Trolls just want to have fun

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A B S T R A C T

In two online studies (total $N = 1215$), respondents completed personality inventories and a survey of their Internet commenting styles. Overall, strong positive associations emerged among online commenting frequency, trolling enjoyment, and troll identity, pointing to a common construct underlying the measures. Both studies revealed similar patterns of relations between trolling and the Dark Tetrad of personality: trolling correlated positively with sadism, psychopathy, and Machiavellianism, using both enjoyment ratings and identity scores. Of all personality measures, sadism showed the most robust associations with trolling and, importantly, the relationship was specific to trolling behavior. Enjoyment of other online activities, such as chatting and debating, was unrelated to sadism. Thus cyber-trolling appears to be an Internet manifestation of everyday sadism.

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1. Introduction

Online *trolling* is the practice of behaving in a deceptive, destructive, or disruptive manner in a social setting on the Internet with no apparent instrumental purpose. From a lay-perspective, Internet trolls share many characteristics of the classic Joker villain: a modern variant of the Trickster archetype from ancient folklore (Hyde, 1998). Much like the Joker, trolls operate as agents of chaos on the Internet, exploiting "hot-button issues" to make users appear overly emotional or foolish in some manner. If an unfortunate person falls into their trap, trolling intensifies for further, merciless amusement. This is why novice Internet users are routinely admonished, "Do not feed the trolls!".

Despite public awareness of the phenomenon, there is little empirical research on trolling. Existing literatures are scattered and multidisciplinary in nature (Hardaker, 2010; Herring, Job-Sluder, & Scheckler, 2002; McCosker, in press; Shachaf & Hara, 2010). For instance, Shachaf and Hara (2010) conducted interviews of Wikipedia trolls, finding themes of boredom, attention seeking, revenge, pleasure, and a desire to cause damage to the community among their expressed motivations for trolling. In other research, Hardaker (2010) conducted a content analysis of Usenet posts that identified four primary characteristics of trolling: aggression, deception, disruption, and success. The deceptive and "pointless"

disruptive aspects may distinguish trolling from other forms of online antisociality, such as cyber-bullying, where perpetrator identities are usually clear (Lenhardt, 2013) and the intent is more straightforward.

Frequency of activity is an important correlate of antisocial uses of technology. For instance, cyber-bullying is often perpetrated by heavy Internet users (Juvonen & Gross, 2008), and disagreeable persons use mobile technologies more than others – not for socializing, but for personal entertainment (Phillips & Butt, 2006). Similarly, gamers who express non-social motivations for online gaming (e.g., competition, personal achievement) demonstrate lower levels of agreeableness and conscientiousness than others (Graham & Gosling, 2013). Still other research has linked low agreeableness, low conscientiousness, and high extraversion to heavy Internet use (Andreassen, Griffiths, & Gjertsen, 2013). These patterns parallel gender differences in online behavior: Men are higher in overall Internet use (Joiner, Gavin, & Duffield, 2005) and higher in antisocial behavior online (Zweig, Dank, Yahner, & Lachman, 2013). Overall, the findings suggest that it may be fruitful to examine associations of trolling with the Big Five, gender differences, and global Internet habits.

The noxious personality variables known as the *Dark Tetrad* of personality – narcissism, Machiavellianism, psychopathy, and sadistic personality (Buckels, Jones, & Paulhus, 2013; Furnham, Richards, & Paulhus, 2013) – are yet to be investigated in the trolling literature. Their relevance is suggested by research linking these traits to bullying in both adolescents (Fanti & Kimonis, 2013) and adults (Baughman, Dearing, Giammarco, & Vernon,

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2012; Jones & Paulhus, 2010; Linton & Power, 2013). Also suggestive is research showing that narcissists (Ljepava, Orr, Locke, & Ross, 2013) and those with antisocial personality disorder (Rosen, Whaling, Rab, Carrier, & Cheever, 2013) use Facebook more frequently than others, thus indicating that dark personalities leave large digital footprints. Of the Dark Tetrad, we expected everyday sadism (Buckels et al., 2013) to prove most germane to trolling. After all, trolling culture embraces a concept virtually synonymous with sadistic pleasure: in troll-speak, "lulz."

To evaluate the predictors of Internet trolling, we administered questionnaires to student and community samples in two online studies. In Study 1, we focused on predicting enjoyment of trolling, as opposed to other online social activities, such as debating and chatting. We expected that the Dark Tetrad would be positively associated with a tendency to rate trolling as the most favored activity on "troll-able" websites (defined here as websites that permit users to interact by posting comments). We further expected that extraversion and agreeableness – the Big Five dimensions most relevant to the Dark Tetrad's social world (Paulhus & Williams, 2002) – would evidence associations with trolling, with a preference for trolling indicative of extraverted but disagreeable personality traits.

2. Study 1

2.1. Method

2.1.1. Participants and procedure

We recruited 418 participants (42.4% female; *M* age = 29.2%, *SD* = 11.0) from Amazon's Mechanical Turk website (http://www.mturk.com) to complete survey questions online. The sample was restricted to respondents from the United States. The key questions regarding trolling and other online behaviors were embedded in a larger battery of personality questionnaires. Participants received monetary compensation ($0.50) for their time.

2.1.2. Measures

Two measures of sadistic personality were administered. First was the Short Sadistic Impulse Scale (SSIS; O'Meara, Davies, & Hammond, 2011), containing 10 items to assess a dispositional tendency to enjoy hurting others (e.g., "*Hurting people is exciting*"; $\alpha = .88$), rated on five-point scales from 1 (*strongly disagree*) to 5 (*strongly agree*). Second was the Varieties of Sadistic Tendencies scale (VAST; Paulhus & Jones, in press), containing six items to assess *direct sadism*, (e.g., "*I enjoy hurting people*"; $\alpha = .61$) and seven items to assess *vicarious sadism* (e.g., "*In video games, I like the realistic blood spurts*"; $\alpha = .69$), rated on seven-point scales ranging from 1 (*not at all*) to 7 (*very much*). The VAST direct sadism subscale is conceptually equivalent to the SSIS, and the scores were highly correlated in this sample ($r = .73$, $p < .001$). Hence, we standardized and summed them to create a *direct sadism* composite score.

The 27-item Short Dark Triad scale (SD3; Jones & Paulhus, in press) was used to assess narcissism (e.g., "*I have been compared to famous people*"; $\alpha = .72$), Machiavellianism (e.g., "*It's not wise to tell your secrets*"; $\alpha = .80$), and subclinical psychopathy (e.g., "*Payback needs to be quick and nasty*"; $\alpha = .79$). The 44-item Big Five Inventory (John & Srivastava, 1999) was used to assess extraversion ($\alpha = .87$), agreeableness ($\alpha = .79$), conscientiousness ($\alpha = .83$), neuroticism ($\alpha = .85$), and openness to experience ($\alpha = .78$)

Finally, the section on Internet behavior asked participants to estimate their overall commenting frequency: "*How many hours per day do you spend posting comments on websites* (e.g., *YouTube, news sites, forums,* etc.)?" A second question probed their preferred activity when commenting online: "*What do you enjoy doing most on these comment sites?*" with five response options: "*debating is-*

sues that are important to you", "*chatting with other users*", "*making new friends*", "*trolling other users*", and "*other (specify)*". The order of the first four answer options was randomized. Those participants who indicated that they did not spend any time posting comments were labeled as "non-commenters."

2.2. Results

2.2.1. Online commenting frequency

Across all participants, the mean number of commenting hours per day was 1.07, *SD* = 1.77.[1] Commenting time was associated with lower conscientiousness scores, $r(418) = -.16$, $p < .001$, and higher scores on all Dark Tetrad measures except narcissism: direct sadism, $r(508) = .12$, $p = .01$, vicarious sadism, $r(508) = .21$, $p < .001$, psychopathy, $r(512) = .12$, $p = .005$, and Machiavellianism, $r(512) = .16$, $p < .001$; narcissism, $r(512) = .04$, $p = .37$.

Commenting time was also negatively associated with age, $r(508) = -.23$, $p < .001$, and men reported greater numbers of hours posting comments (*M* = 0.88, *SD* = 0.78) than did women (*M* = 0.49, *SD* = 0.62), $t(505.91) = 6.19$, $p < .001$, $d = 0.55$. In contrast, extraver­sion, agreeableness, neuroticism, and narcissism were all non-sig­nificant predictors of commenting frequency, *p*'s > .18.

2.2.2. Favored activity when commenting

A total of 23.8% of participants expressed a preference for debating issues, 21.3% preferred chatting, 2.1% said they especially enjoy making friends, 5.6% reported enjoying trolling other users, and 5.8% specified another activity. The remaining 41.3% of participants were non-commenters. Because of low endorsement rates of the "making friends" option, we combined[2] that category with the "other" category in the following analyses.

A multivariate analysis on the Dark Tetrad revealed a significant effect of activity preference: Wilks' $\lambda = 0.97$, $F(20, 1646.00) = 1.65$, $p = .03$. Inspection of the pattern depicted in Fig. 1 confirmed that, as expected, the Dark Tetrad scores were highest among those who selected trolling as the most enjoyable activity. Planned orthogonal contrasts indicated that the effect was significant for all Dark Tetrad measures: direct sadism, $t(500) = 3.03$, $p = .003$, $d = .27$, vicarious sadism, $t(500) = 2.91$, $p = .004$, $d = .26$, psychopathy, $t(500) = 3.09$, $p = .002$, $d = .28$, narcissism, $t(500) = 2.64$, $p = .009$, $d = .24$, and Machiavellianism, $t(500) = 2.78$, $p = .006$, $d = .25$. A second multivariate analysis on the Big Five scores indicated that, as expected, participants who chose trolling as their favorite activity were higher on extraversion, $t(413) = 2.02$, $p = .04$, $d = .20$, and lower on agreeableness, $t(413) = -2.04$, $p = .04$, $d = .20$, than others, but did not differ on conscientiousness, neuroticism, or openness, *p*'s > .21.

3. Study 2

A limitation of Study 1 is that we asked participants to select their favorite activity from a list of options. This necessitated a categorical index of trolling that likely underestimated the effects. Hence in Study 2, we assessed enjoyment of each commenting activity (including trolling) on separate continuous scales. To rule out the possibility that overall Internet use explains relations with trolling, we also included a question about total time spent online for use as a control variable. Finally, to triangulate on trolling with multiple measures, we constructed a second brief index: the *Global Assessment of Internet Trolling* (GAIT) scale, which assessed trolling

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[1] Because the frequency scores were positively skewed, we applied a square root transformation to the raw scores, resulting in a transformed mean of 0.72 h of commenting per day, *SD* = 0.75. The transformed scores were used in the analyses that follow.

[2] The pattern of results was unchanged when all categories were used.