminary findings on correlates of everyday sadism obtained with the SSIS and VAST measures. In the next section, I present a more comprehensive review of the empirical findings relevant to everyday sadism.



## **Empirical Findings Involving Everyday Sadism**

**Everyday sadism and delinquency.** Chabrol et al.'s (2009) investigation into the role of sadistic traits in adolescent delinquency was briefly mentioned as providing initial evidence for everyday sadism's independence from the Dark Triad. More specifically, these researchers examined the associations between self-reported delinquent behaviors (e.g., fighting, carrying weapons to school, stealing vehicles, using drugs at school, etc.), the Dark Triad, and SSIS core sadism in high school students, when controlling for relevant socio-familial factors. As expected, delinquent offenders scored higher in psychopathy, Machiavellianism, and SSIS sadism than did non-offenders. Furthermore, SSIS sadism was negatively associated with attachment to parents, and positively associated with sensation seeking, borderline personality traits, depressive symptoms, impulsivity, and alcohol/drug use among teenage males. Most critically, both SSIS sadism and psychopathy emerged as independent predictors of delinquent behavior when controlling for the other Dark Tetrad traits and socio-familial factors. That is, both sadism and psychopathy uniquely contributed to the prediction of adolescent delinquency. As mentioned previously, these findings are particularly important because they provide the first evidence that everyday sadism is a unique and useful trait predictor in the malevolent domain.

**Everyday sadism and sensational interests.** Hagger-Johnson and Egan (2010) examined the relationship between sadistic personality disorder and sensational interests, e.g., strange, violent, or morbid interests like the occult, weapons and survivalism, or vampires. These researchers cited a prevalent view that sadism and sensational interests frequently co-occur, with sadism possibly being a sensational interest of its own. This view was partially supported by a previous small study that found weak correlations between

MCMI-III sadistic PD scores and the militarism and violent occultism subscales of the sensational interests questionnaire in a forensic sample (Egan, Charlesworth, Richardson, Blair, & McMurrin, 2001; as cited in Hagger-Johnson & Egan, 2010). However, Hagger-Johnson and Egan found little support for an association between sadism and sensational interests in an adult community sample. Four factors emerged in a principal components analysis of the sadistic PD items (labeled as cold, antisocial, controlling, and impulsive). Only the antisocial items were related to sensational interests, and even then, they were only related to one type of sensational interest: those involving a criminal identity (e.g., drugs, gangsters, tattoos, and body piercing). Thus despite some similarities, sensational interests are unlikely to be an accurate indicator of everyday sadism.

**Everyday sadism and suicidality.** Chabrol et al. (2011) tested the link between SSIS sadistic traits and suicidal tendencies in a nonclinical sample of adolescents, wondering if self-harm might possibly be “sadism turned inward”. Socio-familial variables and pathological predictors such as depression, borderline traits, substance use, and impulsivity were also examined as predictors of suicidality. As predicted, Chabrol and colleagues found that sadistic traits were indeed associated with increased suicidality. There was also an interaction with depressive symptoms such that depressed adolescents displayed greater suicidality if they also possessed sadistic traits. These findings suggest that everyday sadism increases the risk of adolescent suicidality, both directly, and indirectly by intensifying the relationship between depressive symptoms and suicidal behaviors. This pattern of relations may, however, be limited to adolescent populations, as recent survey research conducted by our lab (Paulhus et al., in preparation) found no relationship between everyday sadism and suicidality or self-harm in an adult community sample.

**Everyday sadism and aggression.** Of the outcome variables discussed thus far, aggressive behavior is the obvious choice for studying sadism. Two studies have examined the relationship between sadism and aggression. First, Schmeelk, Sylvers, and Lilienfeld (2008) found that sadistic PD in an undergraduate sample was strongly positively associated with trait measures of overt aggression and relational aggression, which is a subtype of indirect aggression that is used for social manipulation (e.g., gossiping, rumor spreading). Additionally, these relationships remained when controlling for the overlap between the two measures of aggression. As with most research on aggression, males scored higher than females on both types of aggression. Gender moderation of the personality relationships was also examined. Schmeelk and colleagues found that the relationship between sadistic PD and relational aggression was significantly moderated by gender, such that the positive association between sadism and relational aggression was stronger among males than females.

Reidy, Zeichner, and Seibert (2011) used a laboratory aggression task to explore the relationships between psychopathy, implicit sadism, and unprovoked aggression in a male undergraduate sample. These researchers had previously found that trait psychopathy was positively associated with unprovoked aggression in an electric shock aggression task, which was similar to the more standard white noise aggression task (Reidy, Zeichner, & Martinez, 2008). They hypothesized that sadism would mediate the relationship between psychopathy and aggression. To operationalize sadism, Reidy and colleagues used a mood congruency paradigm to assess implicit pleasure after viewing violent images, i.e., a measure of implicit sadism. Reidy et al. (2011) found no evidence that implicit sadism mediated the relationship between psychopathy and unprovoked aggression. Instead, they found that Factor 1

psychopathy and implicit sadism each *independently* predicted unprovoked aggression, as would be expected if sadism and psychopathy reflect unique constructs operating in the antisocial domain. Additionally, they found that higher Factor 1 psychopathy scores were associated with lower perceived victim pain/distress. This later result is interesting given other research showing that sexual sadists experience *heightened* perception of others' pain (Harenski et al., 2012), thus pointing to another possible difference between psychopathy and sadism. Unfortunately, this study is limited by the fact that they only used male participants. It is unclear whether these relationships would hold across genders. Reidy and colleagues also used a new implicit measure of sadism that, while face-valid, may or may not capture individual differences in everyday sadism.

**Summary of empirical findings.** In sum, previous research has linked everyday sadism to a variety of outcomes, including a number of antisocial behaviors, antisocial emotions, and indicators of poor psychological functioning. With the exception of the Reidy et al. (2011) study, which was restricted to a male sample, the literature on everyday sadism has been limited to self-report measures and self-report findings. The next logical step to advance this literature is to link sadistic traits to sadistic behavior, especially within the context of distinguishing sadistic outcomes from those of the Dark Triad. Recognizing that truly sadistic behavior is difficult to study in the laboratory (e.g., due to ethical restrictions and social desirability concerns), the present research represents a preliminary foray toward addressing these goals.

## **Overview of the Present Research**

The present research aimed to answer two interrelated questions: (1) how can we study sadistic behavior under controlled laboratory conditions? And (2) is everyday sadism different from other callous traits like the Dark Triad? These questions were addressed using two studies.

### **Study 1: Everyday Sadism and the Desire to Kill**

Study 1 was focused on everyday sadism and the desire to kill. Taking a life is arguably the most extreme form of suffering that a person can inflict. The act of killing may, therefore, be especially gratifying for sadists. Of course, it is exceptionally difficult to study murderous desire in a nonclinical sample. Even if this was possible, everyday sadism is a normal personality trait, so it should be limited to the enjoyment of less horrific behaviors. Thus the present research examined a more innocuous sadistic behavior: killing bugs.

The experimental design was inspired by Martens, Kosloff, Greenberg, Landau, and Schmader's (2007) bug killing paradigm. Participants were given a choice between several noxious tasks, including (1) killing bugs, (2) helping the experimenter kill bugs, (3) cleaning dirty toilets, or (4) testing their ice water pain tolerance. I hypothesized that everyday sadists would be more likely to choose bug killing relative to the other options.

The toilet cleaning control option was included to rule out the possibility that sadists prefer bug killing simply because they have a high tolerance for dealing with disgusting stimuli. If sadistic choice is motivated by pleasure rather than low disgust, everyday sadism should predict a greater likelihood of choosing bug killing over the similarly disgusting toilet

cleaning task. Additionally, I predicted that sadism would remain a predictor of choosing to kill bugs even when controlling for individual differences in disgust sensitivity.

The ice water option was included as a second control option that was aversive but neither sadistic nor disgusting. Choosing this option relative to killing bugs could actually be considered a *prosocial* act. Thus higher sadism was predicted to be strongly associated with choosing bug killing over the ice water option.

In addition to measures of everyday sadism, a self-report measure of right-wing authoritarianism was administered to explore the role of authoritarian submission in sadistic acts. Finally, post-task emotions of pleasure and guilt were also assessed to determine if sadists felt more pleasure, and less guilt, after killing than did non-sadists. Sadism was also predicted to be negatively associated with pleasure among those who chose a non-killing option; that is, sadists who refrained from killing were expected to report less positive emotions than were non-sadists.

## **Method**

**Participants.** 78 undergraduate students from the University of British Columbia's human subjects pool participated for partial course credit. Data from five participants were unusable because the experimenter failed to record the task choice. Two participants refused to participate in the experiment. This left a final sample of 71 participants (72.9% Female;  $M_{age} = 20.37, SD = 2.33$ ).

## **Materials.**

**Core sadism.** The Short Sadistic Impulse Scale (SSIS; O’Meara et al., 2011) was used to assess core everyday sadism (henceforth referred to as core sadism). The SSIS contains 10 items that measure a dispositional tendency to enjoy hurting others. Sample items are, “*Hurting people would be exciting*” and “*I have humiliated others to keep them in line*”, rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha was .87 in this sample. The SSIS is presented in Appendix A.

**Bug-related fears and experiences.** Four yes/no questions relevant to bugs and bug infestations were included in the demographic section of the questionnaire. These questions were: “*Are you currently afraid of bugs?*”, “*Are you afraid of infestations?*”, “*Have you ever had a fear of bugs?*”, and “*Have you ever lived somewhere with a bug infestation?*”.

**Disgust sensitivity.** The Disgust Sensitivity Scale – Revised (DS-R; Haidt, McCauley & Rozin, 1994, modified by Olatunji et al., 2007) was used to assess individual differences in sensitivity to disgusting stimuli and situations. The DS-R divides 25 items into three subscales: core disgust (e.g., “*If I see someone vomit, it makes me sick to my stomach*”), animal-reminder disgust (e.g., “*It would bother me tremendously to touch a dead body*”), and contamination disgust (e.g., “*I never let any part of my body touch the toilet seat in public restrooms*”), as rated on a series of five-point scales. Coefficient alphas for the core, animal, and contamination disgust subscales, and DS-R total, were .72, .82, .64, and .86, respectively.

**Dark Triad.** The Short Dark Triad scale (Jones & Paulhus, 2011b) assessed the noxious traits of narcissism (e.g., “*I have been compared to famous people*”), Machiavellianism (e.g., “*You should wait for the right time to get back at people*”), and

subclinical psychopathy (“*People who mess with me always regret it*”), as rated on a five-point scale from 1 (*disagree strongly*) to 5 (*agree strongly*). As the scale was being finalized when the present study was being run, a slightly different item set (with a handful of items added and/or excluded) was administered to a minority (22) of participants. This older item set included nine items each for narcissism ( $\alpha = .66$ ), Machiavellianism ( $\alpha = .72$ ), and psychopathy ( $\alpha = .68$ ). The newer item set also included nine items each for narcissism ( $\alpha = .63$ ), Machiavellianism ( $\alpha = .63$ ), and psychopathy ( $\alpha = .66$ ).

***Post-task emotions.*** A mood questionnaire similar in format to the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) assessed participants’ emotional state at the end of the experimental session. The questionnaire contained a total of 18 single word emotion items rated on a five-point scale from 1 (*very slightly*) to 5 (*very much*). A four-item guilt composite was created from the “*Guilty*”, “*Regretful*”, “*Remorseful*”, “*Shameful*” ratings ( $\alpha = .93$ ). Similarly, a three-item pleasure composite was created from the “*Happy*”, “*Excited*”, and “*Aroused*” ratings ( $\alpha = .64$ ).

***Right-wing authoritarianism.*** The 15-item short right-wing authoritarianism scale (RWA; Zakrisson, 2005) assessed the social attitude dimension captured by conventionalism, authoritarian aggression, and authoritarian submission. A sample item is “*The ‘old-fashioned ways’ and ‘old-fashioned values’ still show the best way to live*”, as rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha was .72.

**Procedure.** The ostensible purpose of the study was to study the relationship between personality and the ability to perform challenging jobs. Upon arriving and providing consent, participants were given a personality questionnaire packet that included the various



personality scales, along with some filler items about job preferences. The experimenter left the room while they completed the questionnaires in order to reduce reactivity.

Next, participants were told that they would choose between several challenging tasks that mirrored those of real-life jobs. Specifically, they were given a choice between four options: (1) killing bugs (e.g., exterminator), (2) helping the experimenter kill bugs (e.g., exterminator’s assistant), (3) cleaning dirty toilets (e.g., sanitation worker), or (4) testing their ice water pain tolerance (e.g., working in harsh environments).

If the participant chose the bug killing option, they were then presented with the so-called “bug killing machine”, which was a modified coffee grinder, as displayed in Figure 2.



*Figure 2.* The bug killing machine and the bugs used in Study 1.

Three paper cups were located beside the machine, each containing a small live bug (Armadillidiidae or pill bugs). The bugs’ names—Muffin, Ike, and Tootsie—were written in clear letters across the front of the cups. The participants were told that their job was to drop each bug into the funnel and “grind them up” one at a time, starting

with Muffin. The experimenter sat on the other side of the room (ostensibly checking their email on their phone) while the participant completed the task. The procedure for the bug killing assistant choice was identical, except the participant simply handed the cups to the experimenter, who then dropped the bugs into the grinder funnel and turned on the machine.

Unbeknownst to the participants, there was actually a barrier in the grinder funnel that prevented the bugs from reaching the blades. Thus although it looked and sounded like the bugs were being killed, no bugs were harmed in the experiment.

After running a small number of participants through the experimental procedure, we noticed that some proceeded to “kill” all three bugs, while others “killed” only one or two. The experimenters, therefore, began to record the number of bugs killed. Data are available for 69 out of 78 participants.

Participants who chose the toilet cleaning task were given a set of cleaning supplies (plunger, toilet brush, and cleanser) and were led to the door. Similarly, those who chose the ice water task were asked to follow the experimenter to another room. In both cases, the experimenter stopped the participant on their way out the door and explained that they would not have to complete the task. The facade was kept until the last possible second in order to give the participants a chance to change their minds. If a change occurred, the final choice was retained as their chosen option.

Finally, regardless of task choice, all participants completed the emotion rating scales, were probed for suspicion, and were thoroughly debriefed and thanked for their time. Special attention was taken to reassure the participants that the bugs were not harmed in the experiment.

## **Results**

**Preliminary analyses and gender differences.** Descriptive statistics and *t*-tests to examine gender differences in each of the personality predictors are presented in Appendix

B. Endorsement rates for the bug-relevant questions are also presented in Appendix B. As there has been little research on correlates of sadistic traits, we first computed bivariate correlations between the Dark Tetrad personality predictors, disgust sensitivity, right-wing authoritarianism, and the bug-relevant fears and experiences. These correlations are presented in Table 1. Notably, core sadism was strongly and positively associated with Machiavellianism and psychopathy, but unrelated to narcissism. Core sadism was also unrelated to both disgust sensitivity and right-wing authoritarianism. The significant negative correlation between core sadism and the female gender is consistent with the gender difference presented in Appendix B: men had higher sadism scores ( $M = 1.83, SD = 0.72$ ) than did women ( $M = 1.50, SD = 0.50$ ),  $t(75) = 2.30, p = .024, d = 0.53$ . Correlational analyses by gender are presented in Appendix C.

Table 1

*Correlations among the Dark Tetrad, Disgust Sensitivity, Right-wing Authoritarianism, and Other Predictors*

	1	2	3	4	5	6	6-a	6-b	6-c	7	8	9	10
1. Core Sadism													
2. Machiavellianism	<b>.61***</b>												
3. Narcissism	-.03	.03											
4. Psychopathy	<b>.62***</b>	<b>.62***</b>	.15										
5. RWA	.06	.22	-.08	.02									
6. Disgust Sensitivity	.02	.21	-.02	-.01	<b>.42***</b>								
6-a. Core	-.12	.11	-.01	-.08	<b>.34**</b>	<b>.88***</b>							
6-b. Animal Reminder	.14	.20	.04	.04	<b>.35**</b>	<b>.82***</b>	<b>.53***</b>						
6-c. Contamination	.04	<b>.23*</b>	-.11	.03	<b>.35***</b>	<b>.72***</b>	<b>.56***</b>	<b>.38***</b>					
7. Afraid of Bugs?	.10	.04	<b>.24*</b>	-.01	.19	<b>.38***</b>	<b>.39***</b>	<b>.23*</b>	<b>.29*</b>				
8. Afraid of Infestations?	.11	.01	.12	-.04	.19	<b>.25*</b>	<b>.25*</b>	<b>.25*</b>	.04	<b>.46***</b>			
9. Fear Bugs Before?	.11	.00	.08	.16	.03	.19	<b>.27*</b>	.04	.15	<b>.59***</b>	<b>.37***</b>		
10. Lived With infestation?	.12	.02	<b>-.23*</b>	.07	.05	<b>-.36***</b>	<b>-.43***</b>	<b>-.24*</b>	-.15	-.16	-.08	-.02	
11. Gender: Female	<b>-.26*</b>	<b>-.24*</b>	-.19	<b>-.42***</b>	<b>.24*</b>	<b>.45***</b>	<b>.52***</b>	<b>.29*</b>	<b>.23*</b>	.19	.20	<b>.23*</b>	-.13

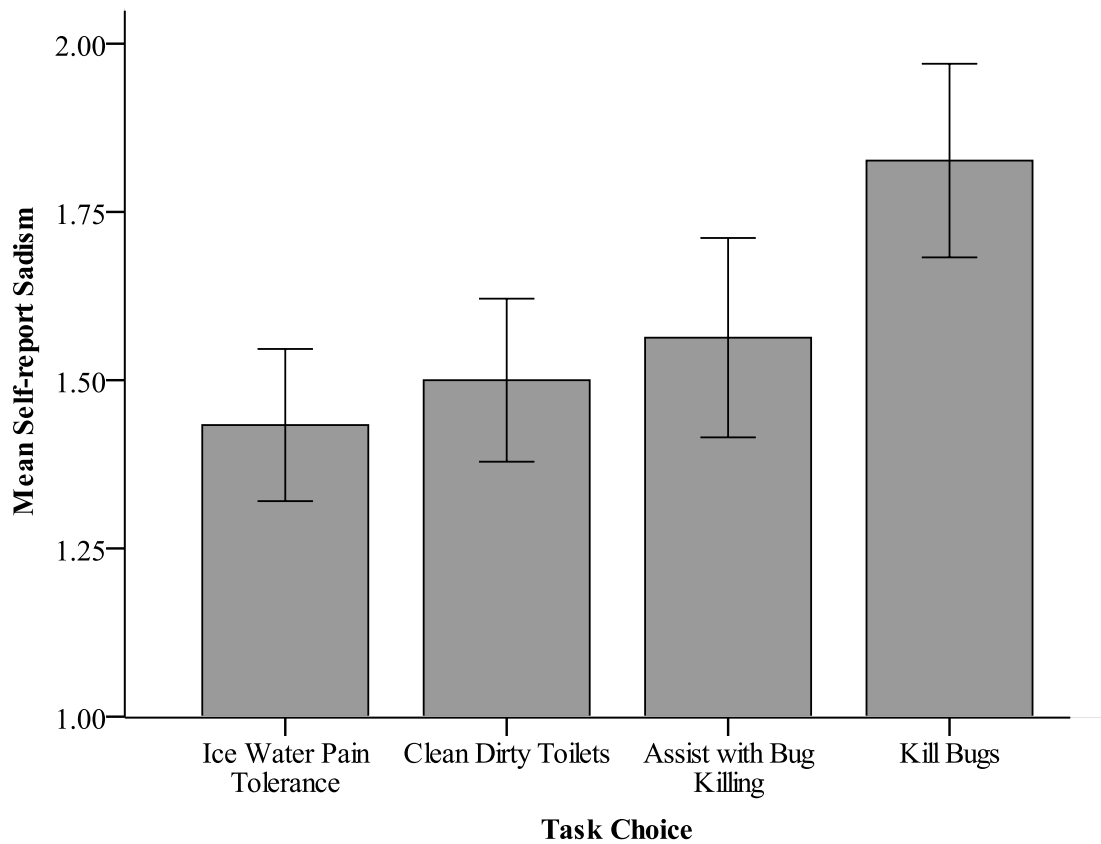
Note.  $N = 78$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).

**Predicting sadistic task choice.** The participant breakdown by task choice was as follows: 12.7% of participants chose to test their ice water pain tolerance, 33.8% chose to clean toilets, 26.8% chose to assist the experimenter with the bug killing, and 26.8% chose to kill the bugs themselves. This means that nearly half of the participants chose a (non-sadistic) non-killing task, while the other half chose a (sadistic) task that involved killing bugs. The proportion of participants choosing a non-killing task over a killing task did not differ according to gender,  $\chi^2(1) = 0.09, p = .76$ .

Figure 3 presents the core sadism scores as a function of task choice. The general pattern of means was in line with predictions: the participants who chose to kill bugs appeared to have the highest self-report sadism scores, while those who chose non-killing tasks appeared to have the lowest sadism scores. This pattern was probed more formally using a multinomial logistic regression analysis, with the personality and bug-related items as predictors of task choice. The results are expressed as relative risk ratios (*RRR*'s) with 95% confidence intervals (*CI*<sub>.95</sub>'s).

As expected, higher sadism scores predicted a significantly greater likelihood of choosing bug killing over the ice water task,  $RRR = 0.14, SE = 0.13, z = -2.17, p = .03, CI_{.95} [0.02, 0.83]$ , a significantly greater likelihood of choosing bug killing over the toilet cleaning task,  $RRR = 0.23, SE = 0.14, z = -2.35, p = .019, CI_{.95} [0.07, 0.79]$ , and a significantly greater likelihood of choosing bug killing over the bug killing assistant task,  $RRR = 0.27, SE = 0.17, z = -2.11, p = .035, CI_{.95} [0.08, 0.91]$ , when holding the Dark Triad, disgust sensitivity, right-wing authoritarianism, and bug-relevant fears and experiences constant. The *RRR*'s may be interpreted as follows: a one-standard deviation increase in self-report sadism is associated with a 7.0% increase in the probability of the participant choosing bug killing over the ice

water task, a 4.28% increase in the probability of the participant choosing bug killing over the toilet cleaning task, and a 3.73% increase in the probability of the participant choosing bug killing over the bug killing assistant task, when holding the aforementioned control variables constant. The full results from this analysis are presented in Appendix E.



*Figure 3.* Self-report sadism scores as a function of task choice. Error bars represent standard errors. See Appendix D for a plot of all personality variables by task choice.

**Correlates of post-task emotions.** Partial correlations (controlling for gender) were used to examine the post-task emotions of bug killers and non-killers as predicted by the Dark Tetrad, disgust sensitivity, right-wing authoritarianism, and number of bugs killed. These correlations are presented in Table 2. As expected, greater self-report sadism was strongly associated with lower self-reported feelings of pleasure among those who chose a non-killing task. Machiavellianism and psychopathy were similarly negatively associated with feelings of pleasure among those who chose not to kill.

Turning next to the post-killing emotions of the bug killers, self-report sadism was unexpectedly unrelated to self-report pleasure. However, consistent with a sadistic motivation for choosing bug killing, there was a positive correlation between the number of bugs killed and reported feelings of pleasure among those who chose to kill bugs. That is, bug killers who killed more bugs expressed greater pleasure than bug killers who killed few bugs.

Although not directly relevant to the present research, it is also interesting to note that right-wing authoritarianism was associated with both (a) killing more bugs, and (b) feeling less guilty after doing so. Similarly, disgust sensitivity was associated with both (a) killing more bugs, and (b) feeling greater pleasure after killing the bugs.

Table 2

*Post-Task Emotions as a Function of Task Choice, Personality, and Bugs Killed*

	Non Bug Killers		Bug Killers / Assistant Bug Killers		
	Post-Task Emotions		Post-task Emotions		Number of Bugs Killed
	Pleasure	Guilt	Pleasure	Guilt	
Core Sadism	<b>-.58</b> ***	-.03	.06	.16	.08
Machiavellianism	<b>-.54</b> ***	.10	.20	-.20	.19
Narcissism	.22	.08	.10	.11	-.08
Psychopathy	<b>-.36</b> *	-.03	.23	.23	.16
Disgust Sensitivity	-.22	.12	<b>.33</b> †	-.12	<b>.35</b> †
Right-wing Authoritarianism	-.08	-.02	.30	<b>-.44</b> *	<b>.43</b> *
Number of Bugs Killed	–	–	<b>.47</b> **	-.27	–

*Note.* Tabled values reflect partial correlations controlling for gender differences.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .10$  (pairwise).



## Discussion

This study explored the relationship between everyday sadism and sadistic behavioral choice (i.e., bug killing). As expected, higher sadism scores were associated with a greater likelihood of choosing to kill bugs over all other tasks, even the option of “bug killing assistant” where they could vicariously enjoy killing without repercussions. For sadists, the visceral experience of killing the bugs themselves was ultimately most desirable. This trend was independent of sadism’s overlap with the Dark Triad, suggesting that there is something unique about sadistic traits that add to the prediction of sadistic behaviors. In fact, when controlling for sadism and the other predictor variables, none of the Dark Triad were associated with a greater likelihood of choosing bug killing over the other options.<sup>3</sup> Thus bug killers are not simply “nasty.” They are a particular type of nasty: they are sadistic.

A further goal of this study was to rule out the alternative explanation that sadists do not necessarily enjoy violence, but that they simply have a high tolerance for dealing with disgusting stimuli like blood, guts, and bugs. The results clearly rejected this interpretation. Sadists were more likely to choose bug killing over the equally disgusting toilet cleaning option. The sadistic preference for bug killing also held when controlling for disgust sensitivity and bug-related fears and experiences. Furthermore, everyday sadism was unrelated to dispositional disgust sensitivity. Thus the alternative explanation involving low disgust was ruled out on all counts.

The results involving post-task emotions were rather mixed. As expected, sadists who chose not to kill reported less pleasure than did non-killers low in sadism. However, sadism

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<sup>3</sup> Higher Machiavellianism was actually significantly associated with a greater likelihood of choosing to clean *toilets* over bug killing,  $RRR = 4.09$ ,  $SE = 2.68$ ,  $z = 2.15$ ,  $p = .032$ ,  $CI_{.95} [1.13, 14.78]$ .

was unrelated to post-killing feelings of pleasure and guilt. Thus bug killers who were high in sadism reported just as much pleasure and guilt as bug killers who were low in sadism. These findings were unexpected, but it is possible that there was simply not enough variance in sadism among bug killers to produce correlations with post-killing emotions (i.e., range restriction). Indeed, ancillary evidence supports this idea. Bug killers who killed more bugs expressed more feelings of pleasure (and almost significantly less guilt) than those who killed less bugs. This pattern may illustrate the reinforcing nature of sadistic behavior via pleasurable experiences of killing, which may be especially intoxicating for those without guilt to keep the behavior at bay (cf. Baumeister, 1996).

Despite the somewhat mixed emotion results, this study was a success in evidencing sadistic behavior under controlled laboratory conditions and at pinpointing the behavioral outcomes most related to everyday sadism. In Study 2, I attempted to demonstrate the relationship between everyday sadism and sadistic behavior using a different, but similarly sadistic, outcome variable—specifically, a willingness to hurt innocent people when such behavior comes at a personal cost.

## **Study 2: Everyday Sadism and Working to Hurt Others**

Study 2 followed Jones and Paulhus (2010) by examining the relationship between core sadism and aggression. Unlike Dark Triad aggression, sadistic aggression should be less context-dependent because the behavior is directly reinforcing. In some situations, only sadists should aggress. One such situation is when the aggression is both (a) unprovoked and (b) costly in terms of time and effort. A psychopath may impulsively hurt others (Masui, Iriguchi, Nomura, & Ura, 2011; Reidy et al., 2011), but they lack the delay of gratification necessary to invest in such goals. Similarly, unprovoked narcissists are unlikely to waste resources on “inferior” others. Machiavellians have the necessary callousness, but will act only if long-term benefits outweigh any costs. Only everyday sadists crave cruelty enough to expend time and resources.

This hypothesis was tested with a modified version of Bushman and Baumeister's (1998) aggression paradigm where participants competed against an ostensible opponent in a computerized reaction time task. After each trial, participants were given the opportunity to punish their opponent with painful white noise blasts. In one condition, the opponent was innocent and always abstained from punishment; therefore blasting this person constituted unprovoked violence. In another condition, the opponent was very aggressive toward the participant; thus blasting the opponent constituted provoked violence.

Critically, this study added a fully crossed “cost/work” condition where participants had to complete a boring task for the opportunity to deliver white noise blasts. I predicted that both psychopathy and core sadism would be associated with unprovoked aggression in the “no work” condition, but only core sadism would predict unprovoked aggression in the

“work required” condition where personal costs were incurred. No clear predictions were made with respect to vicarious/political sadism and aggression, or between core sadism and provoked aggression. However, following previous research (Jones & Paulhus, 2010), it was predicted that psychopathy would be associated with provoked aggression in the “no work” condition where aggression could be performed relatively impulsively.

Another important goal of this study was to demonstrate sadism’s independence from the Dark Triad. Therefore, I hypothesized that core sadism would predict both costly and non-costly aggression toward innocent targets independently of its overlap with the Dark Triad traits of psychopathy, Machiavellianism, and narcissism. If this pattern emerged, it would provide additional evidence that core sadism is a unique member of the Dark Tetrad of personality.

Finally, measures of the Big Five personality domains and dispositional empathy and perspective-taking were included to examine their correlations with the various forms of sadism. Following previous theory and research, all forms of sadism were expected to have negative associations with dispositional empathic concern and agreeableness. Predictions for perspective-taking were left open due to the possibility that sadists retain cognitive empathy to derive pleasure from their victims.

## **Method**

**Participants.** 140 undergraduate students from the University of British Columbia’s human subjects pool participated for partial course credit. Data from four participants could not be used because of computer malfunction. This left a final sample of 136 participants (52.2% Female;  $M_{age} = 20.42$ ,  $SD = 3.0$ ).

## **Materials.**

***Big Five personality dimensions.*** The 44-item Big Five Inventory (BFI; John & Srivastava, 1999) was used to assess the Big Five personality factors of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. All items were rated on a five-point scale, ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Coefficient alphas were .86 (extraversion), .74 (agreeableness), .86 (conscientiousness), .81 (neuroticism), and .80 (openness), respectively.

***Core, vicarious, and political sadism.*** Core sadism was measured with two self-report measures. The first was the Short Sadistic Impulse Scale (SSIS; O'Meara et al., 2011), which contains 10 items that are rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha was .82 in this sample. The SSIS is presented in Appendix A.

Core sadism was also assessed via a preliminary six-item subscale from the Varieties of Sadistic Tendencies inventory (VAST; Paulhus, Jones, Dutton, Klonsky, & Buckels, in preparation). A sample item is “*I enjoy seeing people suffer*”, rated on a seven-point scale from 1 (*not at all*) to 7 (*very much*). Coefficient alpha was .61. The VAST core sadism scores were strongly positively associated with the SSIS in this sample,  $r(135) = .60, p < .001$ ; see Table 3. There was, however, evidence that the two scales functioned somewhat differently in men and women (see Appendix G): the correlation between the SSIS and VAST core sadism scales was only .36 among women (compared to .72 among men). For this reason, I report separate results for each core sadism scale instead of presenting composite results.

The VAST also contains five items that assess vicarious sadistic interests, for example, enjoying violent media and sports. Example items include, “*In video games, I like the realistic blood spurts*” and “*I enjoy cage fighting (or MMA) where there is no escape*”, as rated on a seven-point scale from 1 (*not at all*) to 7 (*very much*). Coefficient alpha was .71.

Finally, five VAST items assessed sadistic political views and social attitudes. A sample political sadism item is, “*If lives were threatened, I would be in favor of torturing a terrorist*”, as rated on a seven-point scale from 1 (*not at all*) to 7 (*very much*). Coefficient alpha for this preliminary item set was .50. The VAST is presented in Appendix A.

***Dark Triad.*** The 28-item Short Dark Triad scale (Jones & Paulhus, 2011b) was used to assess the traits of narcissism (9 items; coefficient alpha = .67), Machiavellianism (10 items; coefficient alpha = .83), and subclinical psychopathy (9 items; coefficient alpha = .68).

***Dispositional empathy.*** The Interpersonal Reactivity Index (IRI; Davis, 1983) was used to measure individual differences in the capacity and propensity to feel empathy for others. The IRI contains 28 items divided into four seven-item subscales. The personal distress subscale assesses a lack of emotion regulation and a self-oriented focus that runs counter to the experience of empathy (e.g., “*I tend to lose control during emergencies*”). The empathic concern subscale assesses a propensity for feelings of warmth, affiliation, and concern for the well-being of others (e.g., “*I often have tender, concerned feelings for people less fortunate than me*”). The fantasy subscale assesses a tendency to immerse oneself into the worlds of fictional characters (e.g., “*I really get involved with the feelings of the characters in a novel*”). Finally, the perspective-taking subscale measures a tendency to adopt the perspective of others (e.g., “*Before criticizing somebody, I try to imagine how I*

would feel if I were in their place”). Each item is rated on a seven-point scale, ranging from 1 (*Not true*) to 7 (*Very true*). Coefficient alphas were .66, .82, .82, and .80, respectively.

**Procedure.** Participants were recruited for a study involving a “competitive computer game”. Upon arriving at their (individual) experiment sessions, participants were randomly assigned to one of four conditions: (1) no work & innocent partner ( $n = 39$ ); (2) no work & aggressive partner ( $n = 32$ ); (3) work & innocent partner ( $n = 32$ ); or (4) work & aggressive partner ( $n = 33$ ). The gender distribution did not vary across conditions,  $\chi^2(3) = 2.72, p = .44$ .

The aggression task used in this experiment was modeled after Bushman and Baumeister's (1998) white noise aggression paradigm. Participants were told that they would be competing in a computer game against a same-sex UBC student. The ostensible opponent was said to have arrived early and, therefore, was already seated in another lab room. The experimenter assured the participants that they would *not* be meeting face-to-face with their opponent and that their identity would be kept anonymous.

The objective of the computer game was to press a button faster than the opponent. Additionally, participants would pick the strength of a white noise blast to be delivered to their opponent's headphones as punishment on each trial (and their opponent would do the same). The noise blast was described as painful, but not damaging. Participants were told that the selected blast levels would be visible to both players, but only the winner would get to deliver the noise blast to the loser. The available blast levels ranged from 0 (no punishment) to 10 (associated with a 90 dB white noise audio clip). Blast duration was determined by the

participant in real-time via a blast delivery button on the keyboard (up to a maximum of five seconds).

Before the test trials began, all participants completed a practice trial with the experimenter to ensure that they understood the task and were familiar with the sound of the white noise. The experimenter also checked on the ostensible opponent by connecting to an “audio feed” of the other room and asking if the opponent was ready. A timed response (“Yes, I’m ready”) was sent to the participant’s headphones and they were required to relay this message to the experimenter. This check-in procedure was designed to increase the believability of the opponent.

The experimenter left the room while the test trials were conducted in order to reduce reactivity. All participants won six out of eight trials, with the first and fifth trials selected as the losing trials. The randomly assigned condition determined the further parameters of the aggression task.

In the “no work” conditions, participants who chose to punish their opponent were able to do so immediately after each winning trial. In this way, aggression was made relatively easy. Conversely, participants in the “work required” conditions were forced to complete a boring letter counting task on each winning trial where they wanted to punish their opponent. The letter counting task was designed to be easy—with an unlimited number of attempts and an unlimited time limit—but monotonous and time consuming. Each counting task featured a different block of “lorem ipsum” nonsense text and a different letter to be counted. The mean successful completion time of any counting task trial was 2.19 minutes. At any point during the counting task trial, the participant could change their mind



and *skip* the punishment delivery if they so wished. Maximum time spent on a skipped/abandoned counting task was 9.44 minutes.

The behavior of the ostensible opponent was also determined by the assigned condition. In the “innocent partner” conditions, the opponent always chose not to punish the participant (i.e., they chose a blast level of 0 on every trial). In the “aggressive partner” conditions, the opponent instead consistently selected the highest blast levels (i.e., randomly fluctuating between levels 7 to 10).

After finishing the last trial in the aggression task, the participants proceeded to fill out the questionnaires in private. Then they were probed for suspicion using a funnel debriefing method and were thanked for their time. Although some participants expressed disbelief regarding the ostensible partner, no participants were removed due to excessive suspicion.

## **Results**

**Preliminary and correlational analyses.** Appendix F presents descriptive statistics and *t*-tests examining gender differences in the Dark Tetrad scores. Table 2 presents correlations between the Dark Tetrad and the other personality predictors. As expected, the SSIS and VAST measures of core sadism had very similar patterns of correlations. Across both measures, core sadism was positively associated with vicarious sadism, political sadism, psychopathy, and Machiavellianism. The VAST core sadism measure also had a significant positive correlation with narcissism. Both core sadism measures were negatively associated with the perspective-taking and empathic concern subscales of the IRI. Finally, core sadism

was negatively associated with the Big Five dimensions of agreeableness and conscientiousness. See Appendix G for separate correlations for men and women.

As empathic concern was positively associated with perspective-taking, but negatively associated with sadism, the observed negative correlation between sadism and perspective-taking may be due to the overlap between the two IRI subscales. Their patterns of relations with gender and the Dark Triad may also be accountable for this negative relationship. Thus partial correlations between core sadism and perspective-taking were computed when controlling for empathic concern, gender, and the Dark Triad. When holding these control variables constant, perspective-taking was unrelated to SSIS core sadism,  $r_{\text{partial}}(129) = .03, p = .77$ , and its negative association with VAST core sadism decreased substantially and dropped to non-significance,  $r_{\text{partial}}(129) = -.14, p = .12$ . Similarly, there was no relation between political sadism and perspective-taking when controlling for empathic concern, gender, and the Dark Triad,  $r_{\text{partial}}(129) = .001, p = .99$ .

Table 3

*Correlations among the Dark Tetrad, Empathy, and Big Five Personality Predictors*

	1	2	3	4	5	6	7
1. Core sadism: VAST							
2. Core sadism: SSIS	<b>.60</b> ***						
3. Vicarious sadism	<b>.41</b> ***	<b>.56</b> ***					
4. Political sadism	<b>.33</b> ***	<b>.34</b> ***	<b>.33</b> ***				
5. Narcissism	<b>.24</b> **	.10	<b>.23</b> **	<b>.18</b> *			
6. Psychopathy	<b>.53</b> ***	<b>.59</b> ***	<b>.43</b> ***	<b>.33</b> ***	<b>.27</b> ***		
7. Machiavellianism	<b>.49</b> ***	<b>.48</b> ***	<b>.32</b> ***	<b>.44</b> ***	.14	<b>.52</b> ***	
8. IRI distress	.01	.00	<b>-.20</b> *	-.03	<b>-.25</b> **	.02	.05
9. IRI fantasy	-.09	-.05	<b>-.17</b> *	<b>-.22</b> **	.12	.01	-.02
10. IRI perspective-taking	<b>-.39</b> ***	<b>-.24</b> **	-.10	<b>-.25</b> **	-.11	<b>-.23</b> **	<b>-.29</b> ***
11. IRI empathic concern	<b>-.57</b> ***	<b>-.53</b> ***	<b>-.38</b> ***	<b>-.48</b> ***	-.04	<b>-.43</b> ***	<b>-.48</b> ***
12. Extraversion	.04	-.01	<b>.17</b> *	-.09	<b>.53</b> ***	.11	-.11
13. Agreeableness	<b>-.54</b> ***	<b>-.44</b> ***	<b>-.24</b> **	<b>-.30</b> ***	-.04	<b>-.50</b> ***	<b>-.49</b> ***
14. Conscientiousness	<b>-.24</b> **	<b>-.33</b> ***	<b>-.18</b> *	-.09	.12	<b>-.33</b> ***	<b>-.27</b> ***
15. Neuroticism	.13	.14	<b>-.20</b> *	-.07	<b>-.23</b> **	.16	<b>.17</b> *
16. Openness	-.09	.01	.03	.00	<b>.22</b> **	.04	-.06
17. Gender: Female	<b>-.22</b> *	<b>-.34</b> ***	<b>-.60</b> ***	<b>-.23</b> **	-.09	<b>-.27</b> **	-.11

Note.  $N = 136$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).

**Predicting easy aggression (no work required).** Two primary indexes of aggression were computed to examine their associations with the Dark Tetrad when work was not necessary to aggress. First, white noise blast intensity and blast duration were strongly positively correlated,  $r(63) = .77, p < .001$ , therefore the scores were standardized within condition and combined to create a composite index of *aggression strength*. Second, since Trial 1 blast intensity was selected before the opponent's aggressive/non-aggressive behavior was known, the difference between the blast intensity of the first and later trials afforded an opportunity to examine responses to provocation (aggressive partner condition) or non-provocation (innocent partner condition). That is, an index of *reactive aggression* was available. To compute the reactive aggression index, the mean blast intensity scores from Trials 2-8 were regressed on the Trial 1 blast intensity scores (separately for each condition) and the residual scores were saved. These residuals reflect the increase in blast intensity following provocation/non-provocation. See Appendix H for descriptive statistics of the complete set of aggression indexes.

Partial correlations between the personality and behavioral variables in the “no work” condition are presented in Table 4. Gender was entered as a control variable in all partial correlation analyses. As expected, core sadism was strongly and positively associated with aggression strength against an innocent target. Vicarious sadism, narcissism, psychopathy, low perspective-taking, and low empathic concern were also significant predictors of strength of aggression toward an innocent partner.

In order to probe the Dark Tetrad associations further, a multiple regression analysis was conducted with VAST core sadism, psychopathy, narcissism, Machiavellianism, and gender as predictors. As expected, core sadism emerged as a significant independent

predictor of strength of aggression toward an innocent target,  $\beta = .35$ ,  $SE = 0.16$ ,  $t(26) = 2.18$ ,  $p = .039$ , when controlling for the Dark Triad and gender. Psychopathy also emerged as an independent predictor of strength of aggression toward an innocent target,  $\beta = .42$ ,  $SE = 0.19$ ,  $t(26) = 2.23$ ,  $p = .034$ ; but narcissism, Machiavellianism, and gender failed to reach significance,  $p$ 's  $> .17$ . See Appendix J for the full results of the regression analysis.

A somewhat different pattern emerged among those who competed against an aggressive partner: vicarious sadism and political sadism were the only significant predictors of strength of aggression toward aggressive targets. The positive partial correlations with narcissism and Machiavellianism trended toward significance, but unexpectedly, the association between psychopathy and aggression strength toward an aggressive target was close to 0. Core sadism was similarly unassociated with aggression strength toward an aggressive target.

Finally, with respect to the indexes of reactive aggression, core sadism and lower IRI distress each predicted significant increases in aggression after non-provocation. Machiavellianism was the only significant predictor of increased aggression after provocation.

Table 4

*Partial Correlations between Personality and Aggression in the “No Work” Conditions, Controlling for Gender*

Predictor	Target: Innocent Partner		Target: Aggressive Partner	
	Overall Aggression Strength	Reactive Aggression After Non-provocation	Overall Aggression Strength	Reactive Aggression After Provocation
	$r_{\text{partial}}$	$r_{\text{partial}}$	$r_{\text{partial}}$	$r_{\text{partial}}$
Core sadism: VAST	<b>.57</b> ***	<b>.42</b> *	.12	.19
Core sadism: SSIS	<b>.44</b> *	<b>.32</b> †	.05	-.15
Vicarious sadism	<b>.33</b> †	.02	<b>.44</b> *	.08
Political sadism	.31	.07	<b>.33</b> †	.18
Narcissism	<b>.39</b> *	.07	.28	.01
Psychopathy	<b>.62</b> ***	.22	.06	.07
Machiavellianism	.12	-.05	.25	<b>.32</b> †
IRI distress	-.14	<b>-.34</b> †	-.08	.26
IRI fantasy	-.23	-.18	-.04	-.11
IRI perspective taking	<b>-.38</b> *	-.23	.09	-.03
IRI empathic concern	<b>-.38</b> *	-.09	.11	.13

*Note.* Tabled values are partial correlations with participant gender as a control variable.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .10$  (pairwise)

**Predicting costly aggression (work required).** Two behavioral indexes of interest were computed in the “work required” condition. The primary dependent variable was the number of times the participant successfully completed the boring letter counting task (i.e., worked) to aggress against their partner, with a maximum of six possible opportunities to do so. A second variable of interest was the number of times the participant indicated that they wanted to aggress (via a non-zero blast intensity level), but ultimately chose to skip the letter counting task and abandon their attempt to aggress. Thus two behavioral counts were computed: the number of times the participant (1) *worked to aggress*, and (2) *abandoned their attempt to aggress*. Note that a precondition for each of these behavioral counts is a signaled initial intention to aggress. They therefore capture the extent to which aggressive intentions actually *culminate* in aggressive behavior when said aggression is costly. Put another way, they index an internal motivation to aggress in the face of external pressures. Appendix I displays the descriptive statistics for these indexes.

Partial correlations with gender as a control variable were used to examine the relations between the personality predictors and the aggressive indexes in the “work required” condition. As predicted, core sadism was a strong positive predictor of the number of times the participants worked to aggress against an innocent target. Similarly, core sadism was also associated with less abandoned attempts to aggress against the innocent target. Additionally, low empathic concern also predicted a tendency to work to aggress against innocents.

The above associations were probed further using a multiple regression analysis with VAST core sadism, Machiavellianism, narcissism, psychopathy, and gender as predictors of working to aggress against innocents. As expected, core sadism emerged as the only

significant unique predictor of working to aggress against an innocent target,  $\beta = .62$ ,  $SE = 0.34$ ,  $t(21) = 1.84$ ,  $p = .04$  (1-tailed). The standardized regression coefficients for psychopathy, narcissism, and Machiavellianism were weak and nowhere near significance,  $\beta$ 's =  $-.23$  to  $.10$ ,  $p$ 's =  $.20$  to  $.50$  (1-tailed). The full results of the multiple regression analysis—and those from a more complicated interaction model—are presented in Appendix K.

Again, a different pattern emerged when the target was an aggressive partner. None of the personality variables were significant predictors of working to aggress against the aggressive target. However, core sadism was significantly positively associated with a greater number of *abandoned attempts to aggress*, while high empathic concern was associated with less abandoned attempts to aggress against the aggressive target.



Table 5

*Partial Correlations between Personality and Aggression in the “Work Required” Conditions, Controlling for Gender*

Predictor	Target: Innocent Partner		Target: Aggressive Partner	
	Abandoned Attempts to Aggress	Working to Aggress	Abandoned Attempts to Aggress	Working to Aggress
	$r_{\text{partial}}$	$r_{\text{partial}}$	$r_{\text{partial}}$	$r_{\text{partial}}$
Core sadism: VAST	<b>-.36</b> <sup>†</sup>	<b>.40</b> <sup>*</sup>	<b>.34</b> <sup>†</sup>	-.11
Core sadism: SSIS	-.12	.06	.19	-.08
Vicarious sadism	-.01	.16	.11	-.01
Political sadism	.23	-.09	.25	.02
Narcissism	.26	-.04	.28	-.09
Psychopathy	-.08	.22	.03	.02
Machiavellianism	.17	.04	.25	-.02
IRI distress	-.14	-.03	.00	-.07
IRI fantasy	.08	-.04	-.15	.03
IRI perspective-taking	-.06	-.07	-.17	-.14
IRI empathic concern	.05	<b>-.35</b> <sup>†</sup>	<b>-.33</b> <sup>†</sup>	.04

*Note.* Tabled values are partial correlations with participant gender as a control variable.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .10$  (pairwise)

## Discussion

This study examined the relationship between everyday sadism and aggression. Using a white noise aggression paradigm, we found that core sadists, vicarious sadists, psychopaths, narcissists, and those low in dispositional empathy and perspective-taking were especially likely to aggress against an innocent person when aggression was easy. Of the Dark Tetrad, however, only core sadists increased the intensity of their attack once they realized that the innocent person would not fight back; and they were even willing to work (i.e., expend time and energy) to hurt the innocent person. Core sadists were also less likely to abandon attempts to aggress against the innocent opponent, but more likely to abandon aggression if the opponent was aggressive toward them. Political and vicarious sadists aggressed strongly toward an aggressive opponent, but did not find it rewarding enough to work for the opportunity to do so. Taken together, these results suggest that core sadists possess an intrinsic and appetitive motivation to inflict suffering on innocent others—a motivation that appears to be absent in other dark personalities. Inflicting suffering on the weak is so rewarding that sadists will aggress even if it comes at a personal cost. In contrast, inflicting suffering on dominant and aggressive individuals appears to be somewhat less desirable.

One apparent limitation of these findings is that the correlations between core sadism and aggressive behavior in the “work” conditions did not replicate across the two available measures of core sadism. The correlations were only significant using the VAST core sadism measure; the SSIS had essentially null relations with all behaviors in the “work” conditions. The reason behind this discrepancy is unclear. As the SSIS is a relatively blatant measure of sadism, while the VAST sadism items were interspersed with a variety of other items (e.g., questions about general health, sports and movie preferences, political views, etc.), one

possibility is that the participants in the “work required” conditions were more sensitive to social desirability concerns and this reactivity obscured the SSIS findings. Indeed the questionnaires were administered after the aggression task; therefore, participants who had just acted aggressively had the opportunity to alter their answers to such a blatant hurting scale. This is a post-hoc explanation and replication is needed to rule out the possibility that the VAST correlations are spurious. Yet the fact that the VAST core sadism results fit well with theoretical predictions suggests that they are not spurious, but do indeed reflect the prediction of sadistic behavior by sadistic personality. Future research will hopefully confirm the robustness of the associations found here.

### **General Discussion**

This thesis explored the unique ability of everyday sadism to predict sadistic behaviors. In Study 1, sadism predicted a greater willingness to kill bugs relative to other noxious tasks. In Study 2, sadists went out of their way to hurt innocent others in a white noise aggression task; they were even willing to incur personal costs to do so. In both studies, sadism remained a unique predictor of sadistic choice, even when controlling for its overlap with the Dark Triad of psychopathy, Machiavellianism, and narcissism. In sum, these findings indicate that sadistic behaviors are not only able to be studied under controlled laboratory conditions, but are also readily predicted by sadistic personality traits. Furthermore, everyday sadism’s independence from the Dark Triad supports Chabrol et al.’s (2011) position that it should be incorporated into a new *Dark Tetrad* of personality.

We currently know very little about everyday sadism. Yet like all dark personality traits, sadism is likely to be highly consequential in and outside of the laboratory. The current

findings add critically to the psychological understanding of sadism's unique behavioral profile. They also assist in validating the SSIS and VAST measures of sadism by documenting theoretically relevant behavioral outcomes associated with these new measures.

One limitation of the present research concerns the practical and ethical constraints involved in studying sadistic behavior. Enjoying killing bugs may be very different from the enjoyment of hurting another human being. In fact, inflicting suffering on disliked animals such as insects may involve qualitatively different motives than those involved in harming an innocent person. Similarly, although the white noise punishment in the second study was described as being painful, sound bursts are relatively innocuous as far as painful stimuli go. Thus future research efforts may want to target more dramatic instances of sadistic behavior against human victims. Reidy et al.'s (2011) shock paradigm may be one option, although it would be best used in a community sample that is unfamiliar with the notorious Milgram experiments. One caveat is that as sadistic opportunities increase in potency, so too will problems of demand characteristics and self-presentation. Researchers will need to devise clever experiments to get around these issues.

The interpretation of the present results also assumes that willingness to engage in sadistic behaviors reflects the perceived amount of pleasure/enjoyment that such behaviors have to offer. This felt enjoyment must simply be assumed because Study 1 failed to produce direct evidence that sadistic behavior is associated with pleasure among sadists. Assessing enjoyment to inappropriate stimuli is a difficult task and indirect techniques may be necessary to get around attempts to self-present in a socially desirable manner. One potential assessment strategy is to videotape participants and code their affective reactions using facial coding schemes. The use of facial electromyography (fEMG) to gauge affective reactions to

sadistic content may also be useful for assessing felt pleasure. Other indirect methods may also be incorporated, such as measures of implicit affect (e.g., Reidy et al., 2011) or implicit approach motivation (e.g., Chen & Bargh, 1999). Whatever the selected assessment method might be, it is certainly desirable to obtain a more detailed account of the motivational process behind sadistic behavior. This goal should be a priority for further research in this area.

### **Directions for Future Research**

**Is there a hidden sadist inside everyone?** It has long been held that humans have an instinctual drive toward aggression and cruelty. Freud (1930) argued that human aggression originates from the death instinct. Lorenz (1966) viewed the “fighting” instinct as a natural part of being human. More recently, Nell (2006) proposed an evolutionary account of the development of cruelty, tracing its continuing rewards from its origins in predation, to the provision of high protein food in hunter-gatherer societies, to the maintenance of social and political power in modern humans, resulting in its inevitable and enduring presence in human societies. Even Baumeister (1996) noted that

The spectacle of violence holds a fascination that seems to transcend time and culture. This does not prove that people can enjoy inflicting the harm themselves, but it is difficult to dispute the fact that they can get some pleasure out of seeing others hurt. At the very least, one can say that inflicting harm on others would be a way of bestowing on oneself the well-tested pleasures of being able to observe someone suffering ... there is a potential sadist inside everyone, but our capacity for guilt—the conscience—keeps it hidden (p. 219, 237)

If these collective conjectures are correct, then an appetitive motivation to inflict suffering may be present in all people, and the only difference between sadists and non-sadists is that the latter group has found a method to conquer their inner cruelty. But what is this method? Baumeister (1996) highlighted guilt as the suppressing mechanism. Freud claimed that the superego and the cultural superego (civilization) reigned in aggressive instincts. Others might claim that it is the degree of empathic concern and inhibitory control that stops cruelty before it starts, while social punishments prevent it from occurring again.

Regardless of the proposed suppressor, this account of sadism ultimately reduces it to individual differences in (already well-researched) constructs such as empathy and inhibitory control. This is a potentially devastating criticism for those interested in studying sadistic personality as a unique trait in its own right. In future research, it will be crucial to demonstrate evidence that people differ in the strength of their motivations for cruelty, and that the appetitive motivation is (a) orthogonal to inhibitory control and (b) predicts sadistic behavior independently of callousness (i.e., lack of empathy). Only then may everyday sadism prove to be a truly useful personality construct.

**Sadism and perspective-taking.** Another prevailing view is that sadists need to appreciate the feelings and intentions of others in order to maximize pleasure from hurting. That is, a certain degree of callous perspective-taking is necessary to experience sadistic pleasure. Individuating victims as autonomous human beings would undoubtedly allow sadists to appreciate the results of cruelly stripping away that agency (Millon et al., 2004). Perspective-taking would also be advantageous for tailoring punishment to the particular victim and devising the most brutal treatment possible. In support of these ideas, O'Meara et al. (2011) found that everyday sadism was positively associated with sensitivity to the

thoughts and feelings of others. The present research accrues additional (partial) support for their findings: the negative correlation between sadism and perspective-taking reduced to non-significance when controlling for gender, empathic concern, and the Dark Triad. This suggests that, other things being equal, sadists and non-sadists possess equivalent levels of dispositional perspective-taking. Perhaps a targeted version of a perspective-taking scale might detect an advantage for sadists; for example, a scale with items describing perspective-taking as a strategy for devising punishment or as a method to appreciate caused suffering. Ability measures of mentalizing might also be useful tools to examine sadistic perspective-taking. A study employing these measures may even find that sadists have biased or exaggerated perceptions when it comes to pain assessment (cf. Harenski et al., 2012). Future research should carefully explore these issues. One question that might arise out of such a research program is whether sadists actually become masochists if they take the perspectives of their suffering victims. That is, can sadistic behavior occasionally reflect vicarious masochism?

**Sadism and victim consent.** Little is known about the contextual factors that moderate the expression of everyday sadism, but practices in the S/M community may provide some inspiration. It is interesting to note that the safe-word methods adopted by S/M practitioners to ensure continued partner consent also allow sadists to indulge their “dark passengers” in a way that would not be possible without such a system. Said another way, S/M safe-words—and their implications for partner consent when not invoked—legitimize sadistic activities while promoting the full expression of sadistic tendencies.

Does victim consent also affect non-sexualized, everyday sadistic behavior? There are certainly many everyday situations where people agree to suffer pain and humiliation in

the hands of others (e.g., surgeries, tattoos, beauty treatments, admittance to fraternities, etc.). This endowed consent may serve to increase the intensity of suffering the sadist deems appropriate to inflict. It is also possible that victim consent instead *reduces* sadistic enjoyment and suppresses aggression among sadists. Knowing that one's target is willing to endure inflicted suffering may dampen the sadistic thrill motivating cruel behavior. Consequently, it is unclear what effect victim consent has on sadistic enjoyment and behavior. Future efforts should investigate the interaction between sadistic traits and victim consent/non-consent in the contexts of aggression and cruel behavior. These studies will hopefully provide an answer to the question of whether sadists gravitate more toward consensual or non-consensual forms of suffering. They will also inform researchers of the conditions under which sadistic aggression is likely to be strongest, and therefore of most concern.

**The Dark Tetrad and altruistic punishment.** In the current research, core sadists were willing to work (i.e., incur personal costs of time and energy) for the opportunity to hurt an innocent person. This behavior is reminiscent of the phenomenon of *altruistic punishment*, which refers to a widespread readiness to punish defectors in economic games, even if one must relinquish personal economic gains to do so. While some researchers believe that altruistic punishment exists to enhance group cooperation via social norm enforcement, recent work suggests that altruistic punishment may not be so prosocial after all. Koenigs, Krepke, and Newman (2010) found that institutionalized patients high in primary psychopathy displayed a greater willingness to engage in altruistic punishment than did non-psychopaths. Masui et al. (2011) found the same relationship with measures of subclinical psychopathy in an undergraduate sample. Furthermore, the more altruistic punishment



delivered by psychopaths, the greater their emotional gratification. Completing this picture, Crockett, Clark, Lieberman, Tabibnia, and Robbins (2010) found a strong link between impulsivity and altruistic punishment, such that persons who engaged in impulsive choice (i.e., time discounting) also tended to engage in altruistic punishment. Additionally, Crockett et al. (2011) demonstrated that experimentally depleting serotonin levels—a neurotransmitter implicated in self-control—produced an increase in both impulsive choice and altruistic punishment. Given that psychopaths are notoriously impulsive (Jones & Paulhus, 2011c), these combined findings support the view of altruistic punishment as merely an impulsive act of revenge. When revenge is more difficult and requires delay of gratification—like in the “work & aggressive partner” condition of the current research—psychopathy is unrelated to such behaviors.

The current research also found that, while not aggressing more than others, those with high empathic concern were *less* likely to abandon attempts to punish an aggressive opponent when work was required. That is, once high empathy persons had decided to punish their social norm defecting opponent, they did not back down. If anything should be called “altruistic punishment,” perhaps this tendency for highly empathic people to stand their ground might be it. Future research should explore these ideas in depth. A closer look at the relations between the Dark Tetrad and “altruistic” punishment might even prompt researchers to reconsider its name.

**Sadism in everyday life and beyond.** The sadism literature clearly relates to more applied domains, such as the prevention of domestic violence, abuse by military and police, and childhood bullying. Sadism is likely to play a large role in these and other cases of abuse. A further domain where sadism might play a role is in the use of technology for nefarious

purposes. Preliminary research in our lab (Trapnell, Buckels, and Paulhus, in preparation) suggests that sadists and psychopaths use social media websites like Facebook and Twitter more often than those without malevolent traits, and they further report that their favorite activity on these sites is cyber-stalking. Similarly, individual differences in sadism may prove relevant to explaining cyber-bullying and “trolling” on the Internet. These are just a few of the everyday domains where sadistic traits might inform theory and research.

Everyday sadism also adds to our understanding of aggression more broadly. Sadistic aggression goes beyond instrumental or reactive forms to *pleasure-driven* aggression, which is a type of aggression that is not often considered in nonclinical and non-forensic contexts. Sadists find suffering to be intrinsically rewarding. This makes sadistic aggression more morally disturbing, and perhaps more dangerous, than aggression tied to extrinsic contingencies. Thus understanding sadism should be a priority in social-personality research. The current research is a vital first step in that direction.

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## **Appendix A**

### **Short Sadistic Impulse Scale (SSIS; O'Meara et al., 2011)**

1. Hurting people would be exciting.
2. I have hurt people because I could.
3. I wouldn't intentionally hurt anyone. (R)
4. I have hurt people for my own enjoyment.
5. I have humiliated others to keep them in line.
6. I would enjoy hurting someone physically, sexually or emotionally.
7. I enjoy seeing people hurt.
8. I have fantasies which involve hurting people.
9. Sometimes I get so angry I want to hurt people.
10. People would enjoy hurting others if they gave it a go.

### **Varieties of Sadistic Tendencies Scale (VAST)**

#### **VAST Core sadism (Relationships)**

1. I enjoy hurting people.
2. I would never purposely humiliate someone. (R)
3. I was purposely mean to some people in high school.
4. I enjoy hurting my partner during sex (or pretending to).
5. I dominate others using fear.
6. I enjoy seeing people suffer.
7. There's nothing as enjoyable as helping someone in need. (R)

### **VAST Vicarious Sadism (Media & Sports)**

1. In video games, I like the realistic blood spurts.
2. I sometimes replay my favorite scenes from slasher films.
3. I take advantage of the free porn on the internet.
4. I sometimes look away in horror movies. (R)
5. I enjoy cage fighting (or MMA), where there is no escape.
6. In professional car-racing, it's the accidents that I enjoy most.

### **VAST Political Sadism**

1. Our country should stay out of all wars. (R)
2. If lives were threatened, I would be in favor of torturing a terrorist.
3. We have to be careful about who we let immigrate into my country.
4. Politicians cannot win unless they use nasty tactics.
5. I feel bad seeing a homeless person. (R)

## Appendix B

### *Descriptive Statistics and Gender Differences in Personality and Other Predictors in Study 1*

	Across Genders				Men		Women		Gender Difference			
	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Core Sadism	1.00	3.60	1.59	0.59	1.83	0.72	1.50	0.50	2.30	75	.024	0.53
Machiavellianism	1.78	4.11	2.82	0.53	3.03	0.60	2.75	0.49	2.11	75	.038	0.49
Narcissism	2.11	4.44	3.11	0.47	3.25	0.53	3.05	0.44	1.66	75	.101	0.38
Psychopathy	1.11	3.44	2.02	0.56	2.39	0.57	1.87	0.49	4.03	75	.000	0.93
RWA	1.20	4.27	2.51	0.62	2.27	0.51	2.60	0.64	-2.16	75	.034	0.50
Disgust Sensitivity (DS)	1.92	4.80	3.24	0.59	2.82	0.51	3.41	0.55	-4.33	75	.000	1.00
Core DS	1.75	4.83	3.36	0.60	2.86	0.55	3.55	0.50	-5.24	75	.000	1.21
Animal Reminder DS	1.50	5.00	3.51	0.86	3.12	0.76	3.67	0.86	-2.60	75	.011	0.60
Contamination DS	1.20	4.40	2.53	0.80	2.23	0.68	2.65	0.82	-2.08	75	.041	0.48
		No	Yes									
Afraid of Bugs?		44.6%	55.4%									
Afraid of Infestations?		24.3%	75.7%									
Fear Bugs Before?		34.7%	65.3%									
Lived with Infestation?		66.7%	33.3%									

## Appendix C

### *Correlations among Personality and Other Predictors in Women in Study 1*

	1	2	3	4	5	6	6-a	6-b	6-c	7	8	9
1. Core Sadism												
2. Machiavellianism	.51 ***											
3. Narcissism	.09	.10										
4. Psychopathy	.51 ***	.58 ***	.09									
5. RWA	.10	.25	.00	.10								
6. Disgust Sensitivity	.13	.34 *	.07	.14	.35 **							
6-a. Core	.01	.33 *	.07	.10	.23	.84 ***						
6-b. Animal Reminder	.15	.20	.09	.06	.31 *	.81 ***	.45 ***					
6-c. Contamination	.14	.31 *	-.01	.21	.32 *	.74 ***	.57 ***	.37 **				
7. Afraid of Bugs?	.16	.11	.46 ***	.04	.12	.37 **	.37 **	.29 *	.20			
8. Afraid of Infestations?	.16	.03	.27	-.10	.14	.10	.01	.23	-.07	.42 ***		
9. Fear Bugs Before?	.19	.12	.23	.28 *	.02	.10	.14	.02	.10	.52 ***	.23	
10. Lived with infestation?	-.13	-.11	-.11	-.02	.11	-.30 *	-.41 **	-.16	-.15	-.23	-.02	-.05

*Note.*  $N = 55$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).

*Study 1: Correlations among Personality and Other Predictors in Men*

	1	2	3	4	5	6	6-a	6-b	6-c	7	8	9
1. Core Sadism												
2. Machiavellianism	.67 ***											
3. Narcissism	-.33	-.20										
4. Psychopathy	.69 ***	.61 **	.08									
5. RWA	.26	.49 *	-.16	.30								
6. Disgust Sensitivity	.23	.46 *	.08	.43 *	.39							
6-a. Core	.06	.23	.17	.38	.32	.88 ***						
6-b. Animal Reminder	.39	.53 **	.12	.51 *	.30	.80 ***	.51 **					
6-c. Contamination	.05	.30	-.21	-.04	.31	.61 **	.44 *	.23				
7. Afraid of Bugs?	.16	.03	-.05	.17	.28	.23	.29	-.10	.46 *			
8. Afraid of Infestations?	.16	.08	-.08	.14	.19	.38	.49 *	.18	.15	.46 *		
9. Fear Bugs Before?	.17	-.08	-.05	.29	-.14	.11	.28	-.15	.14	.70 ***	.55 **	
10. Lived with infestation?	.47 *	.19	-.55 **	.12	.01	-.45 *	-.46 *	-.38	-.08	.08	-.11	.14

*Note.*  $N = 22$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).



## Appendix D

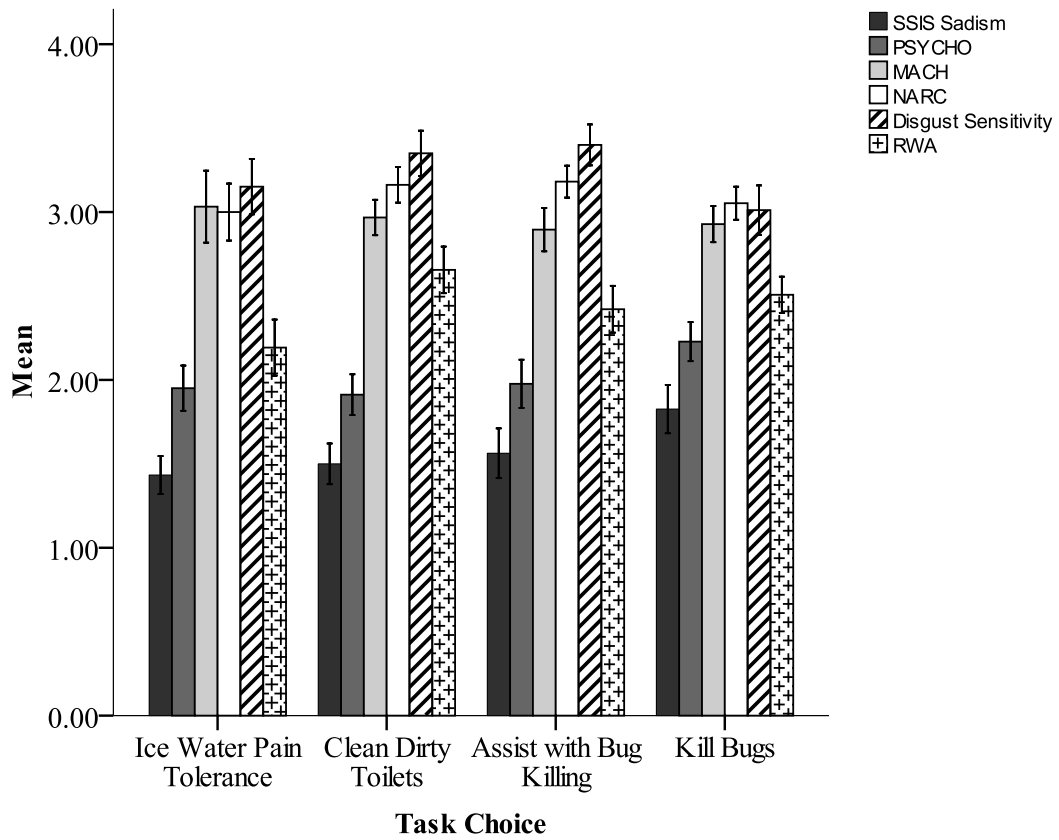


Figure 4. Dark Tetrad, RWA, and disgust sensitivity scores as a function of task choice.

Error bars represent standard errors.

## Appendix E

### *Study 1: Logistic Regression Predicting Likelihood of Task Choice Relative to Bug Killing*

<b>Ice Water (vs. Bug Killing)</b>	<b>RRR</b>	<b>SE</b>	<b>z</b>	<b>p</b>	<b>95% CI</b>	
Core Sadism	0.1429	0.1279	-2.17	.030	0.0247	0.8261
Machiavellianism	2.3041	1.8782	1.02	.306	0.4663	11.3855
Narcissism	0.4905	0.3110	-1.12	.261	0.1416	1.6998
Psychopathy	2.2485	2.0386	0.89	.371	0.3803	13.2929
Disgust Sensitivity	2.0586	1.3783	1.08	.281	0.5542	7.6468
Right-wing Authoritarianism	0.2022	0.1491	-2.17	.030	0.0477	0.8575
Afraid of Bugs?	37.6346	69.9094	1.95	.051	0.9872	1434.7150
Afraid of Infestations?	4.0663	5.6401	1.01	.312	0.2683	61.6358
Fear Bugs Before?	0.0259	0.0471	-2.01	.044	0.0007	0.9104
Lived with Infestation?	0.8283	0.9876	-0.16	.874	0.0800	8.5716
<b>Clean Dirty Toilets (vs. Bug Killing)</b>						
Core Sadism	0.2338	0.1446	-2.35	.019	0.0696	0.7855
Machiavellianism	4.0872	2.6804	2.15	.032	1.1303	14.7791
Narcissism	0.7940	0.3904	-0.47	.639	0.3029	2.0815
Psychopathy	0.8380	0.5332	-0.28	.781	0.2408	2.9161
Disgust Sensitivity	1.2643	0.7051	0.42	.674	0.4238	3.7717
Right-wing Authoritarianism	0.6763	0.3824	-0.69	.489	0.2233	2.0483
Afraid of Bugs?	9.0189	11.3811	1.74	.081	0.7603	106.9805
Afraid of Infestations?	14.4538	17.5613	2.20	.028	1.3359	156.3823
Fear Bugs Before?	0.0669	0.0861	-2.10	.036	0.0054	0.8329
Lived with Infestation?	0.1799	0.1817	-1.70	.089	0.0249	1.3020
<b>Assist with Bug Killing (vs. Bug Killing)</b>						
Core Sadism	0.2680	0.1675	-2.11	.035	0.0788	0.9121
Machiavellianism	3.0710	2.0390	1.69	.091	0.8358	11.2835
Narcissism	1.0040	0.4727	0.01	.993	0.3990	2.5261
Psychopathy	0.8568	0.5082	-0.26	.794	0.2679	2.7402
Disgust Sensitivity	2.1817	1.2278	1.39	.166	0.7240	6.5740
Right-wing Authoritarianism	0.4168	0.2296	-1.59	.112	0.1416	1.2268
Afraid of Bugs?	2.0126	2.2906	0.61	.539	0.2163	18.7296
Afraid of Infestations?	17.7080	22.0404	2.31	.021	1.5442	203.0612
Fear Bugs Before?	0.4017	0.4808	-0.76	.446	0.0385	4.1952
Lived with Infestation?	0.7007	0.6378	-0.39	.696	0.1177	4.1723

*Note.* Tabled values reflect relative risk ratios (*RRR*), standard errors (*SE*), and significance tests for the *RRR*'s. An *RRR* below 1.0 indicates that bug killing was preferred to the other option. An *RRR* above 1.0 indicates that the other option was preferred to bug killing.

## Appendix F

### *Study 2: Descriptive Statistics and Gender Differences in the Dark Tetrad Self-report Scores*

	Men		Women		Gender Difference			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Core sadism: VAST	2.00	0.73	1.77	0.59	1.95	134	.053	0.35
Core sadism: SSIS	1.76	0.65	1.41	0.42	3.63	107.34	.000	0.70
Vicarious sadism	3.00	1.09	1.73	0.79	7.75	116.04	.000	1.44
Political sadism	3.38	1.04	2.97	0.88	7.85	134	.000	1.36
Narcissism	2.89	0.49	2.86	0.60	0.38	134	.701	0.05
Psychopathy	2.04	0.53	1.80	0.55	2.56	134	.012	0.44
Machiavellianism	2.90	0.66	2.79	0.60	1.09	134	.278	0.17

*Note.*  $N_{men} = 65$ ,  $N_{women} = 71$ . Tabled values reflect means (*M*) and standard deviations (*SD*) for male and female participants on each variable, followed by *t*-values (*t*), degrees of freedom (*df*), *p*-values (*p*), and Cohen's *d*'s (*d*) from separate independent *t*-tests. Degrees of freedom for the Core sadism: SSIS and vicarious sadism tests were adjusted due to violations of the homogeneity of variance assumption (Levene's *p*'s < .001).

## Appendix G

### *Correlations Among the Dark Tetrad by Gender in Study 2*

Gender: Male						
	1	2	3	4	5	6
1. Core sadism: VAST						
2. Core sadism: SSIS	<b>.72</b> **					
3. Vicarious sadism	<b>.46</b> **	<b>.58</b> ***				
4. Political sadism	<b>.41</b> ***	<b>.35</b> **	<b>.28</b> *			
5. Narcissism	.23	.18	<b>.37</b> **	.07		
6. Psychopathy	<b>.63</b> ***	<b>.57</b> ***	<b>.47</b> ***	<b>.29</b> *	<b>.33</b> **	
7. Machiavellianism	<b>.58</b> ***	<b>.50</b> ***	<b>.37</b> **	<b>.43</b> ***	.17	<b>.56</b> ***

*Note.*  $N = 65$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).

Gender: Female						
	1	2	3	4	5	6
1. Core sadism: VAST						
2. Core sadism: SSIS	<b>.36</b> **					
3. Vicarious sadism	<b>.27</b> *	<b>.32</b> **				
4. Political sadism	.17	.21	.22			
5. Narcissism	<b>.25</b> *	.00	.17	.17		
6. Psychopathy	<b>.39</b> ***	<b>.61</b> ***	<b>.28</b> *	<b>.25</b> *	<b>.23</b> *	
7. Machiavellianism	<b>.37</b> ***	<b>.47</b> ***	<b>.27</b> *	<b>.31</b> **	.11	<b>.47</b> ***

*Note.*  $N = 71$ . \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$  (pairwise).

## Appendix H

### *Descriptive Statistics for Aggression Indexes in the “No Work” Conditions*

	Innocent Partner				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Blast Intensity	32	0.00	10.00	2.17	2.55
Blast Duration (ms)	32	0.00	3105.33	460.83	791.85
Aggression Strength (standardized within group)	32	-0.72	3.21	0.00	0.98
Change in Blast Intensity after Initial Non-provocation	32	-4.04	5.52	0.00	2.01
	Aggressive Partner				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Blast Intensity	32	1.50	9.00	5.65	2.39
Blast Duration (ms)	32	375.00	4020.17	1980.35	949.71
Aggression Strength (standardized within group)	32	-1.64	1.53	0.00	0.83
Change in Blast Intensity after Initial Provocation	32	-3.49	2.97	0.00	1.60

## Appendix I

### *Descriptive Statistics for Aggression Indexes in the “Work Required” Conditions*

	Innocent Partner				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Abandoned Attempts to Aggress	27	0	6	2.78	1.74
Working to Aggress	27	0	4	0.85	1.20

	Aggressive Partner				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Abandoned Attempts to Aggress	31	0	6	3.03	1.92
Working to Aggress	31	0	6	2.29	2.05

## Appendix J

### *Core Sadism and Psychopathy are Unique Predictors of Unprovoked Aggression*

Predictor	Aggression Strength: Innocent Partner				
	$\beta$	<i>SE</i>	<i>t</i>	<i>df</i>	<i>p</i>
<b>Core Sadism: VAST</b>	<b>.35</b>	<b>0.16</b>	<b>2.18</b>	<b>26</b>	<b>.039</b>
Narcissism	.07	0.13	0.52	26	.608
<b>Psychopathy</b>	<b>.42</b>	<b>0.19</b>	<b>2.23</b>	<b>26</b>	<b>.034</b>
Machiavellianism	-.18	0.15	-1.19	26	.244
Gender: Female	.41	0.29	1.41	26	.171

*Note.*  $N = 32$ . Tabled values are standardized regression coefficients ( $\beta$ ), standard errors (*SE*), *t*-values (*t*), degrees of freedom (*df*), and *p*-values (*p*) from a multiple linear regressions predicting the strength (blast intensity + duration) of aggression toward an innocent partner when no work was required.

## Appendix K

### *Core Sadism is a Unique Predictor of Working to Hurt an Innocent Person*

		Working to Aggress: Innocent Partner				
Model 1	Predictor	$\beta$	$SE$	$t$	$df$	$p$
	<b>Core Sadism: VAST</b>	<b>.62</b>	<b>0.34</b>	<b>1.84</b>	<b>21</b>	<b>.080</b>
	Narcissism	.10	0.26	0.38	21	.707
	Psychopathy	.00	0.30	0.00	21	.998
	Machiavellianism	-.23	0.27	-0.87	21	.395
	Gender: Female	.54	0.45	1.19	21	.247
Model 2	Predictor	$\beta$	$SE$	$t$	$df$	$p$
	<b>Core Sadism: VAST</b>	<b>.83</b>	<b>0.37</b>	<b>2.22</b>	<b>15</b>	<b>.042</b>
	Narcissism	.22	0.32	0.68	15	.507
	Psychopathy	.00	0.33	-0.01	15	.996
	Machiavellianism	-.36	0.31	-1.16	15	.264
	Sadism X Narcissism	-.90	0.51	-1.79	15	.094
	Sadism X Psychopathy	-.26	0.36	-0.73	15	.474
	Sadism X Machiavellianism	.29	0.46	0.64	15	.535
	Narcissism X Machiavellianism	.63	0.50	1.25	15	.229
	Narcissism X Psychopathy	.20	0.47	0.42	15	.680
	Psychopathy X Machiavellianism	-.26	0.38	-0.70	15	.497
	Gender: Female	.48	0.48	1.01	15	.329

*Note.* Tabled values are standardized regression coefficients ( $\beta$ ), standard errors ( $SE$ ),  $t$ -values ( $t$ ), degrees of freedom ( $df$ ), and  $p$ -values ( $p$ ) from two separate multiple linear regressions predicting the number of times the participant worked to aggress against an innocent partner.