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Short Paper

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Abstract

Considering the adoption and the continuous proliferation of social media platforms, the human degradation through social media is becoming much more sinister than what it appears on the surface. The objective of this research is to investigate how the social media usage influences subjective well-being of individuals. To investigate this, we applied the Buddhist philosophical perspectives to assess human qualities through five defilements (Nyanaponika Thera 1993) and in addition, we investigate the moderating role of the number of friends and time spent on social media for life satisfaction. By analyzing data collected from 480 sample, the study makes interesting insights into dark side of social media for social well-being.

Keywords: Social Media Use, Human Degradation, Theology, Life Satisfaction, Survey

Introduction

Recently, Facebook announced that they will hire 3000 additional staff to monitor and remove videos showing murder, suicide and other violent acts, in its most dramatic move yet to combat the biggest threat to its valuable public image (Ingram 2017). Never in the history of human race, had we seen this level of violence publicly demonstrated for an 'audience' of 'family and friends.' While the public killings, rape and violence on Facebook Live represent an extreme example of the human value degradation to many of us, anecdotal commentary suggests that social media *may* be playing a significant role in the degradation of fundamental human qualities.

According to Kross et al. (2013) the discipline of 'subjective well-being' in the behavioral sciences captures the notions of human degradation. The notions in subjective well-being predicts a range of consequential benefits including enhanced health and longevity (Boehm et al. 2011; Diener and Chan 2011; Steptoe and Wardle 2011). Information systems (IS) researchers argue that social media, given its characteristics like substantial proliferation (Ngai et al. 2015), extensive reach (Kietzmann et al. 2011), richness in media (Leonardi 2014), immediate gratification (Wang et al. 2012) and possible anonymity (Bazarova 2012) has the potential to encroach in to our daily routines. As such, the frequency of social media usage, identifying how people interact with these technologies influence the subjective well-being and represents a basic research challenge that has important research and practical implications. The possible issues of social media use are particularly vexing as prior research provides mixed indications about how social media use influences subjective well-being. While some research reveals positive associations between online social media use (in particular Facebook) and well-being (Valenzuela et al. 2009), other researchers highlight opposite results (Chou and Edge 2012; Huang 2010). Further, it is estimated that over 2.34 billion people

belong to Facebook and Twitter in 2016, the two most popular online social networks and over half of them log in daily (Statistca 2017; Zephoria 2017), highlighting the impact it has on number of individuals around the world. Yet, no IS research has examined how social media use influences subjective well-being.

Besides, the study of social media use and well-being may be more nuanced and potentially influenced by multiple factors including number of friends in social media, perceived supportiveness of one's social media, depressive symptomatology, loneliness and self-esteem (Forest and Wood 2012; Kim et al. 2009; Manago et al. 2012). Further, Garcia and Sikström (2014, p. 95) suggest that "Facebook serves as a platform for social competition in which some users express their darkest traits." Wilson et al. (2012) state that social learning and social comparison influence social media users to conform to a certain type of behavior. As such, there is a general acknowledgement that social media use trigger jealousy, anxiety and other negative emotions among users (Fox and Moreland 2015).

Therefore, considering the adoption and continuous proliferation of social media platforms, human degradation through social media could be much more sinister than what it appears on the surface. As such, the driving research question of this research is "does the social media usage influence subjective well-being?" Herein, we acknowledge that the social media use innately does not include negative connotations. However, the use of social media, regardless of the level of usage, has the potential to trigger loathsome human qualities that are damaging to the individual as well as to the society. As such, the term degradation in this research refers to the diminishing changes in one's psychological status as a direct result of the use of social media. Whilst the defilements are likely to exist in every human being with a varying degree, it is argued that the use of social media can act as a catalyst to intensify them. Therefore, our driving hypothesis in the study is that, whether the use of social media moderates the relationship between psychological status and subjective well-being.

As such, the objective of this research is to carefully evaluate this proposition in a cross-sectional study. In doing so, we apply the Buddhist philosophical perspectives to assess human qualities through five defilements (Nyanaponika Thera 1993). We believe that such a fundamental view of the 'causes' in human degradation (rather than focusing on the symptoms of human degradation) will provide us with insights into how such technologies can be used with appropriate caution. In addition, we consider the following attributes of a social media user as moderating variables: (i) number of friends and (ii) time spent on social media. Such variables have been used in prior studies as key determinants of social media (Chen and Lee 2013). The paper proceeds in the following manner. First, the paper provides the background of the study. Second, it introduces the five defilements that are being used to capture human degradation. Third, the instrument and the sample are presented, followed by model validation. The paper concludes with a detailed discussion of the findings, alludes to future research and outlines the limitations of the current study.

Research Background

Amidst revolutionary changes created through social media, there is a growing recognition that social media may contribute to human value degradation (Fox and Moreland 2015). Studies of social media have identified that social media can lead to on-line addiction, cyber-bullying, loss of productivity and in general withdrawal from society (Zhan et al. 2016). These symptoms of the negative impacts of social media have revealed a new wave of social and psychological issues. Recent research on Facebook use has shown that it decreases the quality of life (Bevan et al. 2014), lowers the self-esteem (Johnson and Knobloch-Westerwick 2014; Lee 2014) and is considered as the most common cause for relational conflicts (Fox and Warber 2014). Moreover, there is a substantial growth in online abusive messages, propagation of hatred and also of complaints been made about sexual offenses and behaviors that promote racial discrimination through social media (Brooks 2015; Zhan et al. 2016). Social Psychologists believe that social media provides a 'better' platform to demonstrate the weaknesses of the human mind, as it provides privacy and pervasiveness. As such, unlike physical social boundaries which in general are governed through norms, rules, cultural values and ethics, the societal values in social media seem to waive free-flow without much control (Boyd and Ellison 2008). For instance, studies which have been done on the impacts of social media have proved that spending time in social media has given rise to feelings like jealousy, envy and even a sense of negativity in the minds of the users (Johnson and Knobloch-Westerwick 2014; Konnikova 2013; Lee 2014). Another study observed 82 Facebook users for a

two week period and revealed that spending time in Facebook can lead to depression and decreased feelings on personal wellbeing (Savastio 2013). Furthermore, studies have shown that social media can facilitate a sense of narcissism in the users (Kietzmann et al. 2011). For instance, they identify that social media encourages the younger population to become extremely narcissistic especially by allowing them to promote themselves through photographs and also by making them boast about the number of friends they have in each profile (Pearse 2012).

Defining the Constructs

To investigate how social media use, influence the degradation in human well-being, in this study, we develop a theological foundation to explain this phenomenon. More specifically, we employ the *Theravada* Buddhist view which suggests that human degradation can occur with the influence of five defilements, namely, (i) sensual desire, (ii) ill will, (iii) sloth and torpor, (iv) restless and remorse and (v) skeptical doubt (Bhikkhu Bodhi 2005; Guenther and Kawamura 1975; Traleg Kyabgon 2001). When describing the five defilements, where possible we relate them to the social psychological literature for added credibility.

Sensual Desire

The 'sensual desire' denotes greed and sexual lust. According to Buddhist explanation, frequently giving unwise attention to objects or people nourish the arising of sensual desire that has not arisen. It also increases and strengthens the sensual desire that has already arisen (Bhikku Bodhi and Bhikkhu Nanamoli 1995, SN 46:51). This notion alludes to the mind's tendency to latch on to something that attracts it; a thought or a visual object. The basic premise of this notion is that, when one allows the mind to indulge in such attractions, the person loses their concentration. As such, sensual desire is singled out as particularly hazardous to human beings, because reaching for pleasure and avoiding pain are tautologically desirable. Even when the mind is still enough not to be caught up in other desires, the enticement of pleasure can still be operating (Nyanaponika 1994). In sociology, similar notions have been discussed under online infidelity (Cravens et al. 2013) and greed (Krekels and Pandelaere 2015). Glass and Wright (1992) identify that online infidelity can be sexual, emotional or combination of both groups of behaviors. Further, Cravens et al. (2013) highlight that Facebook users reported a range of different Facebook-specific inappropriate behaviors such as "friending an ex-partner or ex-spouse, friending attractive members, sending private messages to the opposite sex... (Cravens and Whiting 2014, p. 328)." These behaviors attribute to the mind's tendency to latch on to desirable things. Moreover, social media users purport to share the 'best life examples,' which would lead to a false impression that everyone else is doing better than me (Manago et al. 2012). In addition, due to social comparison, people tend to strongly desire another person's superior quality, achievement, or possession (van de Ven et al. 2009) and develop greed over time (Krekels and Pandelaere 2015). The very nature of social media (Ngai et al. 2015) facilitates heighten sexual lust and greed through receiving exposure to vast amounts of unfiltered material (Miranda et al. 2016), product placements (Zeng and Gerritsen 2014), exposure to cultivating false intimacy (Zhan et al. 2016), engaging through fake-profiles (Ngai et al. 2015), or be taken advantage of relationships for their benefit (Zhan et al. 2016). In measuring the construct sensual desire, we developed measures for sexual lust and adapted measures from the Dispositional greed scale (Krekels and Pandelaere 2015) to measure greed.

Ill Will

In Buddhist philosophy, Ill will refers to the desire to punish, hurt or destroy (Bhikkhu Bodhi 2005; Traleg Kyabgon 2001). However, ill will is not only unique to Buddhist philosophy, but also recognized in general psychology. It includes sheer hatred of a person, or even for a situation. The Buddhist readings suggest that ill will can generate so much negative energy in a person, that it is both seductive and addictive (Khenchen Thrangu Rinpoche 1993). Moreover, at the time of a person being angry, it always appears justified, but it easily corrupts our ability to judge fairly. In psychology, ill-will is related through anger or aggression, where anger is defined as "an emotion associated with a desire to harm someone or drive that person away" (Kalat 2005). When explaining the causes of anger, Kalat (2005) employs the frustration-aggression hypothesis and highlights that individuals feel anger when they meet obstacles when achieving something positive in life. Anger can manifest through avoiding interactions with people,

emotional reaction and quick responses without accuracy (Tucker-Ladd 2004). According to Cravens et al. (2013), the use of Facebook acts as a catalyst for anger. The 'openness,' 'reachability,' anonymity prevalent in social media (Kietzmann et al. 2011; Miranda et al. 2016) means that people can express their frustration and aggression without thinking of its consequences. As such, considering the aforementioned and assessing the literature on measuring anger (Spielberger 1999), the measures for ill will were developed.

Sloth and Torpor

Sloth and torpor is a dull, morbid state that is characterized by unwieldiness, lack of energy and opposition to wholesome activity. It is also a state of laziness that demotivates people to engage in productive work. In Buddhist philosophy, sloth is defined as the sluggishness or dullness of mind. Its characteristic is lack of driving power. Its function is to dispel energy and gives a sinking feeling to one's mind. Torpor is the morbid state of the mental factors, that can be characterized by unwieldiness. Its function is to smother. It is manifested as drooping, or as nodding and sleepiness. Its proximate cause is the same as that of sloth (Ajahn Brahm 2006; Bhikkhu Bodhi 2005). In psychology boredom is a similar notion that relates to Sloth and Torpor, where it is defined as an unpleasant, transient affective state in which the individual feels a pervasive lack of interest and difficulty in concentrating on the current activity (Fisher 1993). According to Lampe et al. (2006) one of the motivations for engaging in Facebook is to relieve boredom. But, use of social media diminishes the productivity of a person and increase absenteeism. Pempek et al. (2009) show that students use Facebook regardless of how busy they were highlighting how social media use trigger sluggishness among users. While there is no direct evidence of social media platforms evoking laziness or boredom, there is ample evidence of social media contributing to work aversion (Williams et al. 2012) and creating lack of attention. In developing the items for sloth and torpor, we reviewed literature on measuring sluggishness and sluggish cognitive tempo and adapted the measures for this context (Carlson et al. 1986; Penny et al. 2009).

Remorse and Restlessness

In Buddhism, remorse and restlessness refers to all the mental activities that go on in our mind due to its restless nature (Traleg Kyabgon 2001). As such, remorse and restlessness not only meant that one is regretting about the past acts, but also includes worrying about the future (Ajahn Brahm 2006). In simple terms, restlessness can be like a monkey, always swinging on to the next branch, never able to stay long with anything. It is caused by the fault-finding state of mind which cannot be satisfied with things as they are and so must move on to the promise of something better, forever just beyond (Ajahn Brahm 2006). In psychology, remorse and restlessness can be identified as related to anxiety and it is considered to have a negative impact on one's mental health. According to Wang et al. (2011) social media users regret for what they post on their social media sites for several reasons: (i) not considering the consequences, (ii) the need to be perceived in a favorable way, (iii) misjudgment and (iv) the state they are in (i.e., influence of drugs). Moore and McElroy (2012) in their study further highlight how users regret for posting inappropriate content on Facebook. As such, it is evident that, the use of social media has an influence on planting remorse and restlessness in one's mind. We developed items for measuring this construct by analyzing literature on social media and regret.

Doubt

Doubt is a state of confusion that refers to question about one's ability to understand and implement certain actions. When in doubt, one will procrastinate and question one's own ability or question the people around them (Ajahn Brahm 2006). The ubiquity of social media platforms has made them a fertile ground for relationship betrayals (Cravens et al. 2013). Furthermore, users can access their social media sites at work or home without getting into trouble and also, all the activities on social media sites can be kept private (Cravens et al. 2013). As such Hesper and Whitty (2010) found that one in three couples reported monitoring their partners' Internet activities. In fact, doubt can lead to relationship issues and in return, such issues can affect both the physical and mental health of the individuals. For example, a research based on positive and negative thoughts about partners has shown that due to the importance of maintaining relationships in everyday life, relationships can affect both physical and mental health of human beings (Zhan et al. 2016). Therefore, social media may implant doubt in one's life and mental

condition which would ultimately lead to personal degradation. In measuring doubt, we developed items using suspicion scale (Levine and McCornack 1991) and we adapted them by reviewing literature on social media use and its influence on doubt (e.g., Cravens et al. 2013; Cravens and Whiting 2014; Hesper and Whitty 2010).

The Model, Instrument and the Sample

Figure 1 depicts the a-priori model. It includes human degradation as the independent variable with five sub-constructs and the associated measures derived through the foundations of Buddhist philosophy. The five sub-constructs of the independent variable are all conceived and measured as a formative composite construct. The a-priori model sub-constructs: (i) need not co-vary, (ii) are not interchangeable and (iii) cause the core-construct as opposed to being caused by it. In addition, the model may include different antecedents and consequences for potentially different nomological networks (Cenfetelli and Bassellier 2009; Jarvis et al. 2003; Petter et al. 2007). Henseler et al. (2016) specify that composite constructs can be employed to conceptualize, operationalize and estimate emergent, strong, complex and "man-made" (or "firm-made") concepts.

As the dependent variable, we measure satisfaction with life. As such, we employ the satisfaction-with-life questionnaire (SWLS) construct as per Diener et al. (1985). The SWLS was developed to assess satisfaction with the respondent's life-as-a-whole – precisely what we wanted to measure. The scale has been conceptualized using two components: (i) the emotional or affective component and (ii) the judgmental or cognitive component (Pavot et al. 1991). The scale does not assess satisfaction with life domains such as job satisfaction or finances, but allows researchers to integrate and weight these domains in whatever way they choose. Moreover, (i) number of friends, (ii) hours spent daily on social media, (iii) gender, (iv) age group, and the (v) motivation to use social media were included as moderating variables.
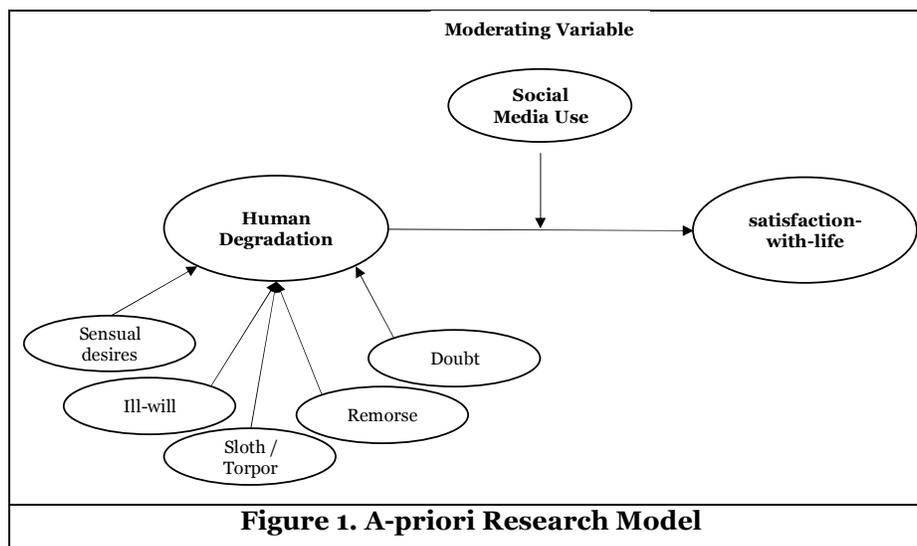

Figure 1. A-priori Research Model

In defining the social media use as the moderating variable, this study subscribes to Baron and Kenny (1986, p. 1174) definition of a moderator as a variable that "affects the direction and/or strength of the relationship between an independent or predictor variable and a dependent or criterion variable." The idea of the moderating effect is related to the premise in contingency theory that the effect of X variable on Y variable can be stronger or weaker, depending on other factors, which are moderators. A moderator influences the strength of the impact of X on Y (Henseler and Fassott 2010).

In total, there were 30 measurement items that were developed to measure the constructs (25 measuring human degradation, 5 measuring satisfaction-with-life and 5 for the moderating variable). It commenced with a section that captured the demographic and usage details necessary for moderating variable. To measure the dependent variable (satisfaction-with-life) 5 items were employed. All 20 items for the five

defilements were newly developed, using the social psychological references where available. The survey[1] designed to operationalize the constructs and measures employed a seven-point Likert scale with the end values of (1) "Strongly Disagree" and (7) "Strongly Agree" and the middle value of (4) "Neutral." The survey instrument included (depicted in Table 1) a cover page, which stipulated the code of conduct and ethics of data collection. It also included a clear description for each construct, where the constructs were explained using a common, easy-to-understand definition. The survey was disseminated to completely randomized samples across several countries in the Asian continent and were hand-collected. Comparing the sample descriptive statistics with publicly available Facebook user data revealed that the sample is a reasonable depiction of the population. Moreover, it was decided not to employ an on-line survey to avoid possible biasness arising by using the same technology foundations as the phenomenon of interest. A sample of 480 respondents were selected (*Average* $_{age}$=28.52, *SD* $_{age}$=5.89; 53% Males; 32.6% South Asian, 37.5% South-East Asian, 30.4% Caucasians) using off-line data collection approaches.

Data Validation

The model and construct validation was completed using: (i) content validity (which was tested using the content validity ratio), (ii) construct validity (which was tested using the composite reliability, average variance extracted – AVE, and factor analysis), (iii) the outer model (which was tested using the partial least squares technique) and (iv) the structural model and moderation effect (which were tested to determine the relationship between the independent variable, moderating variable and the dependent variable).

Content Validity and Construct Validity

Since the constructs and the items of human degradation were derived specifically for the study, the establishment of content validity was a priority. The current study followed the guidelines of McKenzie et al. (1999) for establishing content validity, which entailed four steps[2]: (i) using the guidelines of Lynn (1986), an initial draft of the survey instrument was created by canvassing the related literature from Buddhist archival and social psychological literature; (ii) following the guidelines of the American Educational Research Association (2002), a respondent panel of 25 participants was established to review and evaluate the possible survey questions, ensuring that the panel had the necessary training, experience and qualifications; (iii) the panel critiqued the survey constructs; and (iv) the panel conducted a review of the questionnaire, assessing how well each item was represented as a reflective measure of each sub-construct. In this fourth step, a quantitative assessment was made, establishing the content validity ratio (CVR) for each item/question based on the formula by Lawshe (1975). Based on 25 pilot tests, a CVR value of 0.80 was observed at a statistical significance of p<0.05. Feedback from the pilot round respondents resulted in minor modifications to the wording of the survey items (Lawshe 1975; Lynn 1986; McKenzie et al. 1999) and endorsement of the research model, its sub-constructs and measures. Construct validity for each sub-construct was established using factor analysis, composite reliability and AVE.

In establishing construct validity, we first determined the discriminant and convergent validity through factor analysis, whereby the individual item loadings of the sub-constructs were all above 0.5 on their assigned factor and that the loadings within the sub-constructs were higher than those across the sub-constructs. The measures demonstrated satisfactory reliability as the reflective factor loadings were all above 0.58, which is well above the proposed threshold level of 0.5 (Hulland 1999). Further, there were no cross-factor loadings of above 0.30. Next, the internal consistency was measured, as well as the discriminant and convergent validity, following similar studies (e.g., Wixom and Todd 2005). Strong and significant composite reliability was observed for all the sub-constructs of human degradation, reporting above 0.77 (Nunnally 1967), with alpha values of 0.89 for support for (i) sensual desire (0.88), (ii) ill will (0.92), (iii) sloth and torpor (0.86), (iv) restless and remorse (0.85) and (v) doubt (0.90) (all values significant at 0.001 levels).

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[1] Survey method was used to test the model as it is appropriate for obtaining personal and social facts and attitudes and increases the generalizability

[2] The four-step approach followed here is analogous to the Q-sort approach for attaining content validity

Finally, convergent validity was established through the AVE. All the sub-constructs of the independent variable demonstrated satisfactory convergent and discriminant validity, with the AVE for all the sub-constructs measuring above 0.5 (Fornell and Larcker 1981) and the AVE of each sub-construct is greater than the variance shared between the sub-construct and other sub-constructs in the model (Chin et al. 1988), indicating strong discriminant validity. Results are depicted in Table 2.

Table 2. Construct correlation matrix					
	1	**2**	**3**	**4**	**5**
Sensual Desire (1)	0.771				
Ill Will (2)	0.312	0.843			
Sloth / Torpor (3)	0.209	0.241	0.801		
Restless / Remorse (4)	0.214	0.133	0.199	0.893	
Doubt (5)	0.304	0.277	0.116	0.231	0.944

Sharma et al. (2009) advise against the common practice of gathering perceptual data on both the independent variable and the dependent variable from the same respondent, as it may create common method variance (CMV). However, recent studies argue that it is unlikely that a composite model suffers from common method bias (Rueda et al. In Press). Even so, paying attention to the need to reduce CMV, the items for defilements and satisfaction-with-life were subjected to the Harman (1976) one-factor test. The result did not lead to a single factor solution; thus, confirming that CMV was unlikely.

Testing the Structural and Measurement Models

For the testing of the outer and inner models, the study employed the partial least squares technique using SmartPLS software (Ringle et al. 2005). The partial least squares test (Wold 1989) is a structural equation modeling technique that is well suited for highly complex predictive models and that supports the mapping of formative observed variables (Becker et al. 2012; Chin et al. 1988; Henseler and Sarstedt 2013; Wold 1989). SmartPLS was used together with the bootstrap resampling method (5000 resamples) to determine the significance of the paths within the structural model (Gefen et al. 2000; Petter et al. 2007). As suggested by Diamantopoulos and Winklhofer (2001, p. 272), the test of the outer model employs global items that "summarize the essence of the construct that the index purports to measure" and examine the extent to which the items associated with the index correlate with these global items. For this purpose, the five criterion measures that provides an overarching measure of the construct were included in a separate section of the survey instrument. SmartPLS cross-item loadings indicated that there were no major cross-factor loadings, confirming our earlier observations. Correlating the measurement items with the two global measures demonstrated significant correlation coefficients at the 0.001 level. Next, using SmartPLS software and following structural equation modeling techniques, the a-priori measurement model was tested. The findings revealed that the more their life satisfaction levels declined with the increasing levels of the defilements, $B = -.312$, $\beta = -.224$, $t = -2.39$, $p = .02$. Interestingly, the moderating variables (e.g., number of Facebook friends, time spent daily on social media) did not yield any significant interaction effects ($p > .33$).

Furthermore, a post-hoc analysis was conducted to observe the direct effect of the five constructs on the life satisfaction construct. It also revealed strong and significant path coefficients (β at p <0.005 confidence level) for all defilements, yielding the following results $\beta_{sensual\ desire} = 0.28$, $\beta_{ill\ will} = 0.32$, $\beta_{sloth\ and\ torpor} = 0.33$, $\beta_{remorse\ and\ restlessness} = 0.24$, and $\beta_{doubt} = 0.37$. With the individually regressed coefficients of all constructs are substantial and significant, it may be tempted to call a 'rank order' of constructs based on the coefficient values. While the preliminary findings presented herein are encouraging, developing such an argument requires further validation and generalizability through larger sample and diversity.

Discussion

This research commenced with the objective of answering to the research question "does the social media usage influence subjective well-being?" The relevance of this research to IS academia (and in general to the public) stems from the advent and the mass proliferation of social media within a relatively short period which has revolutionized the way individuals socialize with one another (Miranda et al. 2016),

spend their spare-time (Lampe et al. 2006) and express opinions (Leonardi 2014; Palekar et al. 2015). In general, social media is one of the greatest influencers in the modern history (Sedera et al. 2017). The question whether using social media changes the subjective well-being can be confirmed through multiple theoretical and philosophical lenses. We engaged in this vexing issue by conducting a study based on theological principals of Buddhism.

As such, we devised a model of 5 constructs which included (i) sensual desire, (ii) ill will, (iii) sloth and torpor, (iv) restless and remorse and (v) doubt. Data gathered from a sample of 480 respondents was employed in the analysis. The analyses performed above (i) validated an instrument that allows IS researchers to engage in research on the 'dark-side' of social media engagement, (ii) indicated that human degradation declines with how satisfied the participant are with their lives. Would engaging in any solitary activity similarly predict declines in well-being? We suspect that they would *not*. Because people often derive pleasure from engaging in some solitary activities such as exercising or reading. Supporting this view, a number of recent studies indicate that people's *perceptions* of social isolation (i.e., how lonely they feel)— a variable that we assessed in this study, which did not influence our results — are a more powerful determinant of well-being than *objective* social isolation (Cacioppo et al. 2011).

One might be tempted to question the generalizability of this study and see parallels between social media use and engaging in any Internet activity (e.g., email, web surfing). Here too prior research suggests that the mere use of the technology would not compromise one's well-being. For example, a number of researchers have found that interacting with the Internet predicts changes in well-being depends on *how* you use it (i.e., what sites you visit) and *who* you interact with (Bessiere et al. 2008). Our findings are somewhat contradictory to such studies. Since the social media use was not a significant moderator of the model, we can hypothesize that *any* use of the social media has the potential to augment defilements in a human.

Although these findings are encouraging, they also raise numerous future research opportunities. First, can these findings be generalized? The sample employed herein included predominantly young adults. While the core Facebook user demographic is like those who took part in the study sample, examining whether these findings can be generalized to additional age groups requires further data collections. Moreover, future research should also examine whether these findings generalize to other online social networks – more specifically geographically specialized ones. As a review of the Facebook literature indicated "[different online social networks] have varied histories and are associated with different patterns of use, user characteristics, and social functions (Wilson et al. 2012, p. 205)." Therefore, it is possible that the current findings may not neatly generalize to other online social networks. Second, what mechanisms underlie any toxic effects of social media usage on well-being? Some researchers have speculated that online social networking may interfere with physical activity, which has cognitive and emotional replenishing effects (Kaplan and Berman 2010) or trigger damaging social comparisons (Haferkamp and Krämer 2011). Igniting damaging social comparisons may trigger thoughts of greed, ill will, remorse and doubt. As such, it becomes a particularly interesting notion when considering the growth of social media platforms. Therein, when more people interact with others, the more strongly social media can predict declines in their affective well-being. Examining whether these or other mechanisms explain the relationship between social media usage and well-being is important both from a basic science and practical perspective. Finally, although the analytic approach we used in this study is useful for drawing inferences about the likely causal ordering of associations between naturally occurring variables, experiments that manipulate social media use in daily life are needed to corroborate these findings and establish definitive causal relations.

There are several practical implications that could derive through the study. First, intervention procedures, either automatic or manual, can be included as guidelines to control daily social interactions and addictive properties. Such work will depend on establishing guidelines based on repeated testing of the model and a clear demonstration of *how* social media use prevalence leads to degrading human qualities. Plans are underway to investigate such propositions in future work. Second, the current study findings can act as a self-assessment for any individual to reflect their individual daily practices and assess whether such defilements augment with social media use. We believe that self-assessment is one of the best ways to determine possible human degradation.

There are several limitations and extensions to the study. First, although we observed statistically significant associations between human degradation and well-being, the sizes of these effects were

relatively small. This should not, however, undermine the practical significance. Subjective well-being is a multiply determined outcome—it is unrealistic to expect any single factor to powerfully influence it. Moreover, in addition to being consequential in its own right, subjective well-being predicts an array of mental and physical health consequences. Therefore, identifying any factor that systematically influences is important, especially when that factor is likely to accumulate over time among large numbers of people. Second, asking participants to indicate how good or bad they feel using a single scale, as we did in this study, can introduce biasness. Future research can administer continuous scales or objective data to assess positive and negative effect separately to address this issue.

Table 1. Survey Instrument
CONSTRUCT: Sensual Desire
Sexual Desire
It is okay to get attracted to people one meet on Facebook
It is okay for someone to start casual relationships on Facebook
It is okay to interact with posts (i.e. upload, browse) that arouse one's sexual desires
Overall, the use of Facebook increases one's sexual desires
Greed – Developed and adapted from Krekels and Pandelaere (2015)
I have a strong desire to own what I see on Facebook (e.g., clothing, vehicles)
It is okay to copy lifestyle choices (e.g., clothing, smoking, travel) of others that you see on Facebook
The use of Facebook has increased the pursuit of my life ambitions and goals
My Facebook use has encouraged me to peruse lifestyle options of others
CONSTRUCT: Ill will – Developed and adapted from Spielberger (1999)
I sometimes get frustrated with what I see on Facebook
I react negatively on people who has hurt me or another person emotionally/physically
I avoid posts of certain people that I dislike
I regularly feel angry after using Facebook
I feel calm when I don't use Facebook
CONSTRUCT: Sloth and Torpor – Developed
I often browse Facebook while working or studying
Logging onto Facebook has become a daily routine of my life
My parents or partner advise me not to spend too much time on Facebook
Overall, the use of Facebook makes it difficult to focus on other things in life
CONSTRUCT: Remorse and Restlessness – Developed
I regret uploading certain photographs or posts on Facebook
Whenever I upload a post or pictures on Facebook, I check it regularly to see if anyone has commented or liked my post or picture
After browsing Facebook, I find it difficult to concentrate on my work or studies.
Overall, Facebook posts and comments make me restless
CONSTRUCT: Doubt – Developed and adapted from Levine and McCornack (1991)
When I see negative/bad comments about friends/partner, I start worrying whether they hide certain things from me
It is okay to check my partner's Facebook profile when he/she is not around
Most people only tell what you want to hear on Facebook
Overall, I feel that people are dishonest on Facebook
CONSTRUCT: The satisfaction with life - adapted from (Diener et al. 1985)
In most ways, my life is close to my ideal.
The conditions of my life are excellent.
I am satisfied with my life.
So far, I have gotten the important things I want in life.
If I could live my life over, I would change almost nothing.

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