

Multifaceted Assessment of Sadistic Tendencies: The VAST and CAST

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These two instruments originated with a research group at the University of British Columbia during the years 2006-2013. The group included a personality psychologist (Delroy Paulhus), a clinician (David Klonsky), a social psychologist (Donald Dutton), and two graduate students (Daniel Jones and I).

Our working theme was that sadistic behavior was not as rare as commonly assumed; nor was it necessarily sexual; nor was it necessarily criminal in nature. Instead, we proposed the notion of everyday sadism. From our perspective, enjoyment of cruelty was widespread in the context of violent sports, video games, books, and film. Indeed, ordinary people will pay dearly for such popular entertainment.

Preliminary Work

To develop preliminary questionnaires, our sadism group brainstormed a wide range of items. The diversity of panel members ensured a diversity of angles on the topic. We collected several large datasets from undergraduate student samples and several community samples using Mechanical Turk.

Meanwhile, in 2009, Henri Chabrol and colleagues published some provocative sadism results using a sample of high school students studying in Toulouse, France. The authors had translated an unpublished measure – the *Hurting Scale* – developed by Jason Davies and his students (Davies & Hand, 2003). It was later published as the *Short Sadistic Impulse Scale* (SSIS; O'Meara et al., 2011; see chapter by O'Meara in this volume). Importantly, the Chabrol paper showed that sadism could be distinguished from narcissism, Machiavellianism, and psychopathy, that is, the Dark Triad (Paulhus & Williams, 2002). Indeed, all three correlations with sadism were $< .38$.

Although our core items were similar to those on the Hurting Scale (e.g., “I like to hurt people”), we had generated a much broader set of components. Those components allowed us to test several hypotheses. First, we speculated that *direct sadism* (e.g., “I enjoy physically hurting people”) would correlate with *vicarious sadism* (e.g., “I enjoy torture scenes in films”). That hypothesis was supported: Hence, those who enjoy harming others also enjoy observing cruelty. We also speculated that direct sadism would correlate positively with self-harm (e.g., “I have cut myself to cope with mental pain”). That hypothesis was not supported (Paulhus, 2011; Paulhus et al., 2011). Hence, Freud’s conception of *thanatos* (i.e., the death drive that is expressed through both aggressive and self-destructive behaviors) was not supported by our data.

Another hypothesis was that everyday sadism overlaps with sexual sadism (“I like to hurt my partner during sex”). Only a small positive correlation emerged. The same was true for items tapping aggressive child-protection (“I’d hurt people who threaten my children”). The correlation with mental health (“I have high self-esteem”) was virtually zero. Although many of these associations with sadism were small to moderate, they emerged despite being assessed with single items. We considered the results tentative until the outcome variables could be beefed up with more reliable scales. Most important to our research program, the endorsement rates of self-report sadism items were substantial. These results supported our theme that sadism is an everyday phenomenon, not a rarity among normal people.

The VAST – Varieties of Sadistic Tendencies

Based on the empirical support for our first hypothesis, we assembled a bidimensional instrument assessing both direct and vicarious sadism. The strong intercorrelation in our preliminary work suggested that they were tapping the same psychological construct. After a series of revisions, we finalized the measure as one 7-item direct subscale and one 9-item

vicarious subscale. That 16-item version of the VAST showed acceptable alpha reliabilities (.80 and .81, respectively). It was later published by Paulhus and Jones (2015). Below are a few key studies that exploited this instrument.

Early Experimental Work

To confirm the surprisingly frank admissions to cruelty on questionnaires, we devised a pair of studies to isolate cruel behaviors in the laboratory (Buckels et al., 2013). However, behavioral confirmation raised several challenges, including ethical ones. How could we, in good conscience, induce ordinary students to engage in cruel acts? This dilemma was overcome in two ways. In Study 1, participants believed that they were harming bugs rather than other people. In Study 2, participants believed they were administering white noise punishment to a non-threatening participant; actually, it was a computer-simulated partner. Using both the VAST and the SSIS, we confirmed the behavioral reality of everyday sadism. Those two questionnaire measures predicted (a) the willingness to crunch bugs, and (b) white-noise aggression against an innocent partner. Again, these predictions held above and beyond scores on the Dark Triad. The publication of our study triggered a burgeoning interest in other sadism laboratory research (e.g., Chester et al., 2019; Pfattheicher et al., 2020; Themelidis & Davies, 2020).

Early Online Research

A second influential study (Buckels et al., 2014) inspired a wealth of research on Internet misbehavior. It showed that the VAST could predict the tendency to troll online, that is, make nasty comments designed to upset individuals or groups on the Internet. Mediation analyses led us to conclude that trolling was inherently pleasurable, hence our article was titled, “Trolls just want to have fun”. Its publication set off a cascade of empirical interest in trolling¹. We

¹ In 2014, the article was ranked 77th in global interest across all domains of science ([Altmetric](#)).

followed it up with an examination of psychological mediators (Buckels et al., 2019), but used an expanded measure of sadistic tendencies (described in the second half of this chapter).

Validation from Other Researchers

Further research showed the distinctiveness of direct and vicarious sadism: In Međedović and Petrović (2015), for example, the intercorrelation was a modest .45. Recent research by Dinić and colleagues (2020) confirmed the distinction: Structural analyses showed that the 9-item direct subscale loaded with the SSIS and Assessment of Sadistic Tendencies (ASP; Plouffe et al., 2017; Plouffe et al., 2019), thereby validating it against other sadism measures. By contrast, the vicarious subscale fell separately and showed different external correlates. For an investigation of the broader nomological network of the VAST, see Anderson and Marcus (2019).

The CAST – Comprehensive Assessment of Sadistic Tendencies

A follow-up instrument, dubbed the Comprehensive Assessment of Sadistic Tendencies (CAST), was developed in 2013 to facilitate research on the personality predictors of online trolling (Buckels et al., 2014; Buckels et al., 2019). We anticipated that a narrower construct—*verbal sadism*—could be distinguished from other forms of sadistic tendencies. The CAST extends the VAST to three subscales—direct verbal sadism, direct physical sadism, and vicarious sadism—and it operationalizes the sadistic personality as a chronic tendency to enjoy cruelty in three distinct variants.

Scale development followed a classical test theory approach. The initial pool contained 27 items that drew heavily from the VAST. New candidate items were primarily focused on verbally-sadistic tendencies. Results of exploratory factor analyses and parallel analyses with student and community samples supported a three-factor solution. A total of 18 items were

retained for further construct validation efforts (Buckels, 2018). The 18-item CAST scale was also distributed to other researchers for their independent evaluation of its psychometric properties and predictive utility (resulting in a surprising number of citations for an unpublished measure: 74 citations as of February 2021). It was used to anchor the ASP (Plouffe et al., 2017; Plouffe et al., 2019), which in turn spurred structural investigations of the Dark Tetrad personality space (see Jones & Paulhus, this volume). The CAST's three-factor structure, internal consistency reliability, and test-retest reliability has been supported by research from our lab (e.g., Buckels et al., 2019) and others (e.g., Amrhein, 2018; Erickson & Sagarin, 2021; Greitemeyer, & Sagioglou, 2017; Kay, 2021; Pfattheicher et al., 2020; Plouffe et al., 2017; Russell et al., 2017). It has also been successfully adapted into German (Voggeser & Göritz, 2020) and Spanish (Pineda et al., 2021), among other languages. Intercorrelations among the subscales (direct verbal, direct physical, and vicarious sadism) typically range from .55 to .65.

The VAST and CAST measures include diverse item content that expands the definition of sadism to include vicarious enjoyment of suffering. These multifaceted measures are, however, reliably positively associated with unidimensional measures of sadistic personality. All three CAST subscales overlap strongly with ASP sadism: In undergraduate samples, the correlations range from .40 to .60 for vicarious sadism; .72 to .74 for direct verbal sadism; and .66 to .85 for direct physical sadism (Plouffe et al. 2017; Plouffe et al., 2019). Correlations with SSIS scores are likewise strong and positive: ranging from .59 (vicarious) to .79 (direct physical) (Buckels, 2018).

The physical, verbal, and vicarious sadism facets are also positively associated with measures of the Dark Triad, callousness, and trait aggression (e.g., Buckels et al., 2014; Buckels et al., 2019; Gonzalez & Greitemeyer, 2018; Plouffe et al., 2017). The glue that binds them is

the common core of all malevolent personality traits, which is alternatively described as callous-exploitation (Heym et al., 2019; Jones & Figueredo, 2013; Paulhus, 2014), low honesty-humility (Book et al., 2016), or more recently, D-factor (Moshagen et al., 2018, Moshagen et al., 2020; Zettler et al., 2020). Like other dark personality traits, sadism falls in Quadrant II of the interpersonal circumplex (Wiggins, 1991). In other words, CAST scores are positively correlated with agency, and negatively correlated with communion (Buckels, 2018; cf. Dowgwillo & Pincus, 2017).

In some research, the empirical overlap between sadism and psychopathy is admittedly high enough to suggest redundancy (e.g., an $r = .86$ between CAST and SD3 psychopathy was reported by Jonason and Zeigler-Hill, 2018). That issue is partly a function of overlapping item content, particularly with respect to psychopathy and physically aggressive tendencies. The problem was addressed with the development of the revised psychopathy subscale of the Short Dark Tetrad (SD4; Paulhus et al., 2020). CAST associations with SD4 psychopathy are now in an acceptable range (typical $r = .50$; Buckels, 2021).

With respect to the broad domains of personality, the CAST is negatively associated with agreeableness, conscientiousness, and honesty-humility (Buckels, 2018; Erickson & Sagarin, 2021; Greitemeyer & Sagioglou, 2017; Johnson et al., 2019; Pfattheicher et al., 2020; Plouffe et al., 2017). Of the three subscales, vicarious sadism is less consistently linked to low agreeableness (Johnson et al., 2019; Plouffe et al., 2017). Relations with Big Five neuroticism and HEXACO emotionality are complex. In some research, there a weak positive correlation with neuroticism (Greitemeyer & Sagioglou, 2017; Sagioglou & Greitemeyer, 2016); in other research, there is no correlation (Buckels, 2018; Pfattheicher et al., 2020). In contrast, correlations with HEXACO emotionality are negative in direction (Johnson et al., 2019;

Pfattheicher et al., 2020), which is consistent with an overall lack of sentimentality among everyday sadists. Associations with extraversion and openness are negligible.

Sadistic individuals are callous and aggressive, but in line with our conception of everyday sadism, there is no clear evidence of poor adjustment in their personality profiles. There are two important qualifications of that statement. First, there is scattered evidence of a positive relationship between sadism and the frequency and intensity of negative states, such as negatively-valenced emotions (Buckels et al., 2013; Bulut, 2020; Chester et al., 2019), boredom (Pfattheicher et al., 2020), and trophotropic symptoms (e.g., upset stomach, lump in the throat, and crying) (Bulut, 2020). Second, scores on all three CAST subscales are positively associated with disordered aspects of personality among *women* (Russell et al., 2017; cf. Russell & King, 2017). While speculative, it is possible that gender moderates the relationship between sadism and personal adjustment, with a stronger link between sadistic tendencies and maladjustment in women, as compared to men. Our view is that, in general, sadism aligns with deficits in interpersonal functioning, not personal adjustment (Paulhus et al., 2020; Neumann et al., 2021). Nevertheless, sadistic individuals may harbor resentment from frequent episodes of interpersonal conflict and social rejection by others—which occurs readily upon first acquaintance (Rogers et al., 2018). So accustomed to unpleasantness in daily life, sadistic individuals even report bitter taste preferences (Sagioglou & Greitemeyer, 2016).

Other research supports the core callousness and pleasure from suffering that is central to all varieties of sadistic tendencies. CAST scores predict a tendency to experience pleasure from suffering and harm (Buckels et al., 2019; Lui et al., 2020; cf. Međedović, 2017), in both consensual (i.e., BDSM) and non-consensual contexts (Erickson & Sagarin, 2021). In normal samples, sadistic pleasure is enabled through psychological rationalization processes (Buckels et

al., 2019); it is reduced when individuals take the perspective of suffering others (Lui et al., 2020). Yet CAST scores are negatively associated with dispositional perspective-taking and empathic concern (Erickson & Sagarin, 2021), and are likewise negatively associated with trait emotional intelligence (Plouffe et al., 2017). Taken together, these patterns confirm the presence of impairments in empathy and emotion perception, even among subclinical sadists (cf. Bulut, 2020). Both provide a path to interpersonal maladjustment.

The appetitive motivation inherent in sadistic tendencies is also reflected in positive correlations with individual differences in the sensitivity of the behavioral activation system (Carver & White, 1994)—particularly BAS-drive (Buckels, 2018). That component reflects an intense drive to pursue one's goals (e.g., “*When I go after something, I use a ‘no holds barred’ approach*”). By contrast, inhibitory (BIS) and prevention-focused motives are negatively associated with sadistic tendencies (Buckels, 2018; Jonason & Zeigler-Hill, 2018). Thus personal safety and avoidance of pain is relatively less important to sadistic individuals, as compared to others.

Finally, a growing body of research supports the predictive validity of this measure. In support of the Dark Tetrad model, CAST sadism often predicts behavioral and attitudinal criteria above and beyond overlap with measures of the Dark Triad. Table 1 summarizes this body of research.

Table 1

CAST Predictive Validity Evidence

Criteria	Citation(s)
Online trolling	Buckels et al. (2014), Buckels et al. (2019), Paananen & Reichl (2019)
Bullying and cyberbullying	Buckels (2018), Min et al. (2019)
Cyberaggression and online disinhibition	Kurek et al. (2019)
Intimate partner cyberstalking	March et al. (2020)
Violent video gaming; pleasure from violent video games; and aggressive online gaming behavior ('griefing')	Gonzalez & Greitemeyer (2018), Greitemeyer (2015), Greitemeyer & Sagioglou (2017), Greitemeyer et al. (2019), Ladanyi & Doyle-Portillo (2017)
Fascination with weapons	Gonzalez & Greitemeyer (2018)
Tendency to inflict frustration on others	Emer & Poepsel (2021)
Negative first impressions	Rogers et al. (2018)
Workplace incivility and interpersonal deviance	Min et al. (2019)
Sexual coercion, sexual aggression, attempted/completed rape, and rape myth acceptance	Russell et al. (2017), Russell & King (2016, 2017), Klann (2017)
Social dominance orientation, hostile sexism, and benevolent sexism	Paananen & Reichl (2019)
Conspiracy theories and odd beliefs	Kay (2021)

Two findings are particularly notable, as they pertain to the predictive validity of the vicarious sadism construct. First, Min and colleagues (2019) found that: (a) of the Dark Tetrad variables, sadism was the most important predictor of cyberbullying frequency (accounting for 61 to 64% the variance in cyberbullying); (b) of all the available sadism measures (SSIS, ASP, and CAST), CAST scores explained the most variance in cyberbullying frequency; and (c) of the

CAST's subscales, *vicarious sadism* was the most robust predictor of cyberbullying frequency. As discussed previously, vicarious sadism overlaps the least with SSIS and ASP sadism, yet it is most relevant to the prediction of this important behavioral criterion. A second finding of note is that vicarious sadism scores are positively correlated ($r = .22$) with reports of a completed rape in female samples (Russell et al., 2017); that correlation was only slightly lower than the one for physical sadism ($r = .25$). These patterns support the inclusion of vicarious sadism in the sadistic personality cluster. An appetite for sadistic entertainment may be indicative of aggressive urges writ large (cf. Međedović & Kovačević, 2020).

We acknowledge that some studies have failed to support for the CAST's incremental validity in predicting outcomes above and beyond broadband Dark Triad measures (Jonason et al., 2017; Jonason & Zeigler-Hill, 2018; Karandikar et al., 2019; Ritchie et al., 2019). Yet, in some sense, these failures are reassuring. They suggest that the individual differences in sadism were already embedded in these traditional batteries of the dark domain. Only when sadism is isolated from the Dark Triad, would one expect unique predictive power for outcomes that are uniquely sadistic.

Further Scale Refinement: The CAST-12

Although used extensively in published research, I held back the publication of the CAST to further evaluate its psychometric properties. Results from an Item Response Theory (IRT) approach flagged the two reversed-scored items as potentially problematic (Amrhein, 2018). Indeed, our work on the SD4 (Paulhus et al., 2020) supported their removal. Thus, I now recommend a revised version, the *CAST-12*: a brief, 12-item multidimensional measure of sadism that contains three high-fidelity subscales. Although brief, the CAST-12 retains its three-

factor structure; a three-factor model fit significantly better than the alternative one-factor or two-factor (direct, vicarious) models (Buckels, 2021).

CAST-12

All responses are collected on 5-point scales with anchors:
1 = Strongly Disagree to 5 = Strongly Agree

Direct Verbal Sadism ($\alpha = .77$)

1. I was purposely mean to some people in high school.
2. I enjoy making jokes at the expense of others.
3. I have purposely tricked someone and laughed when they looked foolish.
4. Perhaps I shouldn't have, but I never got tired of mocking certain classmates.

Direct Physical Sadism ($\alpha = .79$)

1. I enjoy physically hurting people.
2. I enjoy tormenting people.
3. I have the right to push certain people around.
4. I have dominated others using fear.

Vicarious Sadism ($\alpha = .80$)

1. I love to watch YouTube clips of people fighting.
2. In video games, I like the realistic blood spurts.
3. I enjoy watching cage fighting (or MMA), where there is no escape.
4. I sometimes replay my favorite scenes from gory slasher films.

Note. Alphas were obtained using data collected from a sample of 1134 undergraduate students.

CAST-12 Total $\alpha = .87$.

With this winnowed measure in hand, our research team is gathering further evidence of the unique predictive validities of the three sadism facets. For instance, in one study (Buckels et al., 2018), we found that vicarious sadism was the most robust predictor of time spent viewing 'nasty' cartoons, whereas verbal sadism was the most robust predictor of aggressive humor styles (Martin et al., 2003). As an ultra-brief multidimensional measure, the CAST-12 permits further investigation of these carefully-dissected slices of everyday sadism, even when survey space is limited. Nonetheless, the overall sadistic personality is best captured by total scores on the

CAST-12. The subscales are sufficiently intercorrelated such that ‘core’ sadism can be represented by a single latent factor (Buckels, 2021; Buckels et al., 2018).

Conclusion

The overriding theme of our research program was that cruel behavior is more common than most people realize. To facilitate empirical research, our sadism research group accepted the challenge of measuring individual differences in sadism via questionnaire. The history of our measures tells a story of increasing granularity. Our early research followed others in creating a single composite score. After hypothesizing a pleasure-seeking motivation for aggressive media consumption, our data confirmed a strong link between sadistic behavioral tendencies and entertainment preferences, but sufficient evidence to separate the constructs into direct and vicarious components. That two-factor instrument was published under the title VAST (Paulhus & Jones, 2015). We then considered a third variant, verbal sadism, to capture pleasure from another form of cruelty that is arguably just as commonplace as physical or vicarious cruelty. Under the title, CAST, that three-factor instrument has accumulated widespread research interest.

The version presented here – CAST-12 – shows sufficient psychometric properties to warrant its use by other researchers. Its construct validity was supported in terms of structural, concurrent, and predictive validity. These results are nevertheless preliminary, and a broader research program is now underway.

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