The Dark Triad and trait self-objectification as predictors of men's use and self-presentation behaviors on social networking sites

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ABSTRACT

An online survey of a nationally representative sample of U.S. men aged 18–40 assessed trait predictors of social networking site use as well as two forms of visual self-presentation: editing one's image in photographs posted on social networking sites (SNSs) and posting "selfies," or pictures users take of themselves. We examined the Dark Triad (i.e., narcissism, Machiavellianism, and psychopathy) and trait self-objectification as predictors. Self-objectification and narcissism predicted time spent on SNSs. Narcissism and psychopathy predicted the number of selfies posted, whereas narcissism and self-objectification predicted editing photographs of oneself posted on SNSs. We discuss selective self-presentation processes on social media and how these traits may influence interpersonal relationship development in computer-mediated communication.

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1. Introduction

Social networking websites (SNSs) have become an integral channel for communication and self-expression in the lives of many. The SNS Facebook has become ubiquitous with over 1 billion users worldwide, 700 million of which access the site daily (Facebook, 2014). Instagram, owned by Facebook, hosts over 1 billion photographs posted by their 200 million users, one-third of whom use the site multiple times a day (Instagram, 2014; Pew Internet, 2013). Twitter hosts over 250 million active users; nearly half access the site daily, and nearly a quarter visit multiple times a day (Pew Internet, 2013; Twitter, 2014).

Although several studies have delved into trait predictors of SNS use, there are consistent shortcomings. First, most use college samples (e.g., Amichai-Hamburger & Vinitzky, 2010; Ross et al., 2009; Seidman, 2013) or nonrepresentative samples collected via online posts, often from college snowball samples (e.g., Carpenter, 2012; Hughes, Rowe, Batey, & Lee, 2012; Ryan & Xenos, 2011), limiting the generalizability of these findings. Second, existing research has largely investigated the Big 5 traits (Amichai-Hamburger & Vinitzky, 2010; Hughes et al., 2012; Ross et al., 2009; Seidman, 2013), narcissism (Carpenter, 2012; Panek, Nardis, & Konrath, 2013; Ryan & Xenos, 2011), and shyness and loneliness (Baker & Oswald, 2010; Ryan & Xenos, 2011). Other traits relevant to social interaction on SNSs remain unexamined. Finally, although considerable research has examined text posts and traditional photographs on SNSs, technological practices continuously evolve. At this time, limited research has parsed apart the use of photo editing software to manipulate one's self-presentation or the relatively new phenomenon of "selfies" (i.e., pictures of oneself taken by oneself). Given that those high on Dark Triad traits manipulate their physical appearance to achieve social gains (Holtzman & Strube, 2013; Jonason, Lyons, Baughman, & Vernon, 2014) and that pictures are considered a key channel for communicating social information on SNSs (Kapidzic, 2013), investigating the trait predictors of these behaviors is the first step in examining their role in the social media environment.

2. The Dark Triad

The Dark Triad of personalities includes subclinical (i.e., within a normal range of functioning) Machiavellianism, narcissism, and psychopathy (Paulhus & Williams, 2002). Machiavellians (Machs) are strategic and cynical. They seek to satisfy their own needs with little regard for morals, often by manipulating others (Christie & Geis, 1970). Narcissists are egocentric individuals with a sense of grandiosity, dominance, and entitlement who perceive themselves as smarter, more attractive, and better than others, but are still

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marked by insecurity (Gabriel, Critelli, & Ee, 1994; Raskin & Terry, 1988). Finally, psychopaths lack empathy and often engage in impulsive and thrill-seeking behaviors regardless of the cost to others (Jonason & Krause, 2013). The three traits share common threads of deceitfulness, self-promotion, coldness, disagreeableness, exploitation, and aggression (Furnham, Richards, & Paulhus, 2013; Jonason & Webster, 2010).

From an evolutionary perspective, many have questioned why antisocial personality traits would emerge and proliferate among social beings. According to life history theory, such trait variance (i.e., individual differences) may be one way to help maximize the likelihood that offspring will survive and reproduce (Figueredo et al., 2005). One possible explanation for Dark Triad traits is that each has a function that makes it evolutionarily advantageous. These traits are associated with the development of different strategies that help individuals achieve their social goals such as obtaining mates (Buss, 2009). Indeed, recent research has determined that individuals high on Dark Triad traits employ different types of "cheater strategies," as these methods help them achieve interpersonal and social goals despite their antisocial personalities (Jonason & Webster, 2012). For example, they may try to charm others into doing what they want, or they may try coercive tactics (Jonason & Webster, 2012).

Existing research on SNSs indicate there may be cheater strategies specific to this mediated context that help those high on Dark Triad traits attract mates or express social dominance. Narcissists use SNSs for self-promotion purposes, including projecting a positive self-image and acquiring a lot of "friends" (Bergman, Fearrington, Davenport, & Bergman, 2011; Buffardi & Campbell, 2008; Carpenter, 2012). Machiavellianism predicts self-oriented goal pursuit on Facebook (Rosenberg & Egbert, 2011) and also predicts more self-monitoring and self-promoting Facebook behavior in men (Abell & Brewer, 2014). Machs have also been shown to be more likely to use the site to manipulate their romantic partners (Fox, Peterson, & Warber, 2013).

SNSs are often used to convey one's attractiveness or sexual availability to the network (Fox & Warber, 2013; Fox, Warber, & Makstaller, 2013; Kapidzic, 2013); as such, manipulating one's self-presentation on SNSs, or merely spending time on SNSs, may qualify as cheater strategies. Given the findings that those high on the Dark Triad employ strategies that enable them to manipulate both their self-image as well as their interactions with others via SNSs, we expect that narcissism (H1), Machiavellianism (H2), and psychopathy (H3) will be associated with (a) greater social networking site use, (b) more frequent posting of selfies, and (c) more frequent photo editing.

3. Self-objectification

Another trait that may predict these SNS behaviors is self-objectification. According to objectification theory, sociocultural forces promote the sexual objectification of people such that they are depersonalized and judged as objects with solely sexual worth. As people are socialized in a sexual objectifying culture, they gradually internalize this perspective and learn to see and value themselves based on their appearance (Fredrickson & Roberts, 1997).

On SNSs, where attention is often focused self-presentation and appearance, self-objectifying individuals may be driven to promote their appearance through these sites. Indeed, the drive to satisfy others' expectations or desires parallels the use of cheater strategies, as self-objectifying individuals may be masking this trait by strategically presenting themselves in a way that would achieve social goals such as attracting a mate.

Although some research on SNSs and other interactive media has shown a relationship between use and self-objectification among females (e.g., Fox, Bailenson, & Tricase, 2013; Fox, Ralston,

Cooper, & Jones, in press; De Vries & Peter, 2013; Meier & Gray, 2013; Vandenbosch & Eggermont, 2012), at this time little is known about men. Given previous findings with females, we anticipate that trait self-objectification will be associated with greater social networking site use (H4a), more frequently posting selfies (H4b), and more frequent photo editing (H4c) by men.

4. Method

A nationally representative sample of 1000 men aged 18–40 obtained through Qualtrics completed an online survey in March 2014. These data were part of a larger data gathering initiative instigated by a national magazine. Fidelity checks were incorporated in the survey; if participants did not pass these checks, their data were removed and sampling continued until quotas were reached. Because of a technical difficulty with the trait self-objectification measure (i.e., a lack of compatibility with some mobile devices), these data were not available for some participants and thus they were removed from the sample.[1] The final sample included 800 men (M_{age} = 29.29, SD = 6.52) who identified as 73.1% Caucasian/European-American/White; 13.3% Black/African/African-American; 7.6% Latino/Latina/Hispanic; 6.1% Asian/Asian-American; 1.3% American Indian/Native American; 2.3% multiracial; and 2% other.

4.1. Measures

4.1.1. Trait self-objectification
The Self-Objectification Questionnaire (SOQ) assesses trait-level self-objectification by asking participants to rank various body traits from most to least important (Noll & Fredrickson, 1998). The traits vary on whether they are appearance-based (e.g., sex appeal, physical attractiveness) or competence-based (e.g., energy level, health). Competence scores are summed and subtracted from the summed appearance scores. Scores can range from −25 to 25; higher scores indicate higher self-objectification (M = −5.22, SD = 12.07).

4.1.2. Dark Triad
The Dirty Dozen (Jonason & Webster, 2010) includes twelve items measuring the Dark Triad. Four items derived from the Narcissistic Personality Inventory (Raskin & Terry, 1988) measured narcissism (e.g., "I tend to want others to pay attention to me"; M = 2.96, SD = 0.96; α = 0.85). Four items derived from the Psychopathy Scale (Paulhus, Neumann, & Hare, 2010) assessed subclinical psychopathy (e.g., "I tend to not be too concerned with morality or the morality of my actions"; M = 2.54, SD = 1.00; α = 0.83). Four items derived from the Mach IV scale (Christie & Geis, 1970) measured Machiavellianism (e.g., "I tend to manipulate others to get my way"; M = 2.42, SD = 1.08; α = 0.90). Participants answered all items on a 5-point fully labeled Likert scale (1 = Strongly disagree; 5 = Strongly agree) and responses were averaged within the subscales for analysis.

4.1.3. Time spent on social networking sites
Participants estimated how much time they spent each day on Facebook, Twitter, Instagram, Tumblr, and Pinterest, five of the most popular SNSs (Pew Internet, 2013). An open-ended item allowed participants to list other SNSs and the time spent on each. The total time spent each day was summed (M = 78.73, SD = 106.18). Because a handful of participants indicated very high

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[1] Chi squares and independent t-tests were conducted on the available demographic variables to compare included and excluded respondents to ensure there was no bias in the selected group. No significant differences between the groups were observed. Further, the remaining identified predictor variables are significant with both the full sample as well as the reduced sample.

Table 1
Correlations between variables.

	1	2	3	4	5	6	7	8	9
1. Trait self-objectification	–	.25***	.10**	.07	−.07*	.13***	.03	.07	.15***
2. Narcissism		–	.50***	.43***	−.06	.19***	.09**	.19***	.19***
3. Machiavellianism			–	.68***	−.11***	.13***	.08*	.17***	.15***
4. Psychoticism				–	−.09**	.09**	.07*	.17***	.10**
5. Age					–	−.14***	.03	−.04	−.09*
6. Time on SNSs						–	.15***	.19***	.21***
7. Photos taken							–	.58***	.22***
8. Selfies posted								–	.27***
9. Photo editing									–

* $p < .05$.
** $p < .01$.
*** $p < .001$.

values (e.g., 16 h a day), we winsorized this variable to three standard deviations beyond the mean and used these values for analysis.[2]

4.1.4. Photo posting behavior

Participants' selfie posting behavior was assessed with one item inquiring how many pictures they had taken of themselves and posted on SNSs in the past week ($M = 0.56$, $SD = 2.33$; $min = 0$, $max = 30$). We also asked how many other pictures they had taken and posted on SNSs in the past week and considered this as a control variable in relevant analyses ($M = 1.45$, $SD = 5.13$; $min = 0$, $max = 75$).

4.1.5. Photo editing behavior

Editing behavior was assessed by asking "How frequently do you use the following techniques to make you look better in pictures you post on social media?" Participants reported on three methods of improving one's appearance: cropping or cutting parts of yourself out of pictures; using photographic filters; and using Photoshop or other picture editing software or applications. Participants responded on a 5-point scale (1 = Never; 5 = Often; $M = 1.37$, $SD = 1.16$) with a response option to indicate that they did not post pictures of themselves on SNSs. Items were averaged into one variable for analysis (Cronbach's $\alpha = 0.88$).

5. Results

Correlations between variables can be viewed in Table 1. The final regression models, including all significant predictors and control variables, can be viewed in Table 2. An examination of variance inflation factors indicated multicollinearity was not an issue in any of the models.

Trait self-objectification, narcissism, Machiavellianism, psychopathy, and age were all correlated with time spent on social networking sites. Controlling for age, narcissism and trait self-objectification were found to be significant predictors, supporting H1a and H4a. Psychopathy and Machiavellianism were not significant.

Narcissism, psychopathy, time spent on SNSs, and number of other photos posted were correlated with the number of selfies posted. Controlling for time spent and other photos posted, narcissism and psychopathy predicted the number of selfies posted, supporting H1b and H3b.

Trait self-objectification, narcissism, Machiavellianism, psychopathy, age, time spent on SNSs, and number of selfies posted were correlated with editing photos of oneself posted to SNSs. Controlling for time spent on social networking sites and the number

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[2] Distributions were examined for each variable. The significance of predictors did not vary whether transformed data were used or not.

Table 2
Summary table of regression models of predictors of time spent on SNSs, number of posted selfies, and photo editing behavior.

Variable	β	t	pr²
Time spent on SNSs			
Age	−.12	−3.48***	−.12
Narcissism	.17	4.68***	.16
Trait Self-objectification	.08	2.14*	.08
Number of selfies			
Time spent on SNSs	.09	2.48**	.10
Number of other photos	.50	16.44***	.51
Narcissism	.09	2.77**	.10
Psychopathy	.09	2.70**	.10
Photo editing behavior			
Time spent on SNSs	.16	4.64***	.16
Number of selfies	.23	6.75***	.23
Narcissism	.14	4.14***	.15
Trait self-objectification	.13	3.96***	.14

Note: Time spent on SNSs, $F(3, 789) = 16.29$, $R = .24$, adjusted $R^2 = .06$. Number of selfies, $F(4, 781) = 86.83$, $R = .56$, adjusted $R^2 = .31$. Photo editing behavior, $F(4, 783) = 39.44$, $R = .41$, adjusted $R^2 = .16$.
* $p < .05$.
** $p < .01$.
*** $p \leqslant .001$.

of selfies posted, the final model revealed two significant predictors of photo editing behavior. Supporting H1c and H4c, narcissism and trait self-objectification were found to be significant predictors of photo editing behaviors, whereas psychopathy and Machiavellianism were not significant predictors.

6. Discussion

This study examined trait predictors of social networking site use, selfie posting, and photo editing behavior among a nationally representative sample of U.S. men. Men who self-objectify spent more time on SNSs than those lower in self-objectification, and, supporting previous research, more narcissistic individuals reported spending more time on SNSs. Those higher in narcissism and psychopathy reported posting selfies more frequently. Narcissists and individuals high in self-objectification more frequently edited photos of themselves that they posted to SNSs. Thus, our study has provided evidence for several as yet unstudied relationships between personality traits and social media use and self-presentation. Further, it suggests that those high on Dark Triad traits may employ SNSs to execute "cheater strategies" that help them achieve their interpersonal and social goals despite their antisocial personality traits.

One contribution of this study is determining that trait self-objectification is associated with the time men spend on SNSs. Although previous research has identified similar relationships

for adolescent girls who use Facebook (e.g., Meier & Gray, 2013; Vandenbosch & Eggermont, 2012), our findings indicate men's self-objectification is also associated with SNS use. Further, men's self-objectification was found to predict the frequency with which they edited photos of themselves that they posted to SNSs. Definitively, self-objectifying individuals prioritize their appearance, and thus it makes sense that they would take the time to cultivate that appearance before selectively self-presenting it to the network. Another possible explanation is that the process of interacting with one's photos could affect self-objectification. It is possible that when men spend time editing their photos, it triggers or reinforces feelings of self-objectification as the user is treating his own image as an object to be manipulated.

Our findings also demonstrate that self-objectifying individuals and narcissists are more likely to engage in selective self-presentation on SNSs by altering their photographs, reflecting previous findings that narcissists lie about their appearance as a mating tactic (Jonason et al., 2014). The hyperpersonal model (Walther, 1996) suggests that such online deception, a form of selective self-presentation, may lead to misperceptions by potential mates. If the interaction continues offline, the receiver may feel disappointed or deceived by this manipulation. Thus, personality types who engage in extensive photo editing may attract more initial interest or attention online, but this cheater strategy may be short-lived and lead to less desirable relational outcomes in face-to-face interactions.

Although it may be a common assumption, this study also provides the first evidence that narcissism is associated with posting selfies and editing photos of the self shared on SNSs, both of which may qualify as the type of self-promotional SNS behaviors that are more common in narcissists (Carpenter, 2012) and also as cheater strategies. Because narcissists value their physical appearance (Davis, Dionne, & Shuster, 2001) and male narcissists overestimate their attractiveness (Gabriel et al., 1994), they may be compelled to share more pictures of themselves on SNSs and edit their photos to maximize attractiveness. Those high on Dark Triad traits are willing to engage in several manipulative tactics to secure short-term sexual partners (Furnham et al., 2013; Jonason, Li, Webster, & Schmitt, 2009), and manipulating one's appearance on social media should be considered in future research. Further, because narcissists are prone to social comparison (Krizan & Bushman, 2011), narcissists may present these edited and optimized images in the social context of SNSs as a strategy to convey their perceived superiority to others (Jonason et al., 2014). The fact that narcissists engage in more photo editing behavior also corresponds to the underlying insecurity associated with narcissism (Raskin & Terry, 1988).

In addition to narcissism, we found that psychopathy predicted posting selfies, although it did not predict editing them. Psychopathy is characterized by impulsivity and a lack of self-control (Paulhus et al., 2010), which may explain why psychopaths do not edit photos of themselves despite posting more selfies. They also lack appropriate filters for their Facebook content, as a recent content analysis of textual Facebook posts revealed (Garcia & Sikström, 2014). This lack of filtering and impulsivity in SNS posting may benefit some psychopathic men, however. One study found that male users who had SNS posts that alluded to excessive drinking and promiscuous behavior were perceived as more attractive than male users with posts identifying them as "the life of the party" (Walther, Van Der Heide, Kim, Westerman, & Tong, 2008). Thus, when psychopathic men appear reckless or impulsive on SNSs, it may actually help attract mates.

Despite previous findings (e.g., Abell & Brewer, 2014; Fox, Peterson et al., 2013; Rosenberg & Egbert, 2011), we did not identify any relationships between Machiavellianism and SNS use,

posting selfies, or editing photographs of the self. One possibility is that Machs may recognize that SNS-based communication is not universally effective for achieving their goals given that much SNS activity is visible to the network (if not the public in general). Thus, Machs may not rely disproportionately on SNSs and instead use various channels (such as texting or face-to-face communication) strategically depending on their goals. Future research should investigate how Machs capitalize on the affordances of different channels. Another possibility is that the measure we used did not address the scope of the construct. Although there is considerable evidence for the validity and reliability of the Dirty Dozen (Jonason & Luévano, 2013; Jonason & Webster, 2010), the short form does not capture the nuances of the full measures and may be less sensitive (Miller et al., 2012), particularly in terms of the nuanced differences between Machiavellianism and psychopathy (Jones & Paulhus, 2014).

Because of the constraints of the sponsoring organization, the data collected were limited to men. Given that women tend to spend more time SNSs such as Facebook and Instagram (McAndrew & Jeong, 2012), and that objectification is theorized to be a more powerful force in women's lives than men's (Fredrickson & Roberts, 1997), it is important that future research investigate women. In particular, self-objectification may play a more instrumental role for women, perhaps mediating the effects of the Dark Triad on behavior. Further, future research on trait self-objectification in men may employ different measures. Men and women may self-objectify differently, and a male-specific measure might offer a more nuanced perspective (Daniel, Bridges, & Martens, 2014).

Finally, although it was nationally representative on other demographics, this survey was limited to a U.S. sample aged 18–40. Individuals over the age of 40 have become increasingly engaged with SNSs although their behaviors within these sites differ from younger individuals (Pew Internet, 2013). Further, SNSs are popular across the globe; even the U.S.-born site Facebook reports that over 80% of its users are outside of the U.S. (Facebook, 2014). Research into broader populations is warranted.

Collectively, our findings expand existing research on those high on Dark Triad traits and online interaction, which has shown associations with antisocial behaviors such as cyberbullying (Gibb & Devereux, 2014) and trolling (Buckels, Trapnell, & Paulhus, 2014). Future research should identify the scope of cheating strategies those high on Dark Triad traits may employ on SNSs. For example, Machiavellians may be more strategic in who they choose to "friend" on these networks, whereas psychopaths may be more likely to impulsively accept or initiate friend requests. Or, those high on Dark Triad traits may be more likely than others to use SNSs or online dating sites to identify—or deceive—potential short-term mates.

Further, this study has offered some of the first insights into the relationship between trait self-objectification and some SNS behaviors. Given the dynamic nature of SNS interactions as well as objectification processes, this is a fruitful area for future research as it is possible that individual behaviors are affecting other network members through interpersonal and normative influence. Researchers must continue to clarify these relationships to help ascertain healthy and socially beneficial uses of SNSs.

Acknowledgements

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