Short Communication

Constructing the cyber-troll: Psychopathy, sadism, and empathy

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ABSTRACT

Online trolling is of particular concern due to the harmful negative outcomes its victims experience. The current study sought to explore and extend the personality profile of Internet trolls. After gender was controlled for, psychopathy, sadism, and empathy (affective empathy, cognitive empathy, and social skills) were examined for their predictive utility of trolling behaviour. A sample of 415 participants (36% men, 63% women, 1% other) with a mean age of 23.37 years ($SD = 7.19$) completed an online questionnaire. Results showed that men were more likely than women to engage in trolling, and higher levels of trait psychopathy and sadism predicted trolling behaviour. Lower levels of affective empathy predicted perpetration of trolling, and trait psychopathy moderated the association between cognitive empathy and trolling. Results indicate that when high on trait psychopathy, trolls employ an empathic strategy of predicting and recognising the emotional suffering of their victims, while abstaining from the experience of these negative emotions. Thus, trolls appear to be master manipulators of both cyber-settings and their victims' emotions.

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1. Introduction

The increased popularity of the Internet has given rise to new forms of antisocial behaviour conducted online. Victims of online antisocial behaviour experience similar psychopathological outcomes as victims of face-to-face antisocial behaviour, including depression, anxiety, and low self-esteem (Nicol, 2012). Additionally, the outcomes of antisocial behaviour online may be more pervasive than traditional antisocial behaviours and have a longer lasting impact on the victim (Park, Na, & Kim, 2014). Such consequences render research on online antisocial behaviours of particular importance.

1.1. Trolling

Trolling is the deliberate provocation of others using deception and harmful behaviour on the Internet which often results in conflict, highly emotional reactions, and disruption of communication in order to advance the troll's own amusement (Hardaker, 2010). The disruptive aspect of trolling distinguishes this behaviour from other forms of online antisocial behaviour, such as cyberbullying (Lenhardt, 2013). Despite limited research, recent studies have established that gender and dark personality traits are significant predictors of trolling behaviours (Buckels, Trapnell, & Paulhus, 2014; Craker & March, 2016).

1.2. Psychopathy, sadism, and gender

The Dark Tetrad (i.e., narcissism, Machiavellianism, psychopathy, and everyday sadism) represent distinct but overlapping socially adverse nonclinical personality traits (Paulhus & Williams, 2002). Individuals high in these dark traits frequently inflict suffering on others and engage in other antisocial behaviours (Jones & Paulhus, 2010). Research has established trait psychopathy and everyday sadism are significant, positive predictors of perpetrating trolling behaviours (Buckels et al., 2014; Craker & March, 2016; March, Grieve, Marrington, & Jonason, 2017). Though Buckels et al. (2014) found narcissism and Machiavellianism to be correlated with enjoyment of trolling, there is no evidence of the utility of these variables in predicting trolling behaviour (e.g., Buckels et al., 2014; Craker & March, 2016; March et al., 2017). In addition to trait psychopathy and everyday sadism, research has also established men are more likely than women to perpetrate trolling behaviours (e.g., Buckels et al., 2014; Craker & March, 2016).

1.3. Empathy

Empathy is a fundamental factor of prosocial behaviour and is believed to facilitate social interactions and development (Jolliffe & Farrington, 2006). Global empathy refers, broadly, to the reaction one experiences when observing the experience of another (Mitsopoulou & Giovazolias, 2015). Empathy is delineated into two dimensions: Cognitive empathy and affective empathy. Cognitive empathy is the ability to recognise and understand another's emotions (Mitsopoulou & Giovazolias, 2015). Affective empathy is the ability to experience,

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internalise, and respond to the emotions of others (Baron-Cohen & Wheelwright, 2004). In addition to cognitive and affective dimensions, the possession of social skills is also considered a measure of empathy and has historically been a way of contributing to measurement of global empathy (Baron-Cohen & Wheelwright, 2004).

Research has established a negative relationship between empathy and face-to-face bullying (Jolliffe & Farrington, 2006) as well as online antisocial behaviours, such as cyberbullying (Ang & Goh, 2010). Interestingly, some research suggests that only affective empathy, not cognitive empathy, is negatively related to face-to-face antisocial behaviour, whereas both dimensions of empathy have been related to online antisocial behaviour. For example, Jolliffe and Farrington (2006) found that only affective empathy predicted traditional bullying, whereas Ang and Goh (2010) found that both affective and cognitive empathy predicted cyberbullying. This suggests there may be a difference between the dimensions of empathy relating to the individual's environment (i.e., traditional and online settings). Outside of cyberbullying, research on associations between empathy and other online antisocial behaviours is limited. To date, there is no research investigating the relationship between empathy and trolling.

1.4. Aim and hypotheses

The aim of the current study was to extend previous research by exploring the utility of empathy as a predictor of perpetration of trolling behaviours. Specifically, the current study aimed to predict trolling behaviour from trait psychopathy, sadism, and empathy (cognitive, affective, and social skills). It was predicted that higher levels of trait psychopathy and everyday sadism would significantly predict trolling behaviours. In addition to the variance explained by these variables, lower levels of cognitive empathy, affective empathy, and social skills would significantly predict trolling behaviours. In addition, gender would be entered as a control variable.

2. Method

2.1. Participants and procedure

Participants, recruited through advertisements on social media, completed an online survey hosted by surveymonkey.com. The sample was comprised of 415[1] participants (36% men, 63% women, 1% other) aged between 18 and 67 years ($M = 23.37$, $SD = 7.19$). The majority of participants identified as Australian (48%) and American (18.6%), with English as their primary language (87.7%), and spent an average of 3–4 h online every day (32.5%).

2.2. Measures

A revised and extended version of the Global Assessment of Internet Trolling (GAIT; Buckels et al., 2014) was used to assess trolling behaviours. Four new items were added to the original 4-item scale, as Field (2013) suggests 4-item scales may not adequately address content validity. Participants indicated their responses to the 8-item (e.g., "*although some people think my posts/comments are offensive, I think they are funny*") GAIT-Revised measure (Cronbach's alpha = 0.85) on a 5-point Likert scale (1 = *Strongly Disagree, 5 = Strongly Agree*).

Trait psychopathy was measured using the psychopathy subscale of the 27-item Short Dark Triad (Jones & Paulhus, 2014). Of the 27-items (5-point Likert scale; 1 = *Strongly Disagree, 5 = Strongly Agree*), nine items measure trait psychopathy (Cronbach's alpha = 0.75; "*payback needs to be quick and nasty*"). Everyday sadism was measured using the Short Sadistic Impulse Scale (O'Meara, Davies, & Hammond, 2011), which is comprised of 10-items (5-point Likert scale; 1 = *Strongly*

Disagree, 5 = *Strongly Agree*) assessing sadistic behaviour and attitudes (Cronbach's alpha = 87; e.g., "*people would enjoy hurting others if they gave it a go*").

Empathy was measured using the Empathy Quotient (EQ; Baron-Cohen & Wheelwright, 2004). The EQ (4-point Likert scale; 1 = *Strongly Disagree, 4 = Strongly Agree*) includes three subscales: Cognitive empathy (Cronbach's alpha = 0.90; e.g., "*I am good at predicting how someone will feel*"), affective empathy (Cronbach's alpha = 0.80; e.g., "*I get upset if I see people suffering on news programmes*"), and social skills (Cronbach's alpha = 0.62; "*I find it hard to know what to do in a social situation*").

3. Results

Bivariate and correlations between the control variable of gender, predictor variables of psychopathy, sadism, cognitive empathy, affective empathy, and social skills, and criterion of trolling behaviours are presented in Table 1.

Table 1 indicates significant positive correlations between trolling and psychopathy and sadism, and significant negative correlations between trolling and gender, affective empathy, and social skills.

To test the hypotheses, a 3-Step Hierarchal Multiple Regression Analysis was conducted, controlling for gender at Step 1. At Step 2, psychopathy and sadism were entered, and at Step 3 cognitive empathy, affective empathy, and social skills were entered to predict trolling. F tests, significance, adjusted R^2, and coefficient statistics are presented in Table 2.

Table 2 shows that at Step 3, psychopathy, sadism, and cognitive empathy are significant positive predictors of trolling, and affective empathy is a significant negative predictor.

3.1. Moderation analyses

The zero-order correlation between cognitive empathy and trolling was not significant (see Table 1); however, upon inclusion in the regression model, cognitive empathy was now a significant positive predictor (Table 2). Variables were centralised and interactions between each predictor and cognitive empathy were computed and entered in a regression model predicting trolling. As only the interaction between psychopathy and cognitive empathy was significant ($p = 0.002$),[2] a PROCESS moderation analysis was run with cognitive empathy as the predictor, trolling as the criterion, and psychopathy as the moderator. Psychopathy was shown to be a significant moderator of cognitive empathy predicting trolling behaviour ($p < 0.05$). Specifically, if trait psychopathy is high, then individuals with higher levels of cognitive empathy are more likely to engage in trolling behaviours.

4. Discussion

The aim of this study was to examine the utility of trait psychopathy, everyday sadism, and empathy (affective, cognitive, and social skills) in predicting online trolling behaviours. The results of this study are line with previous research stating men are more likely to engage in trolling behaviours (Buckels et al., 2014). Also corroborating previous research (e.g., Buckels et al., 2014; Craker & March, 2016), trait psychopathy and sadism were significant positive predictors of trolling behaviour. As trait psychopathy is characterised by impulsivity and thrill-seeking behaviour (Paulhus & Williams, 2002), it is possible that the thrill-seeking aspect of creating mayhem online is a central motivator to troll. Further, as individuals high in everyday sadism experience feelings of enjoyment from hurting others (Buckels, Jones, & Paulhus, 2013), this suggests that the trolls are motivated to and enjoy inflicting cruelty online.

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[1] Although 427 participants accessed the questionnaire, 12 participants were aged under 18 years (the minimum age for inclusion).

[2] These analyses are available from the corresponding author upon request.

Table 1
Intercorrelations: age, gender(control), psychopathy, sadism, cognitive empathy, affective empathy, social skills, and trolling.

	1	2	3	4	5	6	7
1. Age	1						
2. Gender	−0.04	1					
3. Psychopathy	−0.15**	−0.34***	1				
4. Sadism	−0.12*	−0.22***	0.63***	1			
5. Cognitive empathy	−0.11*	0.06	−0.04	−0.05	1		
6. Affective empathy	−0.01	0.27***	−0.35***	−0.46***	0.40***	1	
7. Social skills	0.04	0.04	−0.13	−0.24***	0.40***	0.33***	1
8. Trolling	−0.08	−0.41***	0.62***	0.62***	0.01	−0.47***	−0.16**

Note. Gender is coded as 1 = male, 2 = female; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; correlations corrected for multiple testing; No evidence of multicollinearity (no correlations > 0.07).

4.1. Empathy as a predictor of trolling behaviour

Both affective empathy and cognitive empathy (but not social skills) significantly predicted trolling behaviours. Affective empathy was a significant negative predictor of trolling behaviour, corroborating previous research that individuals lower on affective empathy measures are more likely to engage in antisocial behaviour (Warden & MacKinnon, 2003). This negative relationship between affective empathy and trolling suggests that trolls may not experience or internalise the emotional experience of their victims. This is likely a crucial aspect to trolling – if trolls empathised with their victim, perhaps they would be more likely to reduce or refrain from engaging in the behaviour.

The utility of cognitive empathy positively predicting perpetration of trolling behaviours is slightly more complex. Such a finding suggests that trolls, being high in cognitive empathy, are able to easily recognise and understand the emotions their victims are experiencing. Further analyses suggested that the utility of cognitive empathy predicting perpetration of trolling behaviours is contingent on individual trait psychopathy; specifically, if trait psychopathy is high, then individuals with higher levels of cognitive empathy are more likely to engage in trolling behaviours.

Psychopathy is commonly associated with deficits in affective empathy, but their cognitive empathy is usually intact (Dadds et al., 2009). Although speculative, higher cognitive empathy would allow trolls to determine when they had succeeded in having emotionally manipulated (e.g., embarrassed or angered) their victim. Thus, the trolls most likely to be experts at inflicting emotional suffering on their victims are those with high trait psychopathy and high cognitive empathy.

4.2. Limitations and future research

Results of the current study must be considered in the context of potential limitations. Although the internal consistency of the GAIT-Revised was higher than the original GAIT (Cronbach's alpha = 0.82; Buckels et al., 2014), and the addition of more items expanded upon the original scale's construct validity (e.g., Field, 2013), the current study was the first to employ the GAIT-R, and thus its psychometric validity is limited to this study alone.

Another potential limitation of the current study was that the measure of psychopathy did not distinguish between primary and secondary psychopathy. Such distinction may provide further insight into the relationship between psychopathy and trolling, or even the relationship between psychopathy and cognitive empathy. Similarly, high levels of cognitive empathy could suggest Theory of Mind; however, such analyses were beyond the scope of the current study. Future research should seek to address these limitations, as they may provide greater explanation to the current results.

4.3. Implications and conclusion

The current study has provided evidence for empathy as a predictor of trolling behaviour. Future research should replicate and extend the currently established predictors of trolling in an effort to develop a complete personality profile on the online masters of mayhem and chaos. Such research may lead to the development of education and prevention programs designed to reduce both perpetration and the severity of consequences for trolling victims. Similar programs established for

Table 2
Hierarchical multiple regression analyses with gender control, predictor variables of psychopathy, sadism, cognitive empathy, affective empathy, and social skills and criterion of trolling behaviours.

	B	SE	β	t	F	df	adj. R^2
Step 1					66.41***	1, 357	15.4
Constant	22.25	1.01					
Gender	−4.73	0.58	−0.40	−8.15***			
Step 2					121.40***	3, 355	34.2
Constant	6.94	1.31					
Gender	−2.74	0.47	−0.23	−5.83***			
Psychopathy	0.36	0.06	0.32	6.39***			
Sadism	0.32	0.04	0.36	7.30***			
Step 3					67.76***	6, 352	52.8
Constant	12.76	2.39					
Gender	−2.35	0.46	−0.20	−5.08***			
Psychopathy	0.34	0.05	0.31	6.33***			
Sadism	0.24	0.05	0.27	5.32***			
Cognitive empathy	0.14	0.05	0.13	3.11***			
Affective empathy	−0.27	0.05	−0.23	−5.02***			
Social skills	−0.04	0.09	−0.02	−0.40			

Note. Gender is coded as 1 = male, 2 = female; ***$p < 0.001$.

traditional antisocial behaviours have seen success in the reduction of both perpetration and victims' negative psychological symptoms (e.g., Manger, Eikeland, & Asbjornsen, 2001).

Based on the results of the current study, the prototypical troll is male, high in trait psychopathy and sadism, and has low affective empathy. The interaction of trait psychopathy and high cognitive empathy suggests trolls really are the master online manipulators – they cognitive understand the emotional distress they cause through their trolling behaviour without empathising with their victim's emotional suffering.

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