

## **Narcissism and social media**

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Narcissism has been associated with the discussion of social media for at least a decade. Social media has been viewed as a prime setting for narcissistic grandiosity, and the growth of social media has been potentially linked to increasing cultural manifestations of narcissism (Twenge & Campbell, 2009). In this chapter, we begin by briefly reviewing the history and findings of this research area. We next present several theoretical models useful for understanding narcissism in social media. We conclude with a discussion of some of the limits and controversies in this work as well as suggestions for future research.

First, however, we will take a quick moment to define our terms. We are talking about trait narcissism in this chapter, primarily *grandiose narcissism* (the more extraverted and assertive form) but also *vulnerable narcissism* (the more neurotic and covert form; Miller et al., 2011). When we use the term “narcissists” this is short-hand for individuals with high scores on trait narcissism. Narcissism exists on a continuum, and there is no bright line between non-narcissists and narcissists (Foster & Campbell, 2007). We are not talking about *narcissistic personality disorder* (NPD) as there is no research published on NPD and social media. Our speculation is that the work with clinical samples or measures would show similar results, but this work needs to be done (Miller & Campbell, 2008; Miller, Gaughan, Pryor, Kamen, & Campbell, 2009). When we are talking about social media, we are talking about computer mediated peer-to-peer communication networks such as Facebook, Instagram, and Twitter. Of these, Facebook has been the target of the most research, but the use and forms of social media

are always changing and evolving.

## **History and findings**

### **Research Headwaters**

Work on narcissism and social media grew out of at least four different research streams. One research stream focused on narcissism and self-enhancement processes more generally. The core finding is that grandiose narcissists are motivated to increase and maintain the positivity of the self, conceptualized as self-concept, status, or self-esteem (Campbell, Rudich, & Sedikides, 2002). This can be done through the self-serving bias (e.g., taking credit for successful outcomes and blaming failure on others; Rhodewalt & Morf, 1998), inflating self-beliefs (John et al., 1994), reporting the better-than-average effect (e.g., saying that they are better than others on a range of traits; Campbell et al., 2002), and overclaiming knowledge that they could not possibly have (Paulhus, Harms, Bruce, & Lysy, 2003).

A second stream involved narcissism in close relationships, which showed that grandiose narcissists used social relationships as an arena for self-enhancement. For example, grandiose narcissists are attracted to romantic partners who can bolster their social status and self-esteem (Campbell, 1999). Similarly, grandiose narcissists are willing to sacrifice close relationship partners in the interest of status (Campbell, Reeder, Sedikides & Elliot, 2000). Narcissists are also very successful at shallow, short-term relationships (Campbell, Foster, & Finkel, 2002; Schmitt et al., 2017).

A third stream included the broad interest in personality traces or cues in the world (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011; Gosling, Ko, Mannarelli, & Morris, 2002; Mehl, Gosling, & Pennebaker, 2006; Naumann, Vazire, Rentfrow, & Gosling, 2009). The idea is that personality traits like narcissism can be observed in the social and physical world

through traces or marks these individuals leave behind. One early example was the link between narcissism and self-enhancing and salacious personal email addresses (Back, Schmukle, & Egloff, 2008). Another was narcissism and blogging (Marcus, Machilek, & Schütz, 2006). More recently, this work has examined narcissism and personal appearance, including clothing and make-up (Vazire, Naumann, Rentfrow, & Gosling, 2008).

A fourth and final stream linked grandiose narcissism to trait extraversion (Paulhus, 2001), psychological agency or surgency (Campbell & Foster, 2007), and approach motivation or behavioral activation (Foster & Trimm, 2008). The central finding is that trait grandiose narcissism is grounded in – or at least linked to – basic traits like extraversion (Glover, Miller, Lynam, Grego, & Widiger, 2012), power (e.g., Campbell et al., 2002; Carroll, 1987; ) and reward seeking (Foster & Trimm, 2008; Miller et al., 2009).

Together, these streams of research converged on the idea that narcissists are interested in self-enhancement and social status, and these motives influence their close relationships. Further, narcissism leaves traces in the physical and social world that can be detected and measured, and that grandiose narcissism is grounded in more basic traits of assertive extraversion, agency and approach orientation. Each of these research findings has implications for social media.

### **Overview of Social Media Findings**

The first research on narcissism and social media examined grandiose narcissism and Facebook use. The approach focused on the traces or cues that narcissism left on Facebook profiles, but also examined self-enhancement via analysis of self-promoting content (e.g., main photo attractiveness, glamorous profile pictures; Buffardi & Campbell, 2008). The general pattern of findings was that narcissism predicted number of friends ( $r=.25$ ), main photo attractiveness and self-promotion (as coded individually by outside observers), and more “fun”

pictures. Further, based on cues primarily from the photo, strangers were able to estimate the narcissism of the individual. To be clear, however, the ability to detect narcissism from Facebook profiles alone was modest,  $r = .25$ , between the page owner's narcissism and the narcissism detected by participants. Television dramas (e.g., the crime series *Bones*) that use social media as a forensic diagnostic tool to establish NPD are overstating this effect size.

Since the publication of this paper many variants of this research topic have been done, with actual data and ratings, but often with only self-reported social media data. Here is what the last decade of research shows, based on our meta-analysis (McCain & Campbell, 2016). (Note: similar results have been reported by two other recent meta-analyses [Appel, 2017; Liu & Baumeister, 2016]).

First, grandiose narcissism is related to number of links, friends, and connections on social media. This effect size is modest, about  $r = .20$ . Second, there is a similar but smaller correlation between narcissism and time spent on social media,  $r = .11$ . Third, grandiose narcissism predicts the frequency of status updates on social media,  $r = .18$ , and fourth, it predicts number of selfies posted to social media,  $r = .14$  (see Figure 1).

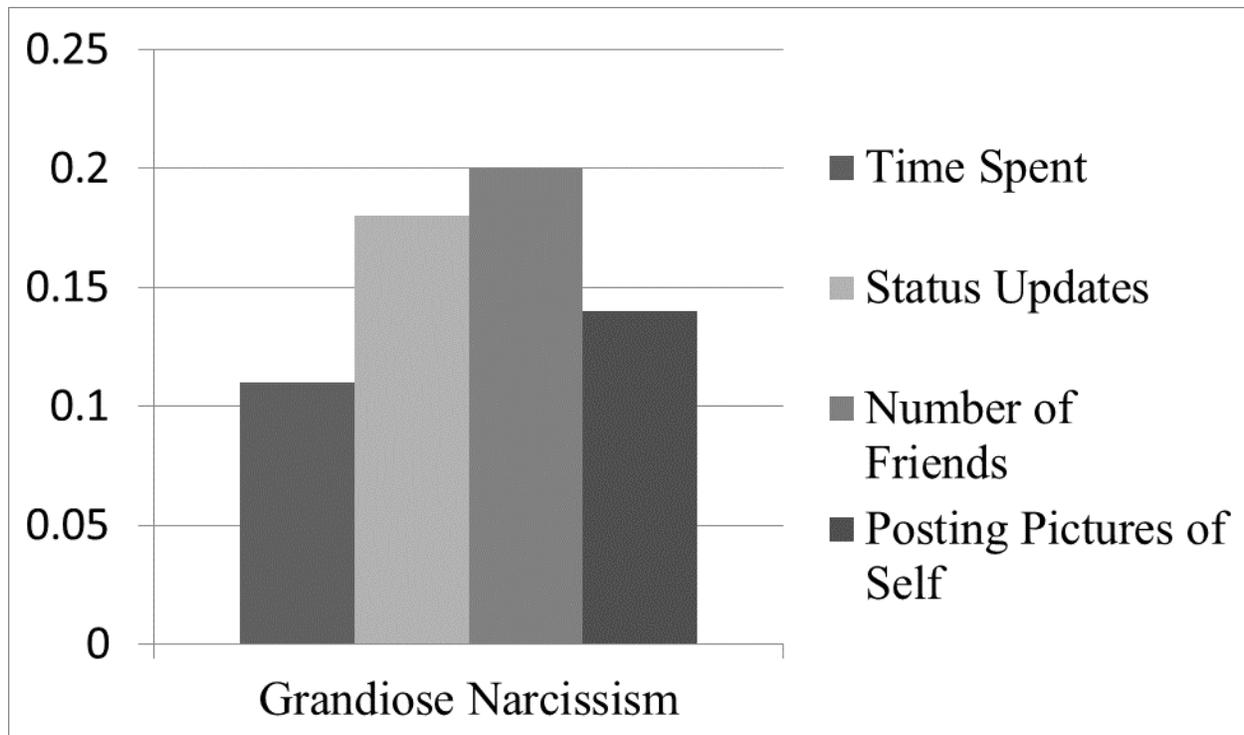


Figure 1. Average correlations between grandiose narcissism and common measures of social media use, as reported by McCain and Campbell (2016). Image available online at <https://osf.io/aycx9/> (McCain & Campbell, 2017).

Unfortunately, there has been far less research on vulnerable narcissism on social media – not enough to estimate precise effect sizes. The few early studies seem to suggest a relationship between vulnerable narcissism and number of friends,  $r = .21$ , and frequency of status updates,  $r = .42$ , but more data are needed. It is possible, based on the thin slice data (i.e., detection of vulnerable narcissism from brief video clips of behaviors; Miller et al., 2011), that vulnerable narcissism will be much harder to detect on social media. This would indeed be consistent with the alternate name for vulnerable narcissism, “covert” or “hidden” narcissism. However, the research needs to be done, and, of course, with some practice covert narcissism could possibly become overt.

A newer line of research has focused specifically on “selfies” or photos that individuals

take of themselves. This topic (although not always by that name) has been discussed in relation to narcissism as far back as the days of MySpace, where selfies were a common method of obtaining profile pictures. The use of selfies expanded dramatically with the advent of phones that had self-facing cameras and with social media platforms (e.g., Instagram) that allowed for rapid dissemination of these images. Selfies became so popular that the term was named “word of the year” by the Oxford English Dictionary in 2013 (Oxford Dictionaries, 2013).

Several studies have now examined selfies in relationship to narcissism, with the first paper a large self-report survey (Fox & Rooney, 2015). In general, grandiose narcissism predicts selfie taking, and specifically the taking of selfies that reveal more of the body and include only the self (i.e., selfies without friends, family, etc.; Barry, Doucette, Loflin, Rivera-Hudson, & Herrington, 2017; McCain et al., 2016). This relationship may differ between men and women, with less pathological narcissism predicting women’s selfie posting (Sorokowski et al., 2015; Weiser, 2015). Further, grandiose narcissists seem to enjoy selfie taking and do it for self-promotional (but not exclusively so) reasons (McCain et al., 2016). Vulnerable narcissism is more complex in its relationship to selfies. It does predict selfie taking, but these selfies are not as enjoyable. Indeed, vulnerable narcissism predicts taking multiple images before an ideal selfie is captured (McCain et al., 2016) and posting more selfies emphasizing physical appearance (Barry et al., 2017).

In sum, grandiose narcissism does leave traces on social media. These narcissistic individuals appear to use social media for self-promotion (but also other motives). They also appear quite adept at creating social networks via links with friends and followers. However, we are only at the beginning of this research. The general patterns are established, but there needs to be more work on motives, more work targeting different social media platforms (e.g., Panek,

Nardis, & Konrath, 2013), and more research on the use of social media as part of a larger self-enhancement strategy on the part of individuals. And, of course, more work that includes vulnerable narcissism. It is also important to note that the work to date is largely correlational. That is, we know social media and narcissism are associated, but we do not know which direction, if any, the causal arrows fly. It could be that narcissism causes social media use, so that increasing narcissism would increase social media use; it could be that social media use causes narcissism, so that increasing social media use would increase narcissism; or it could be a reciprocal or bi-directional effect (see Figure 2). And there could even be a third factor like cultural individualism that causes both.

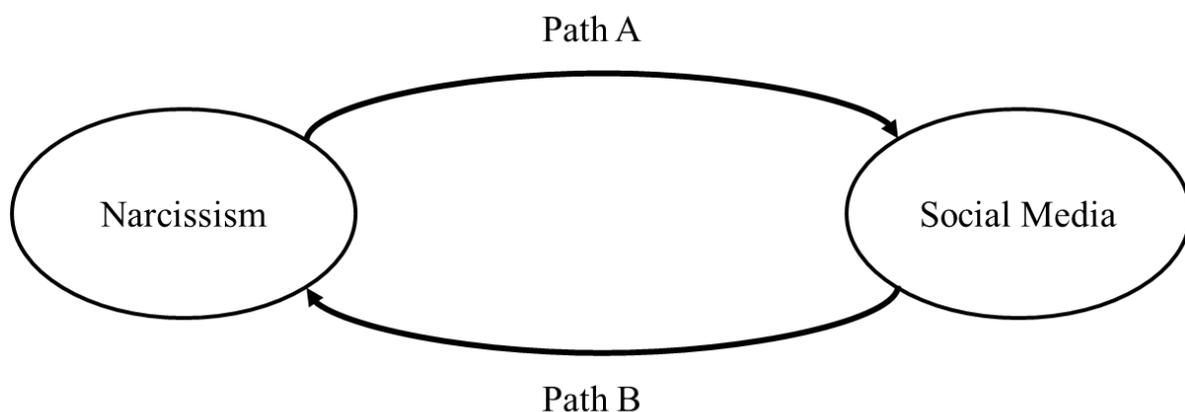


Figure 2. Plausible causal paths linking narcissism and social media. Path A represents narcissism influencing social media. Path B represents social media influencing narcissism. Together, Paths A and B represent bidirectional influence. Image available online at <https://osf.io/aycx9/>

### **Current Models of Narcissism and Social Media**

With the basic set of findings described, we next turn to several promising approaches and models for conceptualizing narcissism in social media. These models are, of course, not the only ways to approach the topic but will hopefully provide some suggestions for intrepid researchers. These are meant to spur thinking beyond the standard trait model – narcissism as a

trait is associated with social media use – by looking across levels of analysis, from the individual to the network to the culture. There is nothing wrong with the standard trait model – especially when used with an eye toward construct validation – but additional models can be helpful.

### ***Expanded Trait Model***

The trait model focuses on the link between narcissism and social media. The goal of the expanded trait model is to take the additional step to ground narcissism in the more basic traits and use that to explain and the narcissism/social media relationship. For example, there is an easy case to be made that the aspects of narcissism related to extraversion should be important for social media connections (e.g., Ong et al., 2011; Pollet, Roberts, & Dunbar, 2011).

There are several basic models that can be used to better understand narcissism. The most obvious of these is the Big Five model, where narcissism seems to be grounded primarily in (low) agreeableness, extraversion (for grandiose narcissism) and neuroticism (for vulnerable narcissism). Researchers might also want to use more expansive variants of the Big Five that can offer more precision. These include the HEXACO model with six factors (including an honesty/humility factor that is not well captured by Big Five measures like the BFI; Gaughan, Miller, & Lynam, 2012). For more detail, a ten aspects model that divides each of the Big Five into two aspects could be used (e.g., Deyoung, 2015), or even examining the Big Five at the facet level using a tool like the NEO with 30 facets (6 for each factor; Costa & McCrae, 1992). This approach in particular provides a very nuanced view of narcissism (Miller et al., 2011).

The other direction is to ground narcissism and social media into a two factor model (see Figure 3). Several useful two factor models are available. These include the big two meta-traits of *plasticity* (extraversion plus openness) and *stability* (conscientiousness plus agreeableness

minus neuroticism) based in a cybernetic trait model (DeYoung, 2014). These Big Two have provided a useful description of social media use (Liu & Campbell, 2016).

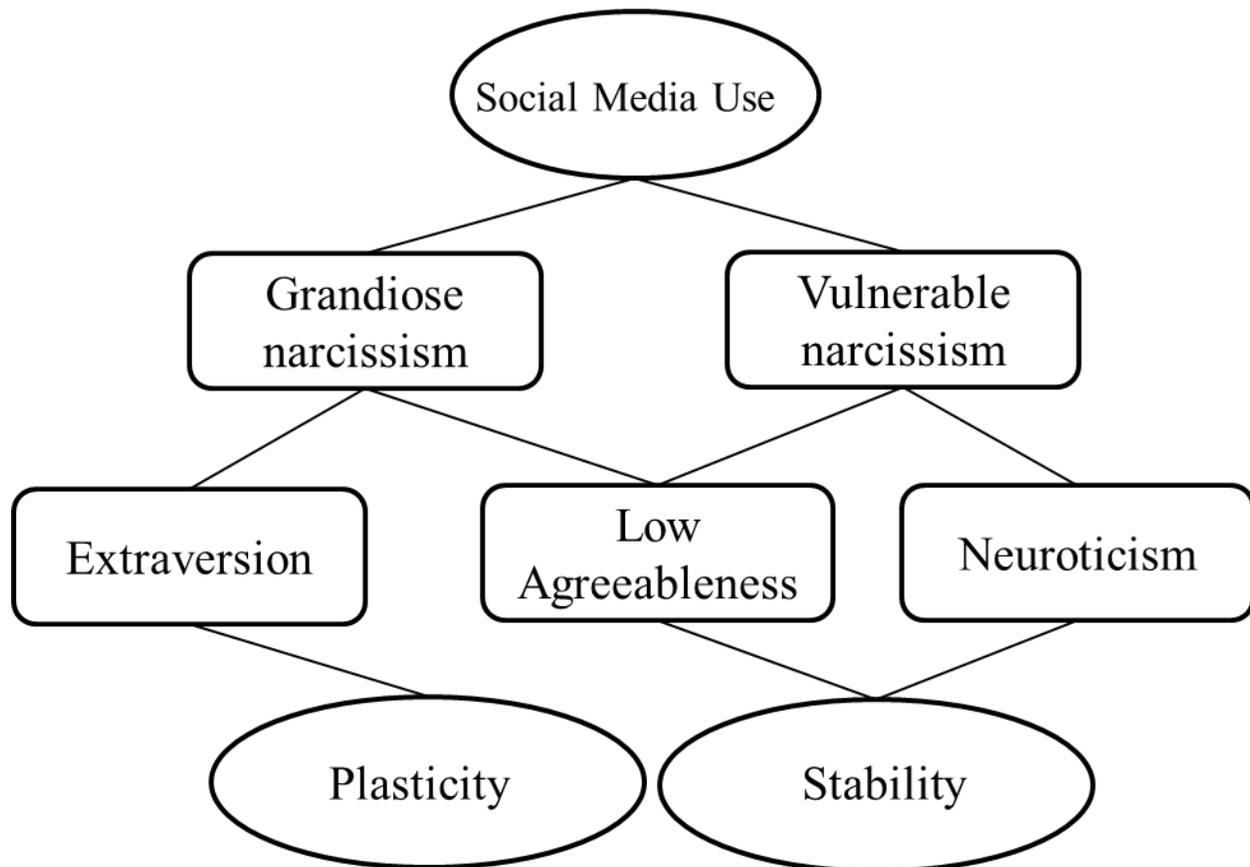


Figure 3. Sample integrative trait model of narcissism and social media use. The Big Five traits are grounded in the meta-traits of plasticity and stability. Image available online at <https://osf.io/aycx9/>

A similar approach that focuses on social behavior in the interpersonal circumplex, with axes of agency/communion, power/love, extraversion/agreeableness, dominance/affiliation, etc. depending on the version used. This approach has been useful for modeling narcissism (e.g., Miller, Price, Gentile, Lynam, & Campbell, 2012).

A final approach is to ground narcissism and social media in basic approach and

avoidance motivations (Elliot & Thrash, 2002). There are several approaches to conceptualizing these basic drives, with behavioral activation (e.g., pleasure and reward seeking) and behavioral inhibition (e.g., pain or risk avoidance) being the most established in the literature as the BIS/BAS model (Foster & Trimm, 2008).

### *Narcissistic Lens Model*

A narcissistic lens model approach for understanding narcissism and social media focuses on the specific aspects of social media that are predicted by narcissism and the cues observers use to detect narcissism from social media. The metaphor of a lens for conceptualizing the importance of cues or traces (e.g., social media content) mediating the link between an individual's traits (e.g., narcissism) and observer's perceptions of narcissism originated in the work of Brunswik (1952), so these are sometimes referred to as Brunswikian lens models (see Figure 4). Importantly, the cues used can be false or invalid which raises the possibility for training. So, for example, narcissism might predict several aspects of social media use, such as self-promotional images or number of connections. Observers might detect narcissism modestly from the social media, but use a combination of valid cues (e.g., self-promoting photo) and invalid cues (e.g., the use of "I" in the text).

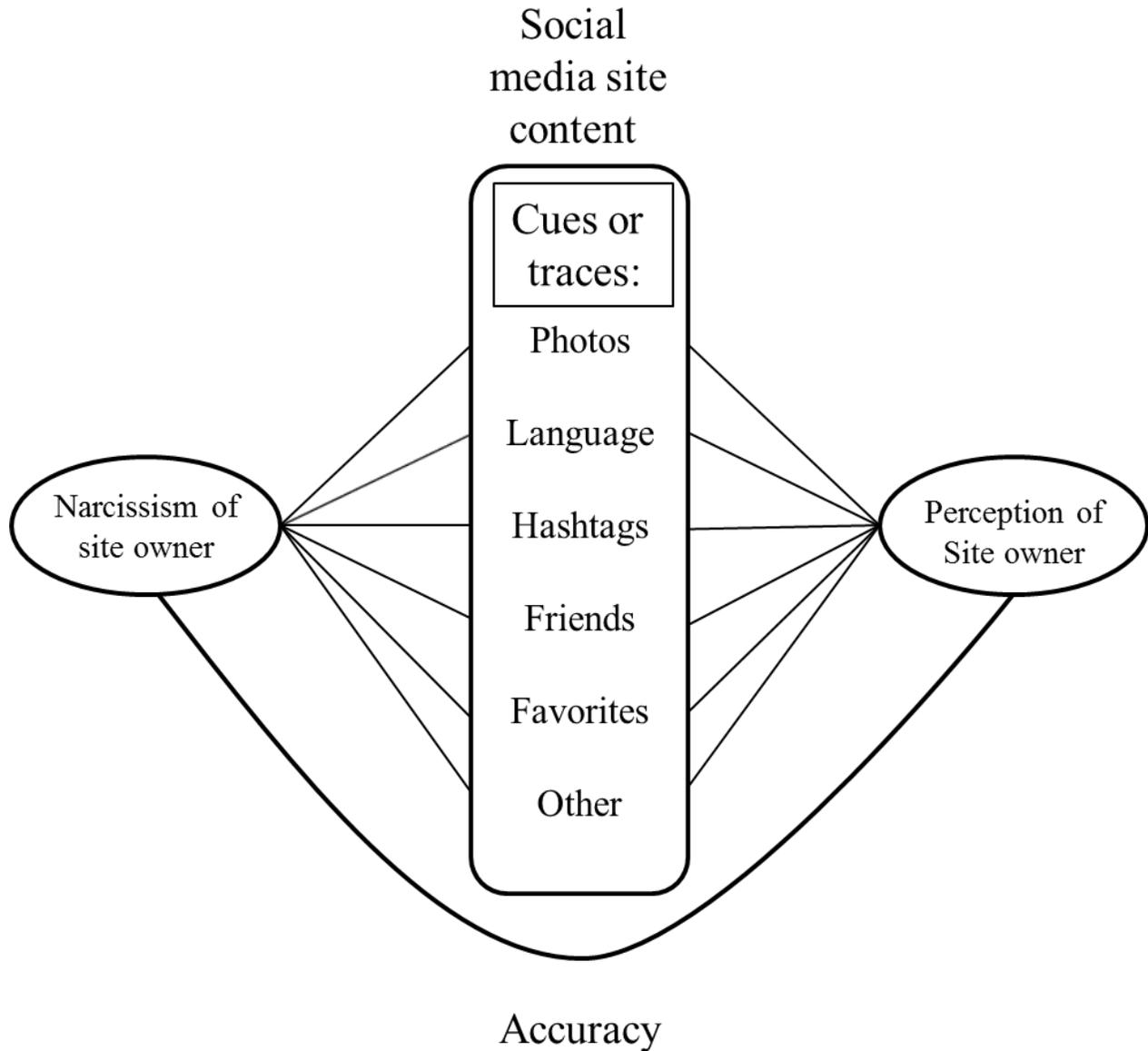


Figure 4. Sample Lens Model: Accuracy refers to the correlation between site owner's narcissism and perception of narcissism based on the site. Cues or traces are aspects of the site that may be predicted by owner's narcissism and/or predict the perception of owner's narcissism. Image available online at <https://osf.io/aycx9/>

Researchers have used this lens model approach in many instances as noted earlier, including studying the perception of personality from bedrooms (Gosling et al., 2002), appearance (Vazire et al., 2008), and Facebook (Buffardi & Campbell, 2008). The challenge in

this work is extracting the specific cues from the social media site or other observable data (e.g., thin slices). These data often takes both objective data (e.g., counting friends on a Facebook page) and less objective data (e.g., trained observer judgments of certain aspects of the page such as the profile picture when isolated from other page content). But the results can yield a great deal of insight (e.g., Back, Schmukle, & Egloff, 2010; McCain et al., 2016).

### ***Social Media as Self-regulation Model***

The Social Media as Self-regulation Model (SMSM) focuses on the use of social media for self-regulation. Self-regulation is typically conceptualized as narcissistic self-enhancement or self-protection. Self-enhancement is arguably grounded in approach motivation and self-protection in avoidance motivation (Spencer, Foster, & Bedwell, 2017). Self-enhancement is about actively seeking opportunities to enhance social status or self-esteem and actively confronting those who try to lower the narcissist's status or esteem; self-protection is about avoiding potential threats to the self-concept or self-esteem (i.e., ego threats). Self-enhancement is associated with grandiose narcissism and self-protection with vulnerable narcissism. But these ideas have not been fully explored or agreed upon in the field (Wallace, 2011).

The SMSM predicts that narcissistic self-enhancement (and self-protection) should be part of a dynamic and recursive process. So, for example, a grandiose narcissist posts an attractive selfie on Instagram (Narcissism-> social media), this selfie is liked and positively commented on by the narcissist's followers which, in turn, further bolsters the narcissist's positive self-views (see Figure 5).

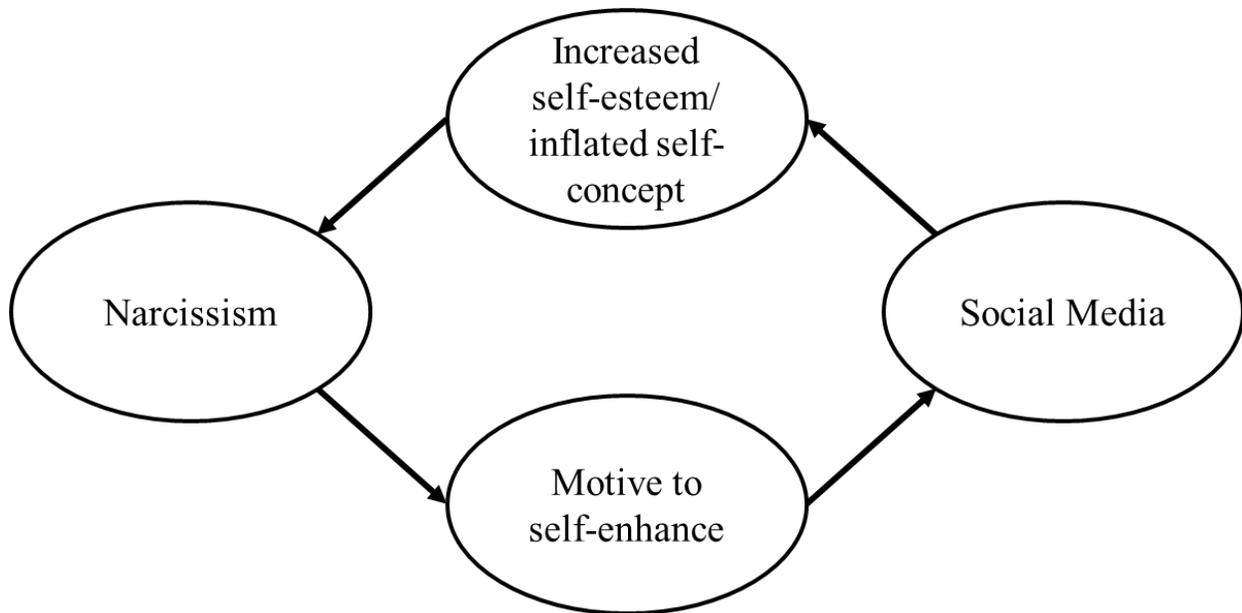


Figure 5. Sample Social Media as Self-regulation model: this is a simple version showing the role of self-enhancement motive in narcissists' social media use, and the feedback loop whereby self-concept is inflated and narcissism is maintained. Image available online at <https://osf.io/aycx9/>

This recursive process makes sense theoretically, but the dynamic nature of this process has rarely been studied in full (see Halpern, Valenzuela, & Katz, 2016 for a good example of how this can be done). The field is filled with correlational work showing the link between narcissism and social media. There is little longitudinal work showing that narcissism predicts social media, nor that social media use reinforces or bolsters narcissism. Furthermore, there have been few efforts to test causal claims via experimental methods by, for example, manipulating narcissism or self-esteem threat and measuring social media use, or manipulating social media responses (e.g., follower comments or likes) to see if these causally impact narcissism (cf. Gentile, Twenge, Freeman, & Campbell, 2012). As a result, the SMSM is currently a primarily heuristic model. It makes intuitive sense, and pieces of it have been tested, but the complete dynamic and recursive aspects of the model need much more research.

### ***Social Network Models***

Another theoretical approach to understanding narcissism in social media is to examine narcissism within egocentric (Lamkin, Clifton, Campbell, & Miller, 2014) or sociocentric (Clifton, Turkheimer, & Oltmanns, 2009) networks. The existing work suggests that in real life social networks grandiose narcissism is associated with network centrality. This is consistent with the reliable finding that grandiose narcissists have more friends or followers on social media. What is missing, however, is a good model on narcissism in computer-mediated social networks. These data would give a good deal of insight into how narcissism is functioning in the space of the social network – are narcissistic individuals central? Is that centrality driven by narcissists’ actively building these networks, or by others connecting with the narcissists? How active are these networks? And how stable is this centrality?

What is most exciting is the prospect of watching these networks change over time (e.g., Czarna, Dufner, & Clifton, 2014). On the one hand, grandiose narcissists could play a crucial role in building social networks. Social media without narcissists would be blander and narcissistic self-promotion might be a driver of social network use and build out (Campbell, 2017). On the other hand, narcissistic self-promotion may grow dull or off-putting over time, and narcissists’ social networks might show high turn-over in membership or high rates of “muting” (i.e., having the narcissists’ posts removed from friends’ information feeds without the narcissists knowing). Social network models of narcissism and social media are, in our opinion, one of the most exciting areas for empirical and theoretical growth.

### ***Cultural models: Narcissism Epidemic and Great Fantasy Migration***

One fascinating set of questions regards the interplay of narcissism and social media on a cultural level. An early approach to this question argued that the cultural rise of social media would be associated with a rise in grandiose narcissism culturally. The argument was that social

media was a platform that (a) provided the opportunity for presenting a curated and enhanced view of the self, and (b) would reward the creation of broad but shallow social networks. This narcissism epidemic model (Twenge & Campbell, 2009) suggested that social media sites were a social niche well-suited to narcissism because of both the opportunity to self-enhance and the shallow rather than deep relationships involved. Consistent with the narcissism epidemic model, social media and narcissism expanded together until the economic collapse, but have since seemed to separate as the reality of high underemployment and debt have mitigated many narcissistic fantasies for young people (Bianchi, 2014; Leckelt et al., 2016).

Given the stark realities of the economic collapse of the Great Recession, we have been working on another model, the *Great Fantasy Migration hypothesis* (GFM). GFM presents the following argument: High narcissism plus a belief in a collapsing economic system will push narcissistic individuals into virtual or fantasy realms where their narcissism can be maintained. Or, simply, an inflated self plus a deflated reality predicts fantasy migration. Someone high in trait narcissism and failing economically can still retain an inflated self-view by engaging in an aspect of geek culture or social media where the checks of the reality principle are put on hold. One can be unemployed in the “real world” but still be a 15<sup>th</sup> degree Druid Warrior in a fantasy world, or a command a large audience of followers on Facebook and Twitter.

Preliminary data on this model are somewhat encouraging. Narcissism, both grandiose and vulnerable, does reliably predict engagement in geek culture (McCain, Gentile, & Campbell, 2015). And some data show that the highest rates of engagement in social media and geek culture are reported by those both high in grandiose narcissism and high in beliefs that the real world is providing fewer opportunities (Weiler, 2017). Much more work on this model is needed, however.

## **Limitations and Future Directions**

In closing, we want to bring up a few issues, ideas and challenges that might help researchers or prospective researchers in the study of narcissism and social media.

First, social media changes and evolves faster than science. These changes occur throughout the social media space. Social media platforms grow and decline in popularity. One of the more interesting social media platforms out there was Yik Yak, which was an anonymous geographically bound posting platform like Twitter, but where everyone could see every post. So, Yik Yak at the University of Georgia would show the stream of posts of everyone in and around campus. It was like the stream of consciousness of the group – fascinating. Then, the anonymity was reduced by the company, and it plummeted in popularity (Statt, 2017). Given the rise and fall of both the popularity and nature of this platform, it was very difficult to do any research on it.

Second, the demographics of platforms change. Facebook was developed for college students (its name comes from the book with faces and names of students used at some prep schools and universities). Now, however, Facebook is popular with older individuals, and college students and adolescents have migrated to sites like SnapChat and Instagram. So, there is a strong case to be made for replicating research on sites like Facebook that have changed in user base over time.

Third, our research methods are in many ways archaic and uninformed. The companies themselves have massive amounts of data and could easily obtain large numbers of participants with narcissism scores to study. This type of data would be a gold mine for science, but there are no easy mechanisms for getting it. In fact, after blowback over a study done on Facebook where they experimentally manipulated members' news feeds, Facebook has appeared less enthusiastic

about this kind of public scientific work (Kahn, Vayena, & Mastroianni, 2014; Kramer, Guillory, & Hancock, 2014). It is understandable, but the loss for science is enormous. Ideally, there would be a public-private partnership that would allow public science to be done on many of these platforms in a transparent and ethical way. This is happening with 23 and Me, a site for genetic testing, so it is certainly possible (Eriksson et al., 2010).

Fourth and related, our research approaches need to expand to include big data, machine learning, and social network analysis. There are some fascinating examples of this already (Garcia & Sikström, 2014; Park et al., 2015; Schwartz et al., 2013), but so much more could be done. But we also need more basic methods from social personality psychology, such as longitudinal and experience sampling measures, experimental methods (e.g., controlling social media use; Sheldon, Abad, & Hinsch, 2011), etc.

Finally, we need to be careful about our measurement of narcissism. Ideally, researchers would use multiple measures of both grandiose and vulnerable narcissism in their studies – and even include peer-reports in addition to self-reports. For example, to capture grandiose narcissism a researcher could use the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), Narcissistic Grandiosity Scale (NGS; Rosenthal, Hooley, & Steshenko, 2007), NARQ Admiration (Back et al., 2013), and/or aspects of the Five Factor Narcissism Inventory (FFNI; Glover et al., 2012). For vulnerable narcissism, the Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 2013), the Pathological Narcissism Inventory (PNI; Pincus et al., 2009) vulnerability subscales or the same from the FFNI can be used. Researchers can even use these scales as multiples indicators of grandiose and vulnerable narcissism and create latent factors to capture the traits. Or, if researchers are interested in more targeted assessment of components of narcissism, they could use scales designed to capture them, for example, entitlement (i.e., the

Psychological Entitlement Scale, or PES; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) or exploitation (the ES; Brunell et al., 2013). Obviously, there are multiple constraints on these measurement decisions, but we recommend being as thoughtful as possible and use multiple measures when possible (e.g., Miller et al., 2014; Miller, Price, & Campbell, 2012).

### **Final Thoughts**

Social media have changed the world in massive and still poorly understood ways. Narcissism has played an important role in this process at the individual, network and cultural level. We are almost a decade into trying to understand this process and now have some replicable findings for grandiose narcissism, some useful theoretical models and approaches and some hints about ways to move forward with this research program. It will be remarkable to see how this space looks in another decade.

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