Facebook Therapy:

Why People Share Self-Relevant Content Online

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Contribution Statement

Online social networks are incredibly popular, yet relatively little research has examined why people use them or the impact they have on their users. This paper examines a cause and a consequence of online social network use. In particular, it investigates why people use the popular microblogging feature on online social networks and how this behavior affects consumer well-being. Our main premise is that microblogging can serve as an emotion regulation tool. It offers consumers a way to share self-relevant information and anticipate a response from online friends, boosting well-being via perceived social support. The current research adds to the understanding of online social network use and how it affects consumer welfare.

Abstract

The current research investigates both the causes and consequence of online social network use. Low emotionally stable individuals experience emotions more intensely and have difficulty regulating their emotions on their own. Consequently, we suggest that they use the microblogging feature on online social networks (e.g., Tweets or Facebook status updates) to help regulate their emotions. Accordingly, we find that less emotionally stable individuals microblog more frequently and share their emotions more when doing so, a tendency that is not observed offline. Further, such sharing, paired with the potential to receive social support, helps boost their well-being. These findings shed light on one reason people use online social networks and demonstrate how social transmission can increase well-being.

The Internet has become a pervasive part of everyday life. Online social networks in particular are revolutionizing the way we spend our time, communicate with others, and maintain social relationships. Almost half of 18-34 year old users check their Facebook account as soon as they wake up, and 28% report doing so on their mobile devices before even getting out of bed (Onlineschools.org 2012).

But why are people so attached to online social networks? And what are the consequences of these technologies for consumer well-being?

The effects of online social networks on well-being are complex and not well understood (Wilson, Gosling, and Graham 2012). While online social networks certainly allow users to keep in touch with friends, most researchers and cultural critics have pointed out the downsides of such sites (Buffardi and Campbell 2008; Forest and Wood 2012; Wang et al. 2011). Some have argued that they are addictive, dangerous, and reduce face-to-face interaction, leaving people depressed, anxious, and lonely (Gross and Acquisty 2005; Kraut et al. 1998; Tonioni et al. 2012; Yoffe 2009). Others have suggested these sites are merely "havens…for people with poor self-image…and narcissists demanding the world's attention," (DiSalvo 2010, 53). Furthermore, online social network use has been shown to negatively impact health and financial behaviors, increasing body-mass index and credit card debt (Wilcox and Stephen 2012).

In contrast, we suggest that certain online behaviors may be beneficial for some consumers because they provide an emotional outlet, boosting short-term well-being. One of the most popular features of Facebook, and the hallmark of Twitter, is microblogging. This feature allows users to share short messages (i.e. status updates or tweets) about their thoughts, feelings, or actions with other users who can read them and potentially respond (i.e., "liking" or commenting on them). Consumers frequently use this feature. Twitter records 250 million tweets

per day (Tsotsis 2011), and 360 million Facebook users update their Facebook status at least once a week, with 125 million users updating their status at least once a day (Hampton et al. 2011).

We propose that the sharing of such self-relevant information may be beneficial, serving as a valuable emotion regulation tool. Individuals who score low on emotional stability (i.e reverse scale of neuroticism) experience emotions more intensely (Barr, Kahn, and Schneider 2008) and negatively (Costa and McCrae 1980) and are less adept at regulating their emotions on their own (Gross and John 2003; Harenski, Kim, and Hamann 2009). Although this leaves them with a heightened need to share their emotions with others (Saxena and Mehrotra 2010), their low affiliation and their tendency to be socially apprehensive (Luminet et al. 2000b) might make it difficult for low emotionally stable individuals to share emotions with others offline. The online setting, however, makes sharing less threatening (Bargh and McKenna 2004; Hamburger and Ben-Artzi 2000; Kang 2000). Thus, we argue that these individuals may rely on their online social network to share their emotions. Further, we argue that such online sharing can have beneficial consequences. It may help emotionally unstable individuals boost well-being after negative emotional experiences by increasing perceived social support.

The current research examines both the causes and consequences of online microblogging. We examine whether low emotionally stable individuals microblog more frequently and share more emotions when doing so. Further, we test whether this increased emotional sharing is unique to online social networks. Finally, we examine whether this type of sharing boosts low emotionally stable individuals' well-being by increasing perceived social support.

EMOTION EXPRESSION

People have an overwhelming need to share their emotional experiences with others (Berger 2011; Derks, Fischer, and Bos 2008; Rimé 2009). People talk about most of the emotions they experience (Zech and Rimé 2005), and inducing more emotion in experiments increases people's urge to share (Luminet et al. 2000a). A possible reason for the strong urge to disclose even negative emotions is that it has an adaptive function, aiding emotion regulation (Rimé 2009; Zech and Rimé 2005). Indeed, 90% of people believe that sharing an emotional experience will be relieving (Zech 1999).

The beneficial effects of sharing are generally believed to be the direct result of expression, or "letting it out" (Kennedy-Moore and Watson 1999). Early theories of psychotherapy, for example, theorized that the venting of emotions would be cathartic and enable healing in the short term (Breuer and Freud 1895).

Today, however, the venting hypothesis is widely considered to be a myth, primarily because an abundance of null-findings suggests that the expression of emotion does not lead to immediate recovery from the emotional event (Bohart 1980; Kennedy-Moore and Watson 2001; Rimé 2009).

Instead, more recent research suggests that the verbalization of an emotion can encourage healing over time. Putting emotion into words requires clear and thoughtful articulation, which can foster cognitive reappraisal and sense making of the distressing experience (i.e. cognitive emotion regulation; Gross and John 2003). This insight can lead to recovery and increased long-term well-being (Frattaroli 1996; Lyubomirsky, Sousa, and Dickerhoof 2006; Pennebaker 1999; Pennebaker, Zech, and Rimé 2001; Smyth 1998).

Importantly, however, this long-term benefit is independent of sharing. Verbalizing emotions in private (i.e. written in a journal or spoken into a tape-recorder) has similar effects, regardless of whether the emotion is expressed to others or kept to oneself (Lepore and Greenberg 2002; Pennebaker 1997). Thus, in contrast to common belief, existing findings suggest that the benefits of emotion expression are not *immediate* and not contingent on actually *sharing* with others.

If the benefits of articulation take time to emerge and are independent of actual sharing with others, then why do people share their emotions with others rather than simply write their thoughts in a journal? And why is this sharing perceived to be immediately relieving (Kennedy-Moore and Watson 1999; Zech and Rimé 2005)? Might the social sharing of emotion provide immediate benefits that go above and beyond the benefits provided by mere articulation?

SOCIAL SHARING OF EMOTION

We suggest that the social sharing of emotion can provide immediate benefits, boosting well-being by increasing perceived social support. Although it has never been empirically tested, prior work theorized that emotional sharing may fulfill a socio-affective need (i.e. the need for attachment and comfort) by eliciting attention, affection, and social support (Rimé 2009). This, in turn, may help buffer negative feelings that arise from negative emotional experiences, providing immediate relief. In other words, sharing might elicit a socio-affective buffer which, while not focused on the resolution of a particular emotional episode, may immediately boost overall well-being (e.g. by reducing feelings of anxiety or loneliness).

If such a short-term socio-affective buffer exists, it would likely be particularly important for low emotionally stable individuals. Emotional stability, or neuroticism at the opposite side of the spectrum, is the most important personality predictor for well-being (Vitterso 2001). Individuals who score low on emotional stability experience emotions more negatively and more intensely (Barr et al. 2008). Futhermore, low emotionally stable individuals are less adept at successfully regulating their emotions internally by themselves (Gross and John 2003; Kokkonen and Pulkinnen 2001). Supporting this claim, a recent neuroimaging study (Harenski et al. 2009) found that low emotional stability was associated with higher emotion-related brain activity and increased prefrontal activity known to be linked to difficulty in emotion regulation. It was not, however, associated with areas that have been linked to successful emotion regulation. These results suggest that these individuals have more difficulty recovering from distressing events on their own. This might leave them especially likely to depend on others to help regulate their emotions, buffering their negative affect at least short-term.

Further, we argue that low emotionally stable individuals may be particularly likely to rely on their *online* social network to share and regulate these emotions. While emotionally unstable individuals have a heightened need to share emotions (Saxena and Mehrotra 2010), emotional instability is also associated with low affiliation, social apprehensiveness, and social avoidance (Schroeder, Wormworth, and Livesley 1992). Consequently, emotionally unstable individuals may find it difficult to share their emotions in an offline (i.e. face-to-face) context.

Online social networks, however, should provide an easily accessible social support system. The Internet reduces the risk inherent in self-disclosure (Bargh and McKenna 2004; Kang 2000), making it easier to reach out to other users (also Hamburger and Ben-Arzi 2000). This might be especially true for microblogs because they are not directed at anyone in particular

who could feel obligated to respond (Forest and Wood 2012). Microblogging may thus provide the desired social support (i.e. comments and likes) without evoking the social apprehensiveness that may come from attempting to share emotions in face-to-face interaction.

Consequently, we suggest that less emotionally stable individuals share more self-relevant content online. More specifically, we hypothesize that less emotionally stable individuals microblog more often and are more likely to share their emotions when doing so.

H1a: Less emotionally stable individuals microblog more frequently

H1b: Less emotionally stable individuals share more emotions in their microblogs

Further, as noted, we suggest that this increased sharing is unique to online social networks and does not hold for offline emotion expression.

H2: While low emotionally stable individuals share their emotions more online than highly emotionally stable individuals, this relationship does not hold for offline emotional sharing.

We also examine the consequences of such sharing. More specifically, we examine whether the sharing of emotions provides an immediate benefit to well-being, and if so, under which circumstances the benefit occurs. Is sharing alone enough to make people feel better, or is social support necessary for the benefit to occur? Does social support have to be received (i.e. help is provided) or could perceived social support be sufficient to yield socio-affective benefits?

We suggest that sharing can boost well-being short-term by increasing *perceived* social support (Barrera 1986). Perceived social support has been shown to be a stronger predictor of well-being than received social support (Wethington and Kessler 1986). Further, it can accrue as long as people believe helping behaviors might be provided (Norris and Kaniasty, 1996). Consequently, we hypothesize that sharing can bring immediate socio-affective benefits as long as social support can be anticipated, even if no actual support is received.

H3a: Sharing boosts low emotionally stable individuals' well-being after negative emotional experiences as long as social support is possible.

H3b: The boost from sharing is mediated by increased perceived social support.

We test our hypotheses in three studies. Study 1 establishes the positive relationship between emotional stability and the frequency of posting microblogs and their emotional content on Facebook. Further, it shows that the frequent microblogging behavior is driven by low emotionally stable individuals' self-reported motivation to use online social networks as an emotional outlet. Study 2 shows that the relationship between emotional stability and emotional sharing is unique to online social networks. That is, less emotionally stable individuals are more likely to express their emotions in online microblogs than more emotionally stable individuals, but this relationship does not hold for offline emotion expression. Furthermore, it establishes that the relationship between low emotional stability and the frequency of microblogging is driven by their predilection for online emotion expression over offline emotion expression. Study 3 examines the consequences of sharing with others. It demonstrates that sharing emotions helps low emotionally stable individuals boost well-being after negative experiences, and that the

potential of receiving a response plays an important role in this emotion-regulation process. Further, the results indicate that the beneficial effects of sharing are driven by an increase in perceived social support.

STUDY 1: EMOTIONAL STABILITY AND THE FREQUENCY AND CONTENT OF EMOTIONAL SHARING

Our first study examines how emotional stability relates to the frequency and content of microblogging. In addition, it explores the underlying motivation for this behavior.

Participants were asked about their frequency of microblogging, about the content of their microblogs, and about their motivations to engage in online social networking. Facebook was by far the most popular online social network in our sample (95% reported having a Facebook account, while only 30% reported having other online social network accounts). Consequently, we focused our investigation on the Facebook status update feature.

We hypothesized that less emotionally stable participants would (1) update their Facebook status more frequently and (2) express more emotions in their posts. Further, consistent with our theorizing that low emotionally stable use online social networks as an emotional outlet, we predicted that the increased frequency of posting would be driven by their motivation to express emotions on online social networks.

Method

One hundred and forty undergraduates who reported having a Facebook account completed an online survey in exchange for the chance to win a monetary prize.

First, participants were asked how often they update their Facebook status (1 = Multiple times a day, 6 = Never). Second, they were asked to log into their Facebook account and copy their 10 most recent status updates into the survey.

Third, participants answered some questions about their motivations for using online social networks (adapted from Hennig-Thurau et al. 2004). They were asked about the extent to which they used online social networks to interact with people, share experiences, share emotions, display identity, or to seek information from other users (1 = Strongly disagree, 7 = Strongly agree). Finally, participants completed the Ten Item Personality Inventory (Gosling, Rentfrow, and Swann 2003) to measure their Big Five personality traits (extraversion, emotional stability, conscientiousness, agreeableness, and openness to experience).

Results

Frequency of Microblogging. We used multiple regression analysis to test how participants' frequency of status updating related to their Big Five personality traits.

Emotional stability was the only personality factor significantly related to status updating.[1] As predicted, less emotionally stable participants reported updating their status more frequently ($\beta = .24$, $t(132) = 2.82$, $p < .01$).

[1] Openness to Experience was marginally related to frequency of status updating ($\beta = .16$, $t(132) = 1.82$, $p = .07$) but no other personality dimension was even close to significance ($ts < 1$, $ps > .50$).

Content of Microblogs. We also looked at the relationship between personality and the content of the updates. Two coders, blind to the hypothesis, coded each status update for presence or absence of emotion expression. They used the words as well as the punctuation (i.e. exclamation marks) to infer whether the update was driven by the poster's current emotional state (e.g., anger, excitement, or sadness). The coders were highly correlated (r = .75) and their responses were averaged to an Emotionality Index.

A multiple regression then examined the relationship between personality and status update content. As predicted, less emotionally stable participants expressed more emotion in their status updates (β = -.20, $t(94) = -1.99$, $p < .05$).[2]

Online Social Networking Motivators. Next, we used multiple regression to examine the relationship between the Big Five personality factors and the specified motivators to engage in online social networking. Our key question was about the motivation to use online social networks to express emotions.

As predicted, less emotionally stable participants were more likely to report that they used online social networks to express their emotions (β = - .18, $t(139) = -2.15$, $p < .05$). None of the other personality factors were significantly related to the motivation to express emotions (βs < .09, ts < 1.60, $ps > .10$), and emotional stability did not significantly predict any of the other online social networks motivators (βs < .08, ts < 1.50, $ps > .10$).

Mediation Analysis. Finally, mediation analysis demonstrated that the effect of emotional stability on frequency of status updates was driven by these individuals' motivation to use online social networks to express emotion. Bootstrap analysis (Preacher and Hayes 2004; Zhao, Lynch, and Chen 2010) revealed that the indirect effect of emotional stability on the frequency of status updating through the motivator to engage in online social networks to express emotion was

[2] Extroversion was also linked to a higher percentage of updates involving emotion (β= .23, $t(94) = 2.28$, $p < .05$).

significant, with a 95% confidence interval excluding zero (indirect effect = .02, 95% CI: .001 to .02), supporting mediation.

Discussion

Results of the first study provide preliminary support for our first two hypotheses. Less emotionally stable individuals not only reported microblogging more frequently, but also expressed more emotions in their microblogs.

Further, mediational results shed light on the underlying process. Less emotionally stable individuals' increased frequency of microblogging was driven by their motivation to use online social networks to express emotions. Thus, the use of online social networks as an emotional outlet seems to at least partially account for the increased frequency of microblogging in low emotionally stable individuals.

STUDY 2: ONLINE VERSUS OFFLINE SHARING

Study 1 found that less emotionally stable individuals use online social networks to share their emotions with others. One might wonder whether this behavior is unique to the online environment. Given their increased need to share emotions (Saxena and Mehrotra 2010), less emotionally stable individuals might simply generally share their emotions more frequently, online as well as offline.

As discussed previously, however, we suggest that these effects should be specific to the online environment. Online social networks offer the illusion of a ubiquitous social support

system (Ellison, Steinfield, and Lampe 2007), and the Internet environment reduces the risk of self-disclosure (Bargh and McKenna 2004; Kang 2000). Consequently, the online environment should encourage social sharing for less emotionally stable individuals who otherwise lack the social support system and social skills to do so offline (Schroeder et al. 1992).

Study 2 tests this possibility. We asked participants how frequently they share their emotions, either online or offline. We predicted that the relationship between emotional stability and emotion sharing would vary, depending on the context. As shown in study 1, less emotionally stable participants should be more likely to share their emotions online than more emotionally stable participants. This difference should disappear, however, for offline sharing.

Further, the increase in online sharing in low emotionally stable individuals as compared to highly emotionally stable individuals was expected to be driven by these individuals' predilection to share emotions online rather than offline.

Method

Ninety-two Internet users participated in the study in exchange for monetary compensation. They were randomly assigned to an online or offline condition.

In the offline condition, participants were asked to agree to statements about how often they share their "feelings and emotions with other people in person" (1 = Not at all like me, 7 = Very much like me).

In the online condition, participants used the same scale to agree to statements about how often they share their "feelings and emotions with other people through microblogs (i.e. status updates, tweets) on online social networks". Participants in this online condition were also asked

how often they microblog on online social networks (1 = Multiple times a day, 6 = Never) and whether they prefer expressing emotions online or offline (-10 = Much prefer online, 10 = Much prefer offline).

Finally, all participants completed the Ten Item Big Five Personality Inventory (Gosling et al. 2003).

Results

Online and Offline Emotion Expression. First, we examined how the online versus offline manipulation, the Big Five personality factors, and their interactions shaped social sharing of emotions.

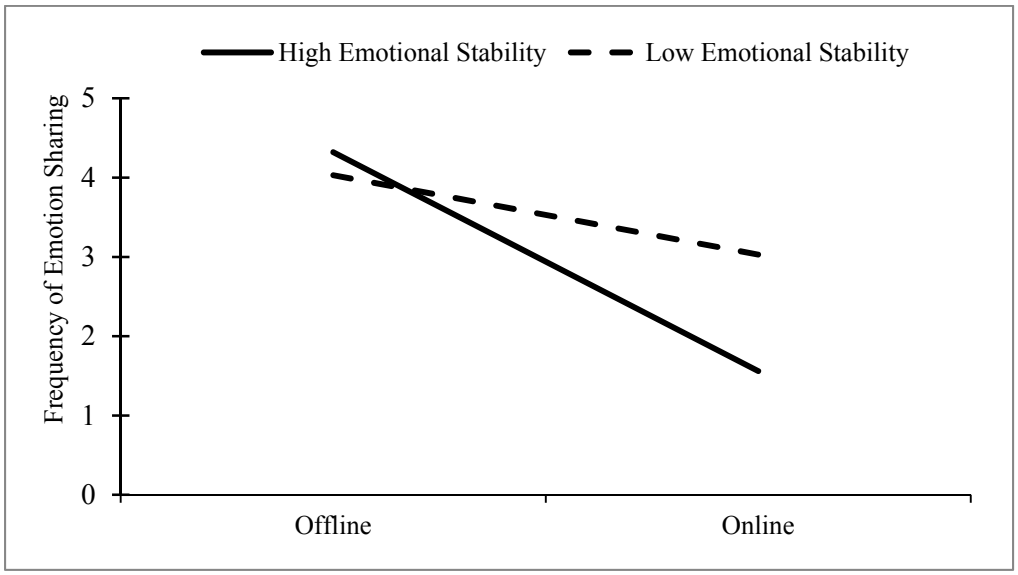
Multiple regression analysis revealed a main effect of condition ($\beta = -.46$, $t(81) = -3.45$, $p < .01$), indicating that, overall, people share their emotions with others more offline than online. This increased offline sharing is consistent with the general finding that people tend to talk more offline than online (Berger and Iyengar 2012; Keller and Libai 2009).

More importantly, consistent with our theorizing, the analysis revealed a significant emotional stability x condition interaction ($\beta = -.33$, $t(81) = 2.16$, $p < .05$), see figure 1.[3] Online, there was a significant relationship between emotional stability and sharing ($\beta = -.38$, $t(81) = -2.43$, $p < .05$). That is, less emotionally stable participants reported sharing their feelings and

[3] To ensure the validity of the two emotional stability items, emotional stability was separately measured with the full 12-item neuroticism (reverse emotional stability) subscale from the NEO Five Factor Inventory (McCrae and Costa 2004). Analysis using the full neuroticism scale without the other Big Five personality factors yielded similar and stronger results.

emotions more often than more emotionally stable participants. Offline, however, this relationship disappeared (β = .08, $t < 1$, $p > .50$).[4]

FIGURE 1: FREQUENCY OF ONLINE AND OFFLINE SHARING FOR HIGH AND LOW EMOTIONAL STABILITY



Looked at from a different perspective, slope analysis (Aiken and West 1991) revealed that while high emotionally stable participants (+1SD) were less likely to share emotions online than offline (β = -.69, $t(81) = -3.84$, $p < .01$), as observed in word of mouth in general, this difference disappeared among low emotionally stable participants (- 1 SD). Low emotionally stable people were just as likely to share their emotions online as offline (β = -.22, $t < 1.36$, $p > .15$).

[4] There were no other effects of personality traits or their interactions for online emotion sharing (βs < .18 *t*s < 1.5, *p*s >.15). For offline emotion sharing, there was a main effect of Extraversion (β = .27, $t(81) = 2.00$, $p = .05$) and a marginal main effect for Agreeableness (β = .26, $t(81) = 1.81$, $p = .08$). All other Big Five personality factors and their interactions were not significant, (βs < .19, *t*s < 1.3, *p*s > .20).

Microblogging. For participants in the online condition, we also examined how frequently they microblogged. As in study 1, less emotionally stable participants reported microblogging more frequently ($\beta = .49$, $t(40) = 2.30$, $p < .05$). No other aspect of the Big Five personality factors was related to the frequency of microblogging (βs < .25, ts(40) < 1.50, ps > .15).

Mediation Analysis. Finally, a mediation analysis demonstrated that less emotionally stable participants' increased microblogging is driven by these individuals' preference to express their emotions online as opposed to offline. Bootstrap analysis (Preacher and Hayes 2004; Zhao et al. 2010) revealed that the indirect effect of emotional stability on the frequency of microblogging through preference for online versus offline emotion expression was significant, with a 95 % confidence interval excluding zero (indirect effect = .08, 95% CI: .01 to .24), supporting mediation.

Discussion

Results of study 2 extend the findings of study 1 and demonstrate how emotional stability shapes online and offline emotion sharing in different ways.

While there was no relationship between emotional stability and offline sharing, there was a significant relationship with online sharing. Compared to individuals with higher emotional stability, less emotionally stable individuals shared their emotions more online. Put differently, consistent with prior research showing that people talk more offline than online (Berger and Iyengar 2012; Keller and Libai 2009), emotionally stable individuals reported sharing their emotions more offline than online. Low emotionally stable individuals, however,

reported sharing their emotions online and offline equally. This suggests that while the increased barriers associated with offline sharing might offset the less emotionally stable individuals' increased need to share their emotions (Saxena and Mehrotra 2010), the reduced risk associated with online sharing does not, leading to a difference in online sharing between low emotionally stable individuals and highly emotionally stable individuals.

Using a different population, the results also replicate the finding of study 1 that less emotionally stable individuals microblog more frequently. Furthermore, the results of the study suggest that the preference for online emotion expression can explain low emotionally stable individuals' motivation to use online social networks as an emotional outlet (study 1), which in turn results in an increased frequency of microblogging.

The first two studies examined the causes of microblogging. They provide consistent evidence that less emotionally stable individuals microblog more frequently and that this is due to the fact that microblogs offer an opportunity to share their emotions online.

In our final study, we turn to examining the consequences of microblogging. In particular, we examine whether and how microblogging may aid to act as a socio-affective buffer, thus impacting well-being. Preliminary surveys provided some initial evidence for the beneficial effects of sharing. For example, correlational studies showed that individuals low in emotional stability were more likely to agree with statements such as "anticipating a response from online friends makes me feel better." An experiment sought to provide more direct evidence for the beneficial impact of sharing.

STUDY 3: BENEFIT OF EMOTIONAL SHARING

Study 3 examines whether the social sharing of emotion impacts short-term well-being, and under what circumstances any such benefits occur.

Forcing participants to microblog about their emotions using their online social network account is neither ethical nor feasible. Furthermore, given that merely exposing users to their own Facebook profile can increase self-esteem (Gonzales and Hancock 2011), it was important to mute this potential confound to study the impact of sharing on well-being itself. Consequently, we created a sharing task that, in some conditions, mimicked what consumers would experience on online social networks without actual exposure to that environment. This not only allowed us to test if, and under what condition, sharing of emotion is beneficial, but also to differentiate the benefit of such sharing from other online activities and the mere exposure to one's online social network profile.

First, we induced negative affect through false feedback on a performance task. Next, participants were assigned to one of four writing conditions. Participants in a (1) *control* condition wrote about a neutral topic unrelated to their emotions. In order to compare emotion sharing to emotion expression alone (i.e. venting), which has not been shown to lead to short-term benefits (Bohart 1980; Kennedy-Moore and Watson 2001), participants in the (2) *private writing* condition wrote about their emotions for no one else to read. Participants of the remaining (3) *shared writing - no response* and (4) *shared writing - potential response* conditions wrote about their emotions with the idea that someone they knew would later read what they had written. The crucial difference between these two shared writing conditions was whether the participants expected that the person being written to would potentially respond. They allowed us to examine whether the possibility of receiving a response, as can occur on an online social network, is necessary for the benefits of emotional sharing to occur.

We predicted that writing to a known other who would potentially respond would boost less emotionally stable participants' well-being after the negative emotional experience. Given that low emotionally stable individuals experience emotions more intensely and have a reduced ability to self-regulate (Barr et al. 2008; Gross and John 2003), they should show lower well-being after a negative emotional experience. Writing to close others who could potentially respond, however, should help alleviate this detriment.

Further, we predicted that if these effects are driven by the expectation of a future response, as we suggest, then they should be mediated by an increase in perceived social support (Norris and Kaniasty 1996).

Method

One hundred and seventy-four participants participated in this experiment as part of a larger group of studies. They were randomly assigned to one of four conditions.

Participants completed two ostensibly unrelated studies. In the first "study," they reported their baseline well-being on three 1-100 slider scales (Bad-Good, Sad-Happy, Tense-Relaxed; adapted from Williams, Cheung, and Choi 2000). Negative affect was then induced by telling participants that they had performed badly on a verbal ability test (adapted from Forgas 1991). Participants were given five minutes to solve 33 anagrams (e.g., "car is to road as train is to …"), each of which had four multiple-choice answers. After the time elapsed, they were given feedback suggesting that they performed below average on the task. They were given their actual score (ranging from 6-26), but were told that the average performance on the task was 27-30 correct answers.

The second "study" used a writing task to manipulate emotional expression. We varied whether participants could emotionally express themselves, whether they could share the expression with a known other, and whether the person being written to might respond.

First, all participants provided a known other's email address to ensure that a known other was similarly activated across conditions. Second, each participant was given a sheet of paper to write on.

Participants in the (1) *control writing* condition wrote about a control topic (office products). The three experimental conditions were asked to write about their current emotions. In the (2) *private writing* condition, participants were instructed to think about the known other whose email address they had provided while writing, but there was no mention of the fact that the writing would be shared. In the (3) *shared writing - no response* condition participants were told that their writings would be shared with the known other whose email address they had provided, but that this person would not be able to respond to their message. Finally, in the (4) *shared writing - potential response* condition, participants were told that their writings would be shared with the known other whose email address they had provided and were led to believe that the person would be able to respond to their message. This allowed us to test whether merely writing in private while having a known other in mind or the mere sharing with a known other is sufficient, or whether potential response is necessary to boost well-being. After the completion of the writing task, participants wrote their unidentifiable Lab-ID on the piece of paper, allowing us to match their writing with their responses, folded it, and placed the paper into an urn provided by the experimenter.

Finally, participants again reported their well-being, using the same measure as before. They also reported their perceived social support (Meltzer 2003). The scale asked them about

their perceived sense of concern or interest from other people (1 = A lot, 5 = None) and the ease with which they could get help if needed (1 = Very easy, 5 = Very difficult). We measured emotional stability using the 12-item neuroticism subscale from the NEO Five Factor Inventory (McCrae and Costa 2004).

Results

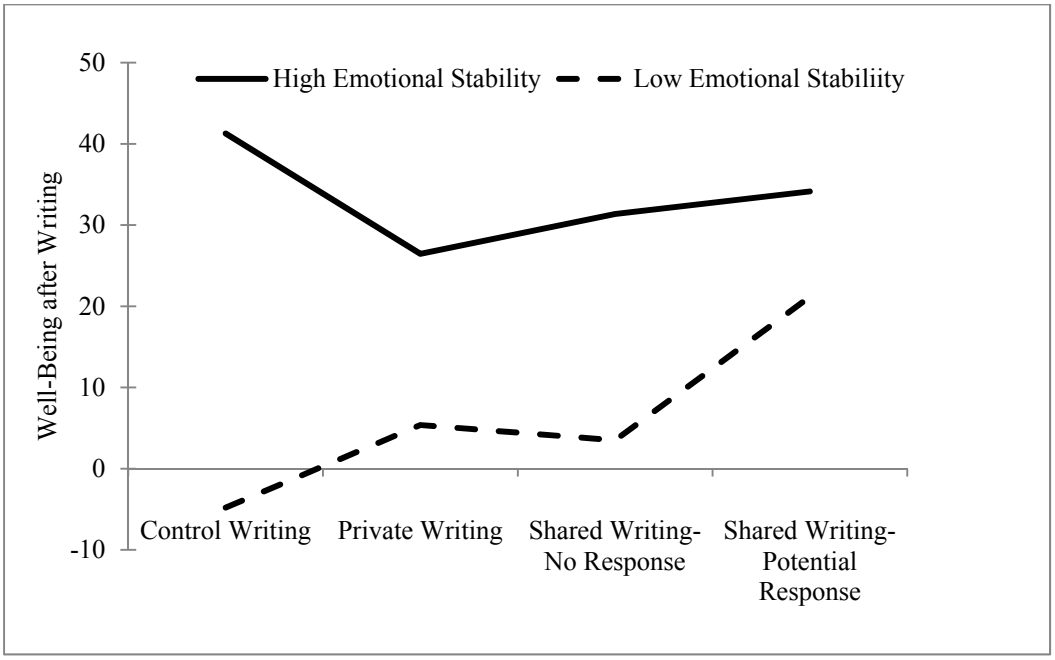
Manipulation check. The negative affect manipulation worked as intended. Participants reported lower well-being after the manipulation as compared to before (M_{After} = 18.28 vs. M_{Before} = 28.58; $F(1, 185) = 32.26$, $p < .01$).

Writing and well-being. As expected, results revealed a main effect of emotional stability on well-being ($\beta = .62$, $t(167) = 4.16$, $p < .01$). Compared to highly emotionally stable participants (M = 33.31), low emotionally stable participants (M = 6.31) felt worse after the negative affect manipulation**.**

More importantly, results revealed that the effect of emotional stability on well-being depended on the writing condition (figure 2). The effect of emotional stability in both the private writing condition and the shared writing with no response condition was similar to the control condition ($\beta = .17$, $t(167) = 1.60$, $p > .10$ and $\beta = .11$, $t(167) = 1.11$, $p > .25$, respectively). In these three conditions, low emotionally stable participants reported lower well-being than highly emotional stable participants. The writing with potential response condition, however, showed a different pattern of results. In this condition, the effect of emotional stability was significantly different than in the control condition ($\beta = .26$, $t(167) = 2.32$, $p < .05$), indicating that this condition impacted low emotionally stable individuals' well-being differently.

Further examining the differential effect of emotional stability across conditions, slope analysis (Aiken and West 1991) revealed that compared to the control condition, writing to a known other who might respond increased well-being for low emotionally stable participants (-1SD, $\beta = .30$, $t(167) = 2.54$, $p = .01$), supporting hypothesis 3a. This was not the case in the other writing conditions (βs < .13, *t*s < 1, *p*s > .30). There were also no corresponding effects of condition among highly emotionally stable participants (+1SD, βs > -.18, *t*s > - 1.40, *p*s > .15).

FIGURE 2: WELL-BEING AFTER DIFFERENT WRITING CONDITIONS FOR HIGH AND LOW EMOTIONAL STABILITY



Looked at from another perspective, while there was a negative correlation between emotional stability and well-being in the other conditions (*r*s < -.28, *p*s < .06), writing with potential response helped close the well-being gap ($r = -.18$, $p > .20$).

Mediated Moderation. Finally, supporting hypothesis 3b, mediation analysis demonstrated that the beneficial effect of writing with the potential of receiving a response on well-being, compared to the control condition, was driven by an increase in perceived social support. Bootstrap analysis (Preacher, Rucker, and Hayes 2007; Zhao et al. 2010) revealed that the indirect effect of writing condition x emotional stability interaction on well-being through perceived social support was significant, with a 95 % confidence interval excluding zero (indirect effect = .08, 95% CI: .01 to .24), supporting moderated mediation.

Discussion

Study 3 illustrates the benefits of social sharing with others. Emotional writing to a known other helped emotionally unstable individuals boost well-being after a negative experience. Importantly, the benefits came not merely from writing in general, writing about emotions (i.e. venting), or sharing emotion with a known other. Instead, the notion that a known other would read what they had written and potentially respond boosted well-being. Further, consistent with our theorizing that socio-affective processes provide comfort, this boost in well-being was mediated by perceived social support.

Ancillary analyses also show that the effects were not in any way driven by differences in what participants wrote across the different conditions. Participants written content was coded by valence (-3 = Very negative, 3 = Very positive), length (1 = Very short, 7 = Very long), and number of emotional words used (1 = None, 7 = Very many). Analysis of the coding revealed that there were no condition x emotional stability interactions for any of these measures ($Fs < 1.30$, $ps > .30$). Further, most participants (86%) did not even write about the negative feedback

itself, a percentage that did not differ based on condition or condition x emotional stability interactions ($\chi 2 < 2.00$, $ps > .20$). This, combined with the fact that perceived social support mediates the results, casts doubt on the notion that writing content, rather than sharing, drove these effects.

GENERAL DISCUSSION

Online social networks are incredibly popular. They have changed the way we spend time, the way we communicate, and the way we form relationships with others. While online social networks have sparked initial research in this domain, much more research remains to be done (Hoffman and Novak 2012; Wilson et al. 2012). Further, while some have argued that online social networks are detrimental, they may also have important upsides.

We argue that certain online activities can be beneficial for consumer well-being. Building on research on the social sharing of emotion, we argue that the popular microblogging feature can have therapeutic value, aiding emotion regulation by allowing users to share self-relevant information and anticipate social support.

Three studies support this perspective. First, they show that microblogging is especially popular among low emotionally stable individuals. Less emotionally stable individuals microblog more frequently (studies 1 and 2) and this behavior is driven by their motivation to use online social networking to express emotions (study 1). Consistent with their reported motivation, content analysis (study 1) and self-report measures (study 2) show that these individuals also express more emotions when microblogging. Our results also show that this increased sharing of emotion is unique to online social networks. Low emotionally stable

individuals are more likely to share their emotions online than highly emotionally stable individuals, but this relationship is does not hold for offline sharing. This difference between online and offline sharing can be explained by low emotionally stable individuals' heightened need to express their emotions, coupled with their preference to share emotions online (study 2).

Second, our results shed light on the downstream consequences of microblogging. Emotional sharing with the potential of receiving a response helps low emotionally stable individuals boost well-being after negative experiences (study 3). This boost does not result from emotion expression alone or from the act of sharing, but is unique to social sharing with the potential to receive a response. Consistent with this perspective, the boost in well-being is driven by the increased perceived social support such sharing provides (study 3).

The findings suggest that online social networks, which allow users to share self-relevant content with online friends who might respond, provide a helpful environment for low emotionally stable individuals to share emotions. Self-disclosure on online social networks is easier and less threatening than offline disclosure. Further, online social networks allow for the anticipation of social support from a community that is likely to be larger and more ubiquitous than their offline social support system, allowing for increased perceived social support. Thus, by offering an emotion regulation tool for individuals who score low on emotional stability, social networks provide an avenue for these individuals to overcome their barriers in self-disclosure and boost their well-being.

Theoretical Implications

The current research helps shed light on why consumers engage in online social networking and how it affects consumer well-being. Although online social networks can encourage social connections by enabling users to conveniently stay in touch with more friends (Ellison et al. 2007; Hoffman and Novak 2012), they have also been criticized for reducing face-to-face interaction (Kraut et al. 1998; Tonioni et al. 2012; Yoffe 2009). By outlining how online social networks can aid emotion regulation, we point to circumstances in which online social network use can increase well-being precisely *because* it lacks face-to-face interaction.

This work also contributes to prior work investigating personality predictors in the Facebook domain. In line with prior work (Gosling et al. 2011; Ross et al. 2009), ancillary measures collected in study 1 show that more extroverted participants reported spending marginally more time on Facebook. But as study 1 shows, extraversion is not linked to posting more frequent status updates. Likewise, narcissism, which has been associated with self-promoting content on Facebook profiles (Buffardi and Campbell 2008), does not predict status update use. Thus while extroverts may certainly use online social networks to maintain social ties (Gosling et al. 2011; Ross et al. 2009), and narcissists may use them to self-promote, status updating does not seem to be driven by these factors. Consistent with prior work (Forest and Wood 2012), we also find that low self-esteem individuals post more negative status updates when they post. They do not report updating their status more frequently, however, nor do they share more emotional content overall. Thus, again, self-esteem and emotional stability seem to be distinct constructs which differently affect online social network use.

The current research also contributes to the literature on emotional sharing. Prior work has speculated that socio-affective benefits might buffer negative affect by eliciting social support (empathy, attention, comforting), suggesting that received social support would yield

benefits (Rimé 2009). Not only does study 3 establish such an immediate socio-affective benefit from sharing, but it shows that expected social support alone is enough to bring this benefit. The increase in well-being occurred before the known others read or responded to the emotion expression. This means the effect is independent of received social support or any social interaction effects. In short, by separating expression from interaction and by controlling for written content, our studies are able to tease apart the benefits of sharing from interactive benefits and possible expressive benefits.

Implications for Consumer Well-being

The present research highlights online social networks' important role in consumer welfare. Not only can they be a useful tool for users to make great positive impact in the world through social change (Aaker and Smith 2010), but the current research also points to how they can increase well-being within the individual user. By offering a way to share self-relevant information and anticipate a response from online friends, online social networks can boost well-being and act as an emotion regulation tool for consumers, in particular for the ones who score low on emotional stability.

In addition to encouraging expression by making self-disclosure convenient and less threatening, online social networks likely provide a perfect environment for the socio-affective buffer demonstrated in study 3 to prosper. Unlike most communication channels (e.g. face-to-face or chat), online social networks allow for delayed response from multiple users over time. Though our data does not speak to the longevity of the socio-affective buffer, we imagine that this will prolong perceived social support and well-being, potentially until a response is no

longer expected. Similarly, the nature of online social networks could conceivably strengthen the efficacy of the socio-affective buffer. Norris and Kaniasty (1996, 499) point out that received social support often fails to meet expectations, so that "paradoxically, the clear advantage of perceived support over received support is that the former never happens." Because online networks allow for social support from multiple users, received social support (i.e a responses to a microblog) is not finite. Instead of being disappointing, responses on online social networks might encourage the anticipation of future ones, further increasing perceived social support and well-being. Future research should explore the dynamics of perceived versus received social support in online settings, and how it affects the longevity and efficacy of the socio-affective buffer.

Microblogging might also offer a healthier and less costly alternative to other emotion regulating behaviors, such as indulgent eating (Andrade 2005; Labroo and Mukhopadhyay 2009), nicotine, or alcohol consumption (Gross and Thompson 2007).

Finally, the effects on well-being might go beyond the benefits documented in the current research. Emotional sharing can lead to bonding and encourage social connections (Peters and Kashima 2007). This might be especially true if users and professionals realize that increased microblogging and emotion expression on online social networks is an indicator for emotional instability, along with its psychological and social correlates (e.g. social apprehensiveness or loneliness). By offering insight into the poster's inner life, the observation of such behavior might foster intimacy and allow observers to act on their insights. For example, reaching out to these individuals to talk in person or socializing offline could affect their friendships positively and increase perceived social support long-term, away from online social networks.

Overall, online social networks might not be as detrimental to well-being as researchers and cultural critics fear, but instead act as an easily accessible and effective therapy tool for consumers to increase their well-being.

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