Self-Affirmation Underlies Facebook Use

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Abstract

Social network sites, such as Facebook, have acquired an unprecedented following, yet it is unknown what makes them so attractive to users. Here we propose that these sites' popularity can be understood through the fulfillment of ego needs. We use self-affirmation theory to hypothesize why and when people spend time on their online profiles. Study 1 shows that Facebook profiles are self-affirming in the sense of satisfying users' need for self-worth and self-integrity. Study 2 shows that Facebook users gravitate toward their online profiles after receiving a blow to the ego, in an unconscious effort to repair their perceptions of self-worth. In addition to illuminating some of the psychological factors that underlie Facebook use, the results provide an important extension to self-affirmation theory by clarifying how self-affirmation operates in people's everyday environments.

Keywords

self-affirmation, emotional well-being, social network sites, Facebook

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Social network sites (SNSs) have taken the world by storm. Facebook, for instance, counts more than one billion active users who spend nearly an hour online every day (Facebook Statistics, 2012). Even older adults are tuning in, with almost half of Americans above the age of 50 currently registered as SNS users—a 100% increase from the previous year (Pew Research Center, 2010). A fundamental question, then, is what makes these sites so universally appealing. Why do people gravitate toward them in such large numbers and with such dedication?

The media and public opinion are ripe with speculations on this issue, most of them pessimistic: SNSs are viewed as a convenient tool for procrastinating, gossiping, relieving boredom, or expressing narcissistic drives (see also Buffardi & Campbell, 2008). Academic research has begun examining subscribers' self-reported motivations for SNS use and revealed that relational needs, such as keeping tabs on one's social network and maintaining relationships, are frequently cited (see Wilson, Gosling, & Graham, 2012, for a review). Yet more basic, and less consciously available, ego needs may also provide a compelling account of why and when people gravitate toward these sites.

In the present article we argue that self-affirmation theory (Steele, 1988) can serve as a cohesive theoretical narrative for understanding important aspects of SNSs' appeal. We propose that SNSs that allow users to (a) craft self-presentations that reveal core aspects of their self-concept, such as social affiliations and treasured characteristics, and (b) highlight social connections with friends and family, satisfy fundamental ego needs regarding desired self-images. In turn, these ego needs motivate SNS use. We focus our analyses on Facebook, currently the world's most popular SNS and one that encapsulates the quintessential features of SNSs (boyd & Ellison, 2007).

Examining the self-affirming qualities of Facebook also offers a unique opportunity to extend self-affirmation theory. This theory has been tested extensively in laboratory settings, using contrived self-affirmation activities, such as ranking one's values and writing essays assigned by an experimenter. Such methods of self-affirmation are unlikely to be adopted spontaneously in people's own environments and everyday lives. How do individuals self-affirm on their own? As Sherman and Cohen (2006) speculated, after suffering a blow to the ego,

> perhaps the individual returns home and browses the Internet, checking for information on a coming election (affirming their political identity), or examines the scores from last night's game (affirming a valued social identity). In such situations, people may think that they are procrastinating, but this procrastination

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> may serve an important integrity-reparative function. (p. 64)

Here we investigate the possibility that Facebook profiles constitute such an ecologically valid outlet of self-affirmation, and in so doing we address theoretical and practical facets of self-affirmation theory.

Facebook and Ego Needs

The primary premise of self-affirmation theory is that people have a fundamental need to see themselves as valuable, worthy, and good. This need for a positive self-image is an important motivator of behavior. People routinely dismiss, distort, or avoid information that threatens their self-worth. Conversely, they value, cultivate, and gravitate toward information that reinforces it.

One strategy for satisfying the fundamental need for self-worth is self-affirmation, defined as the process of bringing to awareness essential aspects of the self-concept, such as values, meaningful relationships, and cherished personal characteristics (Sherman & Cohen, 2006; Steele, 1988). According to self-affirmation theory, people are generally motivated to seek such information in the environment, and this need becomes particularly salient after an ego threat, as people unconsciously attempt to repair their sense of self-worth. Another key proposition of self-affirmation theory is that after attending to self-affirming information, individuals' tendency to engage in defensive processes, such as dismissal or distortion, is reduced or eliminated. This is the case because self-affirmation has already secured individuals' sense of self-worth and self-integrity, rendering these other defense mechanisms unnecessary. Consequently, self-affirmation has the salutary effect of making people more open-minded and secure toward threatening events (Steele, 1988).

How does self-affirmation theory apply to Facebook? Facebook operates by connecting users with their friends, family, and acquaintances. Users create detailed profiles describing their activities, interests, and values, and then articulate "friendships" with other users in the system. Communication between "friends" is publicly posted and archived onto the profile (boyd & Ellison, 2007). Given this focus on representing the key aspects of self and, most importantly, embedding the self in a network of close personal relationships, it is plausible that Facebook profiles may constitute a venue for self-affirmation and that users gravitate toward them in an unconscious effort to elevate their perceptions of self-worth and self-integrity.

Do Facebook profiles meet the criteria for self-affirmation? First, to be self-affirming, profiles must represent the domains of self on which self-worth is contingent (Crocker & Wolfe, 2001). Indeed, Facebook self-presentation involves displaying a multitude of defining aspects of self: social roles (e.g., friend, student), affiliation to networks important to the self-concept (e.g., educational institutions), central attitudes and preferences (e.g., politics, religion, favorite music), and, most importantly, social connectedness with friends and family. In fact, the latter has been identified as the most potent source of self-affirmation (Sherman & Cohen, 2006). It is important to note that social norms around Facebook profile self-presentation dictate high levels of disclosure about these domains (Tufekci, 2008; Young & Quan-Haase, 2009). In one study, 82% of Facebook users revealed highly personal information, such as birth date, political and sexual orientation, and the name of their relationship partner (Gross & Acquisti, 2005). In another study, large numbers of users reported a belief that the disclosure of such private information is essential in making SNSs useful (Tufekci, 2008).

Second, self-affirming profiles must offer a positive and desirable self-presentation. On Facebook, this should be the case for several reasons. The presence of a large audience who can scrutinize the profile should strongly motivate users to put their best foot forward (Leary & Kowalski, 1990). Moreover, technological affordances such as the ability to select and edit statements (i.e., editability), and take unlimited time to compose them (i.e., asynchronicity), enable users to accomplish this goal (Walther, 2007). Indeed, research suggests that these technological affordances allow online communicators to craft optimized, highly desirable self-presentations (Toma, Hancock, & Ellison, 2008). While self-generated profile statements should be positive, those generated by friends should be so as well. Editability enables users to delete any objectionable postings made by friends, and even to terminate friendship connections altogether if they are no longer desired. Consistent with this reasoning, research shows that messages from friends that are posted on the Facebook profile are typically warm, supportive, and validating (Sas, Dix, Hart, & Su, 2009).

Finally, self-affirming profiles must be accurate. Lying about one's characteristics can only highlight one's inadequacy in meeting internal standards for self-worth, and hence the deceptive information should be useless for self-affirmation. Facebook profiles are indeed governed by constraints that minimize deception. One such constraint is the presence of "friends" who know the self-presenter both online and offline, and therefore may be able to verify the veracity of profile statements (Donath & boyd, 2004; Walther & Parks, 2002). People are significantly less likely to lie when there is a high likelihood of getting caught. Research on online dating confirms that online self-presenters are more honest if their friends and acquaintances have access to their profile (Toma et al., 2008). A related constraint to deception is the fact that some of the profile information is contributed by friends. This information should be more credible because it is less amenable to the self-presenter's control. Importantly, friends' postings are a testament of friendship that, because of its public nature, should constitute a reliable indicator of social connectivity (Donath & boyd, 2004). Consistent with these claims, recent research has shown that Facebook profiles are sufficiently accurate to enable reliable personality judgments (Back et al., 2010).

In sum, this analysis suggests that Facebook profiles have the potential to confer upon users self-affirmational benefits because they encapsulate a flattering, socially connected, meaningful, and accurate self-portrait.

Advancing Self-Affirmation Theory

As mentioned earlier, SNSs provide new avenues for representing the self and the domains of self that are critical to self-worth (e.g., relationships, values). Their proliferation provides an opportunity to test self-affirmation theory in a new setting and, in so doing, to extend it on several fronts. First, thanks to Facebook's ubiquity and ease of access, we are able to investigate the operations of self-affirmation in people's own environments and everyday lives, and thus provide an important extension to extant literature that has mostly used contrived self-affirmation exercises (McQueen & Klein, 2006). Second, existing research on self-affirmation has overwhelmingly investigated the effects of self-affirmation, with significantly less emphasis on its causes (Harris & Epton, 2010; Sherman & Cohen, 2006). What motivates people to self-affirm on their own, without being prompted to do so by an experimenter? In our efforts to explicate users' attraction toward Facebook, we provide empirical evidence regarding people's spontaneous use of self-affirming outlets.

Overview of Studies

Our previous analysis indicates that Facebook profiles meet the criteria for self-affirmation. We empirically test the self-affirming value of Facebook in two studies. Study 1 examines whether Facebook profiles are self-affirming in the sense of satisfying users' fundamental need for self-worth and self-integrity. Study 2 asks whether users capitalize on Facebook's self-affirmational qualities by seeking it out for the purpose of ego repair.

Study 1

To establish whether a certain activity is self-affirming, the self-affirmation literature uses a defensiveness-reducing paradigm (McQueen & Klein, 2006; Sherman & Cohen, 2006). This paradigm is based on the theoretical claim that, by satisfying the need for self-worth and self-integrity, self-affirmation diminishes the defensive responses that are naturally elicited by ego threats.

Several steps are involved in implementing this paradigm. Participants are first subjected to an ego threat. Then they are prompted to either engage in a self-affirming activity or not. Finally, their defensive responses are measured. If the activity is self-affirming, a decrease in defensive responses will be observed. This indirect approach, whereby self-worth and self-integrity are not explicitly measured but are assumed to increase if reduced defensiveness is observed, is the gold standard for determining whether an activity is self-affirming (McQueen & Klein, 2006; Sherman & Cohen, 2006; Sherman & Hartson, 2011).

Here, we use this procedure to establish whether browsing one's own Facebook profile is a self-affirming activity. In addition, we directly compare the effect of Facebook profile exposure with that of a well-established self-affirming activity, to assess the relative strength of the self-affirming qualities of Facebook.

Method

Participants. Participants were undergraduates at a Northeastern university who received course extra-credit ($N = 98$, 68% women; M age = 19.81). Ten participants were excluded because they were suspicious ($n = 5$) or because they were not Facebook users ($n = 5$), reducing the effective sample size to $N = 88$.

Self-Affirmation Manipulation. A 2 (self-affirmation condition: affirmed vs. non-affirmed) × 2 (self-affirmation type: Facebook vs. values essay) experimental design was used.

In both Facebook conditions, participants were told they would take part in a "website evaluation study," which involved spending 5 min on a website and then answering questions about it. In the Facebook self-affirmation condition ($n = 21$), this website was participants' *own Facebook profile*. Participants were told they could view any element of their profile (e.g., photographs, wall, list of friends), but could not navigate to someone else's profile. At the end of the study, participants in this condition were asked to temporarily "friend" the experimenter on Facebook, so we could have access to their profile information. All participants agreed.

In the Facebook control condition ($n = 24$), participants were asked to examine *a stranger's Facebook profile*. This stranger was in fact the previous participant in the Facebook self-affirmation condition. Thus, participants were yoked such that each participant in the control condition viewed the profile of a participant in the Facebook self-affirmation condition. Care was taken that participants in the Facebook control condition not be acquainted with the people whose profile they were viewing. The yoking procedure ensured that, as a group, participants in these two conditions examined the exact same profiles.

In the values essay self-affirmation condition ($n = 22$), participants ranked six values in order of personal importance (business, art-music-theater, social life–relationships, science–pursuit of knowledge, religion–morality, government–politics) and then wrote for 5 min about why their highest ranked value was important to them. In the values essay control condition ($n = 21$), participants wrote about why their lowest ranked value was important to the average college student. This value-affirmation procedure is the single most widely used self-affirmation manipulation (McQueen & Klein, 2006).

Procedure. Because self-affirmation occurs nonconsciously, participants were given a cover story about the purpose of the study (adapted from Swann, De La Ronde, & Hixon, 1994). Participants were asked to pilot the viability of a distance-learning Public Speaking course. To this end, they would prepare a short (3-5 min) speech on the legality of abortion, a common topic in such classes, and deliver it through an ostensibly live camera to an evaluator, who would provide written feedback on the speech. Participants' main task would then be to rate the fairness and usefulness of the feedback: Was it accurate? Was the evaluator able to form a good impression of the participants' public speaking abilities? Participants were observed through a one-way mirror to ensure that they delivered the speech.

While waiting for the evaluator to write the speech feedback, participants were invited to complete an additional study to double their extra-credit points. All participants agreed. This ostensibly unrelated study was in fact the self-affirmation manipulation, and it was run by a different experimenter to enhance credibility.

The first experimenter then returned with a sealed envelope containing the speech feedback. All participants were given the same generic negative feedback. A manipulation check confirmed that the feedback was perceived as negative, regardless of whether participants were affirmed ($M = 3.12$, $SD = 1.55$, on a scale from 1 = *not at all positive* to 9 = *a great deal positive*) or not ($M = 2.78$, $SD = 1.46$). Participants then filled out a "confidential" questionnaire about the validity of the feedback. This allowed them to express defensive responses to the ego threat. The self-affirmation exercise was thus completed *prior* to the ego threat, consistent with research demonstrating that timing is critical in effectively reducing defensiveness (Critcher, Dunning, & Armor, 2010).

Debriefing was done through a funneled procedure, which identified suspicious participants.

Measures. The dependent measure, completed at the end of the study, was participants' acceptance of the negative feedback received on their speech (adapted from Swann et al., 1994). Participants rated the feedback on a scale from 1 (*not at all*) to 9 (*a lot*) across five dimensions: (a) perceived accuracy (5 items), (b) evaluator competence (3 items), (c) task diagnosticity (2 items), (d) attribution of performance to self or external circumstances (3 items), and (e) liking of the evaluator (2 items). Because these measures were highly correlated, they were averaged into an acceptance of feedback index ($\alpha = .88$).

Measures of trait self-esteem (Rosenberg, 1965) and affect (Crocker, Niiya, & Mischkowski, 2008) were also collected but are not reported in this study.

Results and Discussion

An analysis of variance was set up with the self-affirmation manipulation (affirmed or non-affirmed) and self-affirmation venue (Facebook or values essay) as the between-subjects factors. The model fit the data well, $F(3, 84) = 8.43$, $p < .001$, partial $\eta^2 = 0.23$, and revealed the expected main effect of self-affirmation, $F(1, 84) = 24.51$, $p < .001$, partial $\eta^2 = 0.23$, whereby participants who were self-affirmed, regardless of the venue ($M = 5.72$, $SD = 1.21$) were more accepting of the feedback than non-affirmed participants ($M = 4.31$, $SD = 1.42$). As predicted, the effect of self-affirmation venue was not significant, $F(1, 84) = 0.41$, $p = .52$, suggesting that participants who spent time on Facebook ($M = 5.05$, $SD = 1.57$) reacted to the feedback in the same way as those completing the values essay self-affirmation ($M = 4.94$, $SD = 1.41$). Finally, there was no interaction between the self-affirmation manipulation and the self-affirmation venue, $F(1, 84) = 0.45$, $p = .51$, which indicates that self-affirmation operated similarly on both venues (Facebook and values essay; see Figure 1).

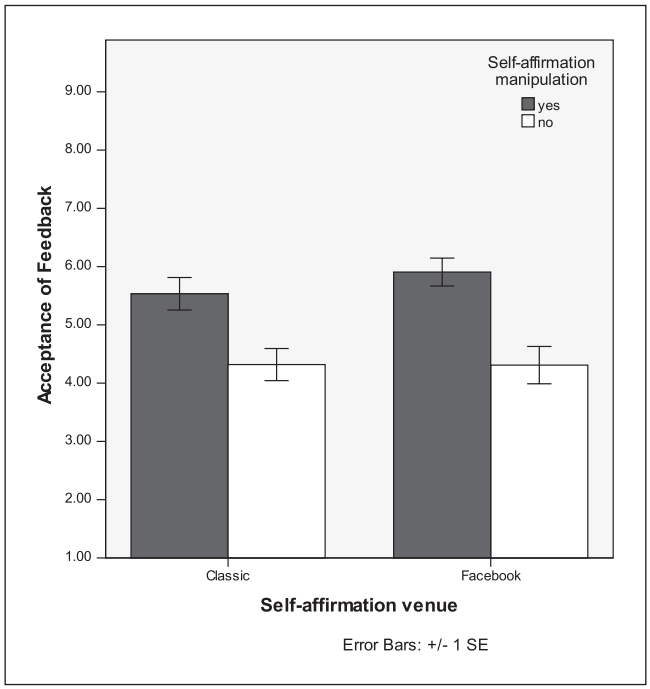

Figure 1. Acceptance of feedback by condition

Simple effects tests confirmed that (a) participants who examined their own Facebook profiles ($M = 5.91$, $SD = 1.10$) were more accepting of the feedback than participants who examined a stranger's profile ($M = 4.31$, $SD = 1.57$), $t(43) = 3.90$, $p < .001$, Cohen's $d = 1.19$, and (b) participants who were affirmed on Facebook ($M = 5.91$, $SD = 1.10$) were equally accepting of the feedback as those affirmed through the values essay ($M = 5.53$, $SD = 1.31$), $t(41) = 1.01$, $p = .32$. Together, these results provide evidence that Facebook profile exposure is a self-affirming activity and that the self-affirmation earned from Facebook does not differ from that earned from the classic values essay manipulation.

In sum, Study 1 found that participants who had examined their Facebook profiles for 5 min were more likely to assume responsibility and less likely to blame others when receiving negative feedback on an academic task. This nondefensive attitude toward an ego threat is the hallmark of self-affirmation (Steele, 1988) and provides compelling evidence that Facebook profile exposure increases self-worth and self-integrity. Moreover, exposure to one's own Facebook profile had the same effect as engaging in a well-validated self-affirming activity. These findings indicate that spending time on Facebook may fulfill important ego needs. By showcasing a version of self that is attractive, successful, and embedded in a network of meaningful relationships, Facebook enhances users' perceptions of self-worth.

Study 2

Study 1 provides evidence that Facebook profiles constitute a source of self-affirmation, in the sense of endowing users with a sense of overall self-integrity and well-being. But do users spontaneously seek out Facebook for the purpose of buttressing self-worth, without being instructed to do so by an experimenter? Do they capitalize on the benefits provided by their Facebook profile in time of psychological need? Study 2 addresses this question.

Self-affirmation theory posits that perceived ego threats activate an unconscious motive to restore the adequacy and integrity of the self. This motive leads people to search for self-affirming information in the environment (Steele, 1988). Although central to self-affirmation theory, this proposition has received little empirical attention (for exceptions, see Steele, 1975; Stone, Wiegand, Cooper, & Aronson, 1997; Tesser, Crepaz, Collins, Cornell, & Beach, 2000). We now test it in the context of affirming the self via Facebook, a ubiquitous social media outlet. In doing so, we attempt to clarify not only whether Facebook profiles *can* serve as a venue for self-affirmation, but also whether they *do* serve as one.

Method

Participants. Undergraduate students received course extra-credit for their participation ($N = 86$; 66% women; M age = 19.79, $SD = 1.04$). Ten participants were excluded because they were not Facebook users. Fifteen others were excluded because of suspiciousness. Excluded participants were equally dispersed across conditions.

Experimental Design. The cover story, with participants required to engage in a public speaking task, was identical to that used in Study 1. However, participants were randomly assigned to receive negative ($n = 47$) or neutral feedback ($n = 39$) on their speaking performance. In addition, after receiving the feedback, they were *not* instructed to self-affirm. Instead, they were given a choice to participate in one of five "unrelated" studies ostensibly going on in the lab, in exchange for an additional extra-credit point.

One of these studies was browsing their own Facebook profile. The four decoy studies involved an online activity designed to be as similar as possible to Facebook profile browsing, but not self-affirming. Pilot testing revealed four activities that did not differ from Facebook profile browsing in terms of level of engagement, excitement, or difficulty: (a) watching YouTube videos, (b) listening to online music, (c) reading online news, and (d) playing online videogames. Participants did not in fact complete any of these studies.

Funneled debriefing was used to identify suspicious participants.

Measures

Dependent measures. Participants ranked the five online activities in the order of personal preference (1—I would MOST prefer to participate in this study; 5—I would LEAST prefer to participate in this study). Subsequently, they wrote a brief paragraph about *why* they chose their most preferred activity, to assess any conscious awareness of self-affirmational benefits.

Covariates. Several measures that may affect activity choice were collected. Participants' age and gender were assessed in the beginning of the study. Then, participants rated each activity across the following dimensions: (a) perceived effort to complete, (b) level of familiarity, and (c) how interesting, engaging, and positive each was perceived. Finally, participants reported whether they were Facebook users and, if so, how satisfied they were with their profile self-presentation, and how positive, accurate, and comprehensive they considered their self-presentation to be.

Results and Discussion

The rank of the activities was recoded to reflect whether participants' first preference was Facebook or not (i.e., any one of the four decoy activities). After receiving neutral feedback, participants were as likely to choose Facebook profile browsing as any of the other activities. In this condition, 30.8% of the participants chose Facebook, a rate not significantly different from chance, $z(39) = 1.69$, $p = .10$. After receiving negative feedback, however, almost twice as many participants (59.6%) chose Facebook, a rate significantly higher than chance, $z(47) = 6.79$, $p < .001$. A chi-square analysis confirmed that participants were more likely to choose Facebook as their first preference when their ego had been threatened (negative feedback condition) than when it had not (neutral feedback condition), $\chi^2(1, N = 86) = 7.11$, $p = .01$, Cohen's $w = 0.27$ (see Table 1).

A fixed-effects linear model was used to test whether this pattern held when controlling for covariates. The model contained each activity's rank as the dependent variable, condition (negative vs. neutral feedback) as fixed-effects predictor, and all the proposed covariates. As before, when

Table 1. Number and Percentage of Participants Who Chose Facebook Versus Any of the Four Non-affirming Websites in Each Condition

	Facebook		Other activities	
	Total	%	Total	%
Neutral feedback condition	12	30.8	27	69.2
Negative feedback condition	28	59.6	19	40.4

participants' egos were not threatened, they did not exhibit a preference for Facebook. The rank of Facebook (*rank* = 2.80) was not different from the average rank of the other activities (*rank* = 3.09) in the neutral feedback condition, *t.s.*(400) = 0.29, $p = .29$. However, when participants' egos were threatened, they displayed a preference for spending time on Facebook: Facebook's rank was significantly lower (*rank* = 2.42) than the average rank of the other activities (*rank* = 3.09), *t.s.*(400) = 0.66, $p = .008$.

None of the covariates affected the rank of the online activities, with the exception of how engaging the activities were perceived ($\beta = -0.17$, $p = .003$). Participants in the neutral feedback condition were more likely to select engaging activities, consistent with the claim that people select engaging media to relieve boredom (Zillmann, 1988).

Together, the chi-square and linear model analyses show that participants tended to gravitate toward their Facebook profiles, a self-affirming venue, when their egos were threatened, but not when their egos were intact, regardless of gender, perceptions of the online activities, or the perceived quality of their own Facebook profile. In addition, an analysis of the open-ended responses showed that only five participants (5.81%) seemed consciously aware of self-affirming properties of their chosen activity (e.g., "I chose Facebook because I love me!").

In sum, Study 2 provides evidence that Facebook users gravitate toward their online profiles after experiencing psychological distress, in an apparently unconscious effort to improve perceptions of self-worth. These data illuminate an important, and previously unexamined, motive for Facebook use: restoring perceptions of self-worth. Study 2 provides support for the key proposition of self-affirmation theory that people are intrinsically motivated to maintain elevated perceptions of self-worth and self-integrity and that they seem to do so by unconsciously seeking self-affirming activities in the environment.

General Discussion

What makes Facebook so attractive and compelling to millions of users? The present studies reveal that one reason may be its self-affirming qualities. The findings reported here provide evidence that self-affirmation theory (Steele, 1988), is a useful framework for understanding why (i.e., to increase perceptions of self-worth) and when (i.e., following a threat to one's desired self-image) people tend to spend time on Facebook. The results provide several theoretical advancements to self-affirmation theory and also contribute new insights on the causes and effects of SNS use. Below, both types of contributions are discussed in detail.

Self-Affirmation Theory Revisited

A long research tradition in psychology has examined the uniquely human motivation to pursue self-worth (Tesser, 1988). Chief in this line of research is self-affirmation theory (Steele, 1988), that has launched over 20 years of academic investigation on the importance and benefits associated with maintaining self-worth and self-integrity. By examining whether SNSs, a recent Internet phenomenon, play a role in self-worth maintenance processes, the present research addressed several lacunae in the extensive self-affirmation literature, as detailed below.

Operationalizing Self-Affirmation. Theoretically, self-affirmation is the process of bringing to awareness defining aspects of the self-concept, such as values, goals, and treasured personal attributes. This broad definition encompasses many activities that could potentially affirm the self. Yet research to date has operationalized self-affirmation quite narrowly. A systematic review of self-affirmation manipulations (McQueen & Klein, 2006) shows that by far the most widely used operationalization of self-affirmation is ranking a series of values in order of personal importance and writing a short essay about the highest ranked value. Other, less frequently used operationalizations, include bogus positive feedback on tests of personality and social skills (e.g., Heine & Lehman, 1997) and unscrambling sentences that contain self-affirming messages (Stone & Cooper, 2003). Note that these self-affirmation manipulations are activities developed by social psychologists and administered in lab settings. An important question, then, is what are the everyday, "natural" equivalents of the contrived self-affirmation exercises?

The present research shows that Facebook profiles constitute such an everyday outlet for self-affirmation and is thus one of the first studies to empirically show how the theoretical construct of self-affirmation translates into everyday activities. We offer several pieces of evidence in support of the contention that Facebook profiles are self-affirming. First, we use the defensiveness-reducing paradigm of self-affirmation effects, the gold standard in the field, to show that Facebook profile browsing reduces defensiveness to ego threats and hence can be assumed to increase perceptions of self-worth and self-integrity. Second, we show that the effects of Facebook profile browsing are similar to those of a well-validated self-affirmation manipulation (see Napper, Harris, & Epton, 2009, for a similar comparison procedure). Third, our experiments highlight several important

characteristics of Facebook that are consistent with self-affirmation theory. There is indication that Facebook is sought unconsciously (Study 2), in line with claims that conscious affirmation attempts are ineffective (see Sherman & Cohen, 2006, for a review). Most importantly, Facebook profile browsing soothes ego threats that are *unrelated* to Facebook content (Study 1). Recall that the ego threat administered affected participants' academic abilities, while Facebook profile content has been shown to *not* contain information about academics (Rosenbaum, Johnson, Stepman, & Nuijten, 2010; Toma & Carlson, 2012). This decoupling of the threatened domain of self from the affirmed domain is the sine qua non of self-affirmation theory.

An important question is whether Facebook profile browsing, the everyday activity scrutinized here, is self-affirming or represents a related psychological process for regulating feelings of self-worth. Indeed, a multitude of theories make similar claims about people's ego needs and the means they use to achieve them. This literature, dubbed the "self-zoo" because of its blurry boundaries (Tesser, 2000), includes self-affirmation theory, self-verification theory (Swann, Rentfrow, & Guinn, 2003), symbolic self-completion theory (Harmon-Jones, Schmeichel, & Harmon-Jones, 2009), the self-esteem evaluation (SEM) model (Tesser & Cornell, 1991), implicit self-esteem compensation (Rudman, Dohn, & Fairchild, 2007), social comparison (Festinger, 1954), and cognitive dissonance (Festinger, 1957).

Our experimental procedure and findings help rule out some of these alternate possibilities. First, as mentioned earlier, in Study 1 the threatened self-domain (academics) differed from the boosted domain (Facebook self-presentation), as per self-affirmation theory's claims that self-affirmation is an indirect process. Conversely, self-verification, symbolic self-completion, social comparison, and cognitive dissonance thoeries posit that individuals repair ego threats by accessing or boosting information related to the same domain as the one that had been threatened (Festinger, 1954, 1957; Gollwitzer, Wicklund, & Hilton, 1982; Gollwitzer & Wicklund, 1985; Swann et al., 2003; Swann & Hill, 1982; Swann & Read, 1981; Trepte, 2005). Second, the *form* undertaken by some of the related processes is distinct from self-affirmation's, albeit their function is similar (i.e., to maintain positive self-evaluations). Specifically, SEM and social comparison processes represent interpersonal strategies whereby individuals compare themselves with, and help or hinder, others for the purpose of regulating their own feelings of self-worth. Implicit self-esteem compensation occurs automatically after one's self-worth has been threatened and does not involve engaging in any specific activity. Hence, these related processes are narrowly defined and do not meet the criteria for self-affirmation (i.e., reassuring individuals of their *overall* self-worth and self-integrity, through statements of quintessential values, beliefs, and characteristics).

While our experimental procedure allows us to conclude that Facebook profile browsing is self-affirming, it is possible that this everyday activity may also fulfill related psychological functions. Consider first self-verification theory, which claims that individuals seek psychological coherence, manifested as a desire to be perceived by others in a way that is aligned with self-perceptions (Swann et al., 2003). Facebook profiles may well represent individuals' efforts to present themselves to others in a manner consistent with self-perceptions. Similarly, symbolic self-completion theory claims that individuals create symbols of attainment to present themselves as capable in defining areas (Wicklund & Gollwitzer, 1981). Facebook profiles symbolically represent, through photographs and textual statements, social achievements and treasured characteristics. As a "natural," everyday activity that is not narrowly tailored by experimenters, it is possible that Facebook profile browsing fulfills multiple psychological roles, depending on the ego threat experienced by the participants (i.e., related or unrelated to Facebook content). Future empirical work is needed to identify any self-verification or symbolic self-completion properties of Facebook. If such properties emerge, an argument could be made as to the substitutability of these processes and self-affirmation. Within the "self-zoo" literature, Tesser and colleagues (Tesser, 2000; Tesser & Cornell, 1991; Tesser et al., 2000) have proposed that self-esteem regulation mechanisms may be substitutable for one another because they fill the same higher order purpose of protecting self-worth. The substitution principle could be bolstered by findings that one activity (i.e., Facebook profile browsing) can serve multiple self-worth restorative functions. Future research is necessary to fully investigate these claims.

Future work is also necessary to replicate these findings and to clarify how exactly Facebook profile browsing affects users. For instance, one way to demonstrate the suitability of self-affirmation theory to Facebook profile self-presentation is to investigate whether exposure to these profiles elicits other known effects of self-affirmation. Such effects include an increase in self-concept clarity (Waksiak & Trope, 2009), a boost in ego resources, and the use of higher level mental construals (Schmeichel & Vohs, 2009).

Spontaneous Self-Affirmations. Existing empirical work on self-affirmation has favored effects rather than causes of self-affirmation, and positive, rather than negative, effects (Sherman & Cohen, 2006). This is understandable given the sizable benefits conferred by this simple psychological intervention. But it is equally important to determine under what circumstances self-affirmational benefits materialize. When do people pursue self-affirmation? What causes them to seek ego-restorative activities?

An explicitly motivational theory, self-affirmation proposes that threats to the ego activate an unconscious need to self-affirm—that is, to restore perceptions of the adequacy and integrity of the self. As discussed earlier, similar claims are made by cognitive dissonance, self-verification, symbolic self-completion, and SEM theorists. While these other

theoretical perspectives' claims have received empirical testing, self-affirmation theory's claims about the pursuance of self-affirmation following an ego threat have been relatively sidelined in favor of examining effects of self-affirmation. In showing that participants spontaneously gravitated toward Facebook, a self-affirming venue, after having their academic identity threatened (Study 2), the present research provides much-needed empirical support for this key theoretical proposition.

How does spontaneous self-affirmation operate? In his original conceptualization of the theory, Steele (1988) proposed that individuals' means of self-affirmation will be dictated by (a) accessibility, or "the degree to which a given adaptation is accessible in the individual's perception, memory, or imagination" (p. 291), and (b) effectiveness-cost ratios, or its judicious use of time and resources. For instance, assuming that both means of self-affirmation are available, an individual will prefer doing the dishes to volunteering to organize a charity benefit. For millions of users, Facebook is both easily accessible and cost-effective, making it a plausible venue for spontaneous self-affirmation in everyday life. However, future research is needed to examine to what extent Facebook self-affirmation is preferred to other types of spontaneous self-affirmations, such as calling a friend or going shopping.

Understanding the Psychological Draw of Facebook

The self-affirmation framework highlights the profound implications that Facebook profile browsing can have on the self-concept. Whereas conventional wisdom maintains that Facebook use is merely a time sink and leads to an assortment of negative consequences, the present findings provide evidence that it can be a psychologically meaningful activity, that supplies a sense of well-being at a deep level. In addition, the self-affirmation frameworks offers insights on the baffling mass appeal of Facebook, that cuts across generational and cultural lines. The extraordinary amount of time people spend on Facebook may be a reflection of its ability to satisfy ego needs that are fundamental to the human condition, yet whose covert operation makes them less amenable to scrutiny. These ego needs pertain to how people wish to see themselves—socially attractive and embedded in a network of meaningful relationships.

The self-affirmation framework is the first to provide a cohesive, parsimonious, and psychologically driven explanation for the appeal of Facebook, and is consistent with an emerging body of research that has identified psychological benefits earned from SNS use. Consider first the effects of Facebook use. Recent research has uncovered a series of correlations between SNS use, broadly defined, and positive psychological and social outcomes, such as increased social capital (Ellison, Steinfield, & Lampe, 2007); increased life satisfaction, social trust, civic engagement, and political participation (Valenzuela, Park, & Kee, 2009); increased social self-esteem and emotional well-being (Valkenburg, Peter, & Schouten, 2006); and increased college student motivation, affective learning, and positive classroom climate (Mazer, Murphy, & Simonds, 2007). The self-affirmation framework adds a new class of *intrapersonal* benefits to extant research—boosting perceptions of self-worth and self-integrity. Together, this literature pinpoints to considerable psychological benefits of an interpersonal and intrapersonal nature that can be derived from SNS use.

Consider next the causes, or motivators of SNS use. Prior research in this area has predominantly used a self-report methodology to examine why users gravitate toward SNSs. In these studies, users report interpersonal motivations, such as maintaining social connections, sharing identities, and engaging social surveillance (Gross & Acquisti, 2005; Joinson, 2008; Lampe, Ellison, & Steinfield, 2008). The present work adds to this literature by exposing motivations that may not be consciously available and that stem from intrapersonal goals (i.e., preserving self-integrity). In showing that users gravitated toward their Facebook profiles following a blow to their ego, this work offers a nuanced view of Facebook use as the product of situational factors (in this case, having one's desired self-image challenged through negative feedback on an important task) and users' implicit goals to maintain a positive self-view.

Practical Implications

The finding that SNS profiles can act as an everyday source of self-affirmation has several practical implications. First and most evidently, the experience of engaging with one's profile-based self may confer emotional benefits to the millions of SNS users, in terms of restoring deep-seated notions of self-integrity. Perhaps online daters who are anxious about being single or recently divorced may find comfort in the process of composing or reviewing their online profiles, as it allows them to reflect on their core values and identity. Perhaps students who are feeling stressed about upcoming exams might similarly find solace in their SNS profiles. An important task for future research is to determine the boundary conditions of SNS self-affirmation. How often do SNS users engage in self-affirming activities (i.e., own profile browsing and construction)? If they do engage in these self-affirming activities frequently, what are the effects of having one's self-worth constantly bolstered? Note that extant research has only examined the effects of solitary self-affirmation inductions; Facebook profile browsing may provide the opportunity to investigate the effects of repeated self-affirmations.

Second, self-affirmation is associated with a cornucopia of psychological benefits, such as reducing the gender achievement gap in the sciences and engineering (Miyake et al., 2010), rendering individuals more receptive to anti-smoking messages (Armitage, Harris, Hepton, & Napper, 2008),

promoting wellness in breast cancer patients (Creswell et al., 2007), and reducing self-serving biases that distort social perception (Sherman & Kim, 2005). Precisely because such sizable benefits ensue from self-affirmation, researchers are becoming interested in designing self-affirmation interventions that can be implemented in applied settings (Napper et al., 2009; Sherman & Hartson, 2011). As noted in recent research, designing such interventions is a challenging task. Ideally, these interventions should be applicable to a wide range of potential subjects; should not require individual tailoring; should offer easy access to a control equivalent, for the purpose of gauging intervention success; should operate unconsciously; and should be compatible with mass communication, for the purpose of wide dissemination (Napper et al., 2009).

The present research points to the intriguing possibility that Facebook profiles may constitute an easily implemented, wide reaching and subtle self-affirmation intervention in everyday settings. Indeed, these profiles are nearly universally applicable, with SNSs' user base rapidly growing; they do not require individual tailoring—in fact, most profiles do not even need to be created specifically for the intervention; and they offer easy control equivalence, as shown in the self-affirmation manipulation detailed here. In addition, Facebook self-affirmation appears to operate nonconsciously, and is part of mass communication. Facebook profiles may then be used strategically in applied self-affirmation interventions, such as those aimed at decreasing resistance to antismoking messages among young adults.

Conclusion

Everyday life is rife with threats to the ego, ranging from the trivial (e.g., being treated rudely by a clerk, being ignored by a friend) to the consequential (e.g., failing an exam, getting into an argument with a spouse). These setbacks are both common and unavoidable, raising the question of how individuals manage to maintain a sense of self-worth and avoid being plagued by anxiety and self-doubt. This research shows that, just as setbacks and challenges are pervasive in everyday life, so too are opportunities to offset their effects. Facebook, an SNS that is ubiquitously available, has the ability to repair the damage caused by ego threats and it is actively sought after by users for the purpose of soothing a wounded ego. The availability of everyday sources of self-affirmation, such as Facebook, appears to be a useful instrument in individuals' efforts to preserve self-worth and self-integrity.

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