"I Got the Job!": An Exploratory Study Examining the Psychological Factors Related to Status Updates on Facebook

Abstract

Status updates on Facebook are a common enough phenomenon. When something good happens in one's life, an update may be posted. Conversely, when something isn't going right, a status update to that effect may also be posted. For those of us that use Facebook, we see this every day and may in fact be contributing to it. Nonetheless, the regular sharing of personal information also poses both a security and privacy risk. Thus, it is important that we understand the extent to which people post various types of information on social networking sites, such as Facebook. In this study, we develop an instrument to measure two types of status updates on Facebook: those that are positive in content and those that are negative. We then use this instrument, in conjunction with instruments that measure personality and trait affect, to determine to what extent various psychological factors may help explain the degree and nature of posting status updates on Facebook. This was done by performing two statistical analysis techniques: Pearson correlations and the use of partial-least-squares structural equation modeling (PLS-SEM). Overall, 14 out of 16 hypotheses were supported in at least one of the two statistical analysis techniques.

Keywords: Facebook status updates; social networking; psychological factors; personality; trait affect; security and privacy

1. Introduction

Facebook and other social networking sites allow people to communicate and stay connected with friends, family members, coworkers, and even acquaintances through instant messaging and/or sharing information via status updates (Hampton, Goulet, Rainie, & Purcell, 2011). Status updates on Facebook are a common enough phenomenon. When something good happens in one's life, an update may be posted. Conversely, when something isn't going right, a status update to that effect may also be posted. For those of us that use Facebook, we see this every day and may in fact be contributing to it.

While posting status updates on Facebook may seem like an innocuous activity and is no doubt something a vast number of people enjoy doing, being so open with certain types of information also poses both a security and privacy risk. This paper explores this type of activity by Facebook users and seeks to find to what extent, if any, it may be related to certain psychological factors, such as personality and various types of trait affect. Facebook is the ideal platform to do this as it is the most popular social networking site. Over half of its users actively use Facebook daily (Hampton et al., 2011).

In the remainder of this section, we will discuss information sharing on the Facebook platform, followed by a discussion on personality types and its relationship to Facebook use, and finally trait affect and Facebook use.

1.1 Information Sharing and Facebook

Information sharing can be loosely defined as the disseminating of information such that the information reaches those people to whom it is valuable and yet does not interfere with the information processing of people who will find no value in its contents (Malone, Grant, Turbak, Brobst, & Cohen, 1987). The greatest difficulty with information sharing is controlling what places and areas the information reaches. On the Internet in general and social media in particular, there is no real way to control the spread of information; once it is out there it is out there forever.

Facebook is perhaps one of the most widely used social media sites composed of over 1 billion users representing almost all ages, education levels, and cultural backgrounds. It has grown to become the most popular means of communication in adolescents globally. Online social media sites, like Facebook, have security and access controls that are weak by design. This is done to leverage their network components and enhance their growth by making certain attributes like registration, access, and information sharing uncomplicated. These characteristics of Facebook coupled with the decline in cost and mining of storing data online has led to the increased use of information sharing (Dawes, 1996).

Facebook usage can be broken down into passive consumption and active participation. Passive consumption of Facebook can be described as perusing through the newsfeed and browsing profiles while active participation can be defined as actual interactions with various users on Facebook and much more in the way of information sharing (Jin, 2013).

The largest concern with the increase of information sharing is that personal information that is provided by social media sites remains in existence essentially forever. This puts personal information, most of which is provided by default from social media sites like Facebook, at risk of manipulation for long periods of time. As security infrastructure for encrypting personal information remains underdeveloped, the chances of data leakage remains at an all-time high (Dawes, 1996).

People are more likely to engage in information sharing when they feel more inclined to engage in prosocial transformations (Constant, Kiesler, & Sproull, 1994). This is when people wish for good outcomes, not only for themselves, but also for the organization that they work for and the other employees that are a part of it (Constant et al., 1994). Thus, it is safe to assume that people that are experiencing a comfortable and positive working experience, are more likely to engage in high levels of information sharing without knowledge of the risks and concerns information has to offer.

1.2 Personality and Facebook Use

Status updates make it easy for people to seek support, empathy, and advice. Examining the role of psychological factors related to the users using the big five personality traits (extraversion, agreeableness, conscientiousness, and neuroticism, and openness) and types of affect (angry, happy, sad, etc.) will help reveal how individuals either seek or do not seek support.

The five-factor model has been widely used to analyze social media trends in relation to personality traits. The five factor model consists of the personality traits neuroticism, extraversion, openness, agreeableness, and conscientiousness (Hughes, Rowe, Batey, & Lee, 2012). People who have higher levels of openness and neuroticism are more drawn to social media sites. The anonymous nature of social media sites tends to attract people who are less comfortable with themselves and who have an unusual difficulty engaging socially with other people when they are face to face.

It has been suggested that high levels of social media usage can be beneficial in helping people overcome feelings of low satisfaction and low self-esteem (Correa, Hinsley, & De Zuniga, 2010). The content of what people post has also been shown to be influenced by personality, such as those higher with respect to the personality trait openness posting a greater number of intellectual topics on Facebook (Marshall, Lefringhausen, & Ferenczi, 2015).

Neuroticism can be defined as the measure of affection and emotional control individuals have; those that have higher levels of neuroticism exhibit poor control over emotions and stability (Hughes et al., 2012). Likewise, they tend to show higher social media usage (Correa et al., 2010; Hughes et al., 2012). This higher level of social media usage is likely done in part to reduce loneliness (Ross et al., 2009).

Extraversion can be defined as showing high social skills and a propensity to be surrounded by a large group of individuals. Individuals with higher levels of extraversion had a greater tendency to use social media sites and generally had more friends on Facebook than others (Hughes et al., 2012). Extraverted individuals also believe that their "real" self is located online (Ross et al., 2009).

Openness can be defined as an attribute with a high interest for new experiences and is characterized by broad, novelty seeking interests (Hughes et al., 2012). Openness to experience has shown a positive correlation with social media usage as well as a particularly keen desire for trying new methods of communication (Hughes et al., 2012; Ross et al., 2009).

Agreeableness describes how friendly people are. Studies have shown that less agreeable people have more contacts found online (Hughes et al., 2012). This is because these individuals find it particularly difficult to make friends face to face and resort to other methods such as Facebook, where interactions are not so instantaneous.

Conscientiousness can be used to describe a person's work ethic, thoroughness, and orderliness. People that are high in conscientiousness tend to be more inclined to avoid social media sties as they believe that they promote procrastination and distraction (Hughes et al., 2012; Ross et al., 2009).

In one of the first published studies on personality types and Facebook behavior, Ross et al. (2009) surveyed 97 students (85% female; 15% male) at a university in Southwestern Ontario. They found that extraversion was associated with the number of groups one belonged to, but not to the number of Facebook friends or time spent online. Neuroticism was related to Facebook Wall usage with those higher on the neuroticism scale more likely to prefer this feature compared to those with lower levels of neuroticism instead preferring to post photos on their Facebook profile. They did not find agreeableness, conscientiousness, or openness to be related to Facebook usage.

In order to counter some methodological limitations in the study by Ross et al. (2009), Amichai-Hamburger and Vinitzky (2010) partially replicated their study with a larger sample size and a method that would examine how individuals build their profile instead of a self-reported survey. Both studies concluded that the online friend group size is reflective of their offline social network. Introverts have smaller social networks and extroverts have the larger friend count. The main inconsistency between these two studies focuses on the neuroticism trait. For example, Ross et al. (2009) found that those with higher levels of neuroticism were less likely to share overly personal information and only post textual content. In contrast, Amichai-Hamburger and Vinitzky (2010) found that they were more likely to upload photos when compared to those who had as having lower levels of neuroticism.

This is important because seeking support on social networking sites or just general usage can make one vulnerable to cyber security threats, such as identity theft and stalking. An individual's personality is related to their behavior and motivations to use Facebook. Those whose personality is high on the trait of neuroticism preferred to use the wall feature of Facebook and were more likely to avoid sharing irrelevant personal information such as home address or phone number. On the other hand, those who are low in neuroticism are more likely to post photos rather than textual posts, which can reveal their location (Ross et al., 2009).

1.3 Affect and Facebook Use

Affect has come to mean several different things in the literature with mood and emotion often used interchangeably with what is meant by affect (Ekman & Davidson, 1994; Isen, 1984; Schwarz & Clore, 1996; Waters, 2008). However, this becomes problematic since each term means something slightly different. Emotion can be defined as a short-lived phenomenon that occurs in response to a stimulus (Isen, 1984). In contrast, mood lasts longer and is not as intense as emotion. Both mood and emotion are types of affective states that fluctuate over time (Waters, 2008; Watson & Tellegen, 1985). They include such things as fear, sadness, surprise, and attentiveness (Watson & Clark, 1994).

In contrast to state affect, trait affect represents a generally stable and life-long type of affect that changes very little over time, similar to personality traits. It is composed of the higher order dimensions positive affect and negative affect, which represent the valence of mood descriptors (e.g., afraid, scared, nervous, guilty, active, alert, enthusiastic, excited), as well as the lower level dimensions that reflect the specific qualities of the individual affects (i.e., fear, hostility, guilt, sadness, joviality, self-assurance, attentiveness, shyness, fatigue, serenity, and surprise) (Grös, Antony, Simms, & McCabe, 2007; Watson,

Clark, & Tellegen, 1988; Watson & Walker, 1996). The lower order dimensions are classified as positive, negative, or other.

While few studies have been done examining the many complexities of affect and Facebook use, some have been done that look at loneliness and the impact interactions on Facebook may have on it. Lonely individuals are more likely to experience difficulties in maintaining or developing relationships and therefore turn to social media sites because it reduces social boundaries (Jin, 2013). And while active participation on Facebook may help some, passive consumption has led to more loneliness in adolescents (Jin, 2013).

The social compensation hypothesis states that features of online communication can be used to compensate for weaker social skills in lonely adolescents, which can result in making online relationships appear more attainable (Jin, 2013). Thus, lonely individuals tend to use Facebook for creating relationships and then maintaining these relationships. Increased Facebook behavior has shown a decrease in loneliness for adolescents and can be used to improve cases of lonely individuals.

The outline of this paper is as follows. First, we discuss the methods that we employ in this study. This includes the development and validation of two nine-item scales to measure status updates by individuals on Facebook—one for updates that are considered positive in content and another for what is considered negative. Second, we develop 16 hypotheses based on theories related to personality and affect. Third, we analyze the results using two primary statistical analysis techniques. This includes performing simple Pearson correlations followed by modeling the hypothesized relationships using partial least squares structural equation modeling (PLS-SEM). Fourth, we discuss the results of this study and what the implications may be. Finally, we end with some concluding remarks on possible future work.

2. Material and Methods

2.1 Participants

The current study involves human participants and as such IRB approval was sought and obtained prior to the collection of data for the study. Participants were recruited in the United States using Amazon's Mechanical Turk, which has been shown to be an efficient and reliable method of collecting survey responses (Dupuis, Endicott-Popovsky, & Crossler, 2013). The survey itself randomly assigned participants to one of two versions of the survey: personality or trait affect. Thus, a between-subjects design was used. Two quality control questions were employed in both cases. Participants that failed either quality control question had their responses eliminated from further data analysis. The overall acceptance rate was approximately 91%.

The final number of participants for the survey that incorporated measures related to personality was 1,092 (53% female; 47% male) compared to 1,114 (55% female; 45% male) for the survey on trait affect (Anonymous for review, n.d.). The overall average age of participants was 36. More than 92% of them use Facebook at least once per month with over 51% using it several times per day or more. Next, we will discuss the survey instruments that were used in the study.

2.2 Survey Instruments

The current study concerns itself with measuring the big five personality traits and various components of trait affect. Previously developed and validated instruments were used to measure these psychological factors. For the five personality traits examined, The Big Five inventory was used (Benet-Martínez & John, 1998; John, Donahue, & Kentle, 1991; John, Naumann, & Soto, 2008).With respect to trait affect, we examined both the higher order dimensions of affect—positive and negative—as well as the lower order dimensions of affect—fear, guilt, hostility, sadness, joviality, self-assurance, and attentiveness (Watson & Clark, 1994). This was done using the PANAS-X (Watson & Clark, 1994). While not examined using structural equation modeling as we did with the aforementioned types of affect, we did assess the correlations of four other types of lower order dimensions of affect: shyness, fatigue, serenity, and surprise.

Beyond these psychological factors, our primary focus was on assessing how they may be related to the types of status updates provided by individuals on the social networking platform Facebook. Since existing instruments do not exist as far as we could determine, we developed our own. Following the general guidelines from Churchill (1979) and Straub (1989), we began with construct domain specification. In the current context, we were concerned with developing a representative sample of the types of status updates users of Facebook post. To further delineate these types of posts, our desire was to classify them as either positive or negative. Positive status updates represent the sharing of good news or something positive in one's life, such as a promotion, graduating school, getting engaged, etc. In contrast, negative status updates represent something that is not desirable, such as losing a job, a death of a loved one, feeling sad, etc.

Next, we surveyed the literature. While several studies have been done on the types of things people post on social networking sites (Christofides, Muise, & Desmarais, 2012; Clerkin, Smith, & Hames, 2013; Dwyer, Hiltz, & Passerini, 2007; Garg, Benton, & Camp, 2014; Jin, 2013; Johnson, Egelman, & Bellovin, 2012; Moore & McElroy, 2012a, 2012b; Teppers, Luyckx, Klimstra, & Goossens, 2014), most of these studies were either too specific with respect to what was being studied or too general in nature to be useful for the current research insofar as item development was concerned. Nonetheless, they did provide some useful ideas to help in brainstorming the various types of status updates people post on Facebook. These ideas were used in our subject matter expert panel review.

We convened a subject matter expert panel to assist in developing items that we could use in our study. Generally speaking, subject matter experts have a certain amount of experience in a specific industry or trade. However, in the current context the most useful subject matter experts turned out to be frequent users of Facebook. Thus, we used a modified version of the Delphi technique in order to reach consensus on a representative sample of both positive and negative status updates seen on Facebook (Boulkedid, Abdoul, Loustau, Sibony, & Alberti, 2011; Dalkey & Helmer, 1963; Duffield, 1988; Hasson, Keeney, & McKenna, 2000; Powell, 2003). This technique has been employed successfully in past information systems research (Aladwani & Palvia, 2002; Dupuis, Crossler, & Endicott-Popovsky, 2016).

Our first round consisted of brainstorming in a private online forum. This allowed for individuals to feel more free in providing ideas and responses, which can sometimes be hampered when a Delphi technique is used in-person and with dominant personalities. After the initial brainstorming that took place online, they met three times over a course of six weeks. This allowed participants to think about their prior responses, reflect based on additional experiences on Facebook between the sessions, and

ultimately allow the group to refine a list that was representative for both positive and negative status updates. An online brainstorming session with three in-person meetings was considered a good balance between participant fatigue and further refinement of the items (Hasson et al., 2000). Consensus was considered obtained if there was 75% agreement or more on a specific item. As there is no consensus on what represents consensus, 75% was chosen to provide a good balance between 51% and 100%, two extremes often forwarded as representing consensus. The finalized list of items consisted of nine Facebook status updates classified as positive and nine classified as negative.

Next, a technical review was completed to check for wording, clarity, simplicity, etc. We wanted to make sure that the items were ultimately written in an unambiguous manner (Krathwohl, 2004). Several minor changes were made as a result.

After this was completed, we proceeded to complete a pretest of the items using cognitive interviewing techniques with individuals representative of our eventual participants (Housen, 2008; Rosal, Carbone, & Goins, 2003). As they proceeded through the survey, notes were taken on any questions they had or if their understanding of the item was different from what was intended. Minor changes were made in a few places.

The final items that we use in the current study are included in the table that follows. Of note, we decided a six-point Likert scale would be the most effective and also help mitigate common method bias to a certain extent.

Table 1: Facebook Status Update Items: Positive and Negative

How likely are you to post the following types of Facebook status updates if the situation applies to you?	
Positive Facebook Status Updates	**Negative Facebook Status Updates**
1. Job promotion or a new job	1. Asking for support and/or prayers when you, a friend, or family member have some type of medical issue, emergency, or procedure
2. Support and/or advocacy for a specific politician and/or political party	2. Feeling lonely, sad, and/or depressed
3. Feeling happy, glad, and/or excited	3. Feeling angry, upset, and/or mad
4. Birth of a child	4. Mad, angry, and/or upset at a significant other
5. Acceptance into a college, university, and/or major	5. Mad, angry, and/or upset at a friend
6. Weight loss and/or fitness goals and/or progress	6. Feeling stressed and/or dealing with a stressful situation
7. Getting engaged	7. Disdain for a specific politician and/or political party
8. Major accomplishment in an academic, sport, or work setting	8. Having difficulties in an academic, sport, or work setting
9. When you're on vacation and want to let people know	9. Major news events that have a negative outcome

With the preceding material and methods in mind and the earlier discussion on personality and affect, we developed 16 hypotheses to explore how different types of status updates on Facebook may be related to personality and affect. The development of these hypotheses follows.

3. Theory

In this study, we examine three different types of psychological factors: personality, the higher order dimensions of trait affect, and the lower order dimensions of trait affect. We will first take a closer look at personality.

3.1 Personality

Over the years, there has been a convergence in personality research that has led to the general consensus of five distinct personality types or traits, which include: extraversion, agreeableness, conscientiousness, neuroticism, and openness.

Extraversion has been defined by terms such as under-control, sociability, outgoing, social leadership, dominance, unrestraint, positive emotionality, etc. (John et al., 2008). Thus, extraversion has generally been viewed as positive in nature, but also with some negative attributes (e.g., dominance). For example, we generally do not expect people that are negative to be overly social, although there are no doubt exceptions. Therefore, we offer the following two hypotheses:

> H1: The level of extraversion is positively associated with the level of posting status updates on Facebook that are considered positive.

> H2: The level of extraversion is positively associated with the level of posting status updates on Facebook that are considered negative.

We expect that there is a greater likelihood of H1 being supported than H2 given the above discussion on how it has been viewed, but both should see some support.

In contrast to extraversion, agreeableness has been described by terms such as generosity, gentleness, modesty, warmth, affection, trust, empathy, etc. (John et al., 2008). Agreeableness has also been shown to be negatively correlated with hostility (Watson & Clark, 1994). Therefore, there appears to be ample support for a positive association with posting positive status updates on Facebook, but no clear suggestion for a possible relationship with the posting of negative status updates. To the extent that a relationship may be found for the latter, we would expect it to be negative. The following hypothesis is offered:

> H3: The level of agreeableness is positively associated with the level of posting status updates on Facebook that are considered positive.

Next, we turn our attention to conscientiousness. Some terms that have been used to describe conscientiousness include orderliness, reliability, decisiveness, achievement striving, constraint, competence, self-discipline, etc. (John et al., 2008). We expect those that are more conscientiousness will be less likely to post status updates that are considered negative. In contrast, it is more difficult to determine a relationship between levels of conscientiousness and positive status updates on Facebook. On the one hand, conscientiousness is considered a positive trait. On the other hand, those that are

more conscientious will be less likely to post in general. Given the lack of clarity with respect to this personality type, we expect that there will not be a statistically significant relationship between conscientiousness and positive status updates on Facebook. The following hypothesis is offered:

> H4: The level of conscientiousness is negatively associated with the level of posting status updates on Facebook that are considered negative.

The fourth personality type we will discuss is neuroticism. Generally speaking, we associate neuroticism with negative emotionality. Terms that have been used to describe neuroticism include insecurity, emotionality, irritability, anxiety, angry hostility, depression, self-consciousness, etc. (John et al., 2008). Therefore, we would generally expect that people with higher levels of neuroticism are more likely to post status updates on Facebook that are considered negative. Likewise, we would expect those with higher levels of neuroticism to be less likely to post status updates that are viewed as positive. We offer the following two hypotheses:

> H5: The level of neuroticism is negatively associated with the level of posting status updates on Facebook that are considered positive.

> H6: The level of neuroticism is positively associated with the level of posting status updates on Facebook that are considered negative.

Our fifth and final personality type is openness. Some terms that have been used to describe openness include intellect, imagination, creativity, values, feelings, idealism, open-mindedness, etc. (John et al., 2008). Therefore, we expect to see higher levels of openness associated with higher levels of posting positive status updates on Facebook. In contrast, personality theories do not lend any strong support to an association between openness and negative status updates on Facebook, one way or the other. Therefore, the following hypothesis is offered:

> H7: The level of openness is positively associated with the level of posting status updates on Facebook that are considered positive.

3.2 Trait Affect

In this study, we examined various levels of trait affect. Our primary focus will be on the higher order dimensions and the lower order dimensions that can be classified as either positive or negative. Nonetheless, we will explore possible correlations between the other lower level dimensions and Facebook status update behavior.

First, we are going to take a look at positive affect, which "reflects the extent to which a person feels enthusiastic, active, and alert" (Watson et al., 1988, p. 1063). Trait positive affect represents the way individuals feel like this in general. The lower level dimensions of positive affect—joviality, self-assurance, and attentiveness—further reflect this general definition, but with a higher level of specificity. Therefore, in general we expect the levels of positive affect reported by individuals to be associated with the degree to which they post positive status updates on Facebook. Although arguments could be made to support a negative association between various types of positive affect and negative status updates, we do not believe the theoretical evidence supports such hypotheses to the same extent. Nonetheless, we will note that when associations are found between the types of positive affect under investigation here and negative status updates on Facebook, such relationships will be negatively correlated. Therefore, we offer the following hypotheses:

H8: The level of trait positive affect is positively associated with the level of posting status updates on Facebook that are considered positive.

H14: The level of joviality is positively associated with the level of posting status updates on Facebook that are considered positive.

H15: The level of self-assurance is positively associated with the level of posting status updates on Facebook that are considered positive.

H16: The level of attentiveness is positively associated with the level of posting status updates on Facebook that are considered positive.

Next, we examine negative affect, which is "a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness" (Watson et al., 1988, p. 1063). The lower level dimensions of negative affect include fear, hostility, guilt, and sadness. As before, measuring the lower level dimensions allows us to examine the peculiarities of negative affect in greater detail. Similar to positive affect, the theoretical evidence most strongly supports a relationship between negative affect and posting negative status updates on Facebook. To the extent that there is a relationship between negative affect and this behavior, we would expect it to be in the opposite direction. Thus, we offer the following hypotheses:

H9: The level of trait negative affect is positively associated with the level of posting status updates on Facebook that are considered negative.

H10: The level of fear is positively associated with the level of posting status updates on Facebook that are considered negative.

H11: The level of hostility is positively associated with the level of posting status updates on Facebook that are considered negative.

H12: The level of guilt is positively associated with the level of posting status updates on Facebook that are considered negative.

H13: The level of sadness is positively associated with the level of posting status updates on Facebook that are considered negative.

Next, we discuss the results of our study.

4. Results

In this study, we applied two approaches in assessing whether certain relationships exist as hypothesized. First, we performed a simple correlation matrix using SPSS. This was done using all items that were a part of the original scale either adapted for us or developed for this study. Next, we performed additional analyses using SmartPLS v. 3.2.4. Two models were created—one for personality and the other for affect.

4.1 Common Method Bias

In survey research in general, and survey research involving a single data collection point in particular, common method bias will be of great concern. There are various approaches that can be employed to help mitigate the threat of common method bias and were employed in the current research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). For example, participants were recruited using Amazon's Mechanical Turk, which provides a high level of anonymity. Additionally, the dependent variables and independent variables were not close together in the survey. Furthermore, while most of the items measured incorporated a 5-point Likert scale, some did not. Finally, the items that made of the various constructs, such as openness, had their indicators interspersed through that section of the survey. Thus, only an individual with significant training in psychology of a copy of the instrument itself would be able to discern the specific constructs being measured.

Therefore, several factors contributed to mitigating the threat of common method bias. Nonetheless, it remains a possibility that must also be assessed post hoc. In this particular case, Harman's single factor test using both exploratory factor analysis and confirmatory factor analysis were employed (Malhotra, Kim, & Patil, 2006; Podsakoff et al., 2003). Although using Harman's single factor test is not a cure-all and does have its critics, it remains the most widely used approach to test for common method bias. In all instances, the total variance explained by a single factor was less than 27%, which falls well below the threshold of 50%. Thus, while common method bias cannot be ruled out as a contributing factor in the current research, it does not appear to be a significant factor.

Next, we assess the relationships between the constructs using simple correlations.

4.2 Correlations

Our first examination of the constructs being investigated involve simple Pearson correlations between the calculated scales. We also include Cronbach's Alpha for these various scales in the table that follows.

Table 2: Correlation Matrix and Cronbach's Alpha

Construct	Cronbach's Alpha	Facebook: Positive Status Updates	Facebook: Negative Status Updates
Facebook: Positive Status Updates	0.904	-	0.527**
Facebook: Negative Status Updates	0.883	0.527**	-
Personality: Extraversion	0.890	0.172**	0.038
Personality: Agreeableness	0.839	0.145**	-0.031
Personality: Conscientiousness	0.858	0.015	-0.084**
Personality: Neuroticism	0.899	0.078**	0.164**
Personality: Openness	0.833	0.104**	0.005
Affect (trait): Positive	0.913	0.100**	-0.010
Affect (trait): Negative	0.924	0.061*	0.181**
Affect (trait): Negative: Fear	0.905	0.069*	0.181**
Affect (trait): Negative: Hostility	0.887	0.014	0.160**
Affect (trait): Negative: Guilt	0.915	0.034	0.150**
Affect (trait): Negative: Sadness	0.906	0.050	0.175**
Affect (trait): Positive: Joviality	0.940	0.110**	0.001
Affect (trait): Positive: Self-Assurance	0.868	0.061*	-0.001
Affect (trait): Positive: Attentiveness	0.810	0.051	-0.036

Affect (trait): Other: Shyness	0.844	0.078**	0.128**
Affect (trait): Other: Fatigue	0.893	0.099**	0.078**
Affect (trait): Other: Serenity	0.861	-0.009	-0.096**
Affect (trait): Other: Surprise	0.793	0.140**	0.152**
Significant at the 0.05 level *** Significant at the 0.01 level*			

4.3 Modeling the Relationships

Beyond assessing simple correlations, we are interested in determining the extent to which certain psychological factors, such as personality, account for the Facebook behavior under examination in the current study rather than a single construct from such a psychological factor. We created three different measurement models to account for the various psychological factors under investigation and their association with Facebook status updates, both positive and negative: 1) personality—extraversion, openness, conscientiousness, neuroticism, and agreeableness; 2) higher order dimensions of trait affect—positive and negative, and 3) lower order dimensions of trait affect—fear, hostility, guilt, sadness, joviality, self-assurance, and attentiveness. We did not create a measurement model to assess the remaining four lower order dimensions of trait affect since they did not fall under either positive or negative types of affect.

We first assessed reliability in SPSS prior to developing our measurement model in SmartPLS v. 3.2.4. Next, we assessed reliability in our measurement models. In order to optimize our measurement models, we removed indicators with loadings less than 0.65. Since all of our constructs under examination in this study are reflective in nature, the removal of indicators should not negatively affect content validity. This threshold was considered a good balance between optimizing the measurement model and retaining enough indicators to demonstrate high reliability. In all cases, at least four indicators were retained. Cronbach's Alpha was above 0.80 in each case. The table that follows provides this information, including the average variance extracted (AVE).

Table 3: Reliability and AVE in the Measurement Models

Construct	Indicators Removed	Number of Indicators Used	Cronbach's Alpha	AVE
Facebook: Positive Status Updates (Personality)	1	8	0.915	0.629
Facebook: Negative Status Updates (Personality)	3	6	0.930	0.734
Personality: Extraversion	2	6	0.889	0.635
Personality: Agreeableness	3	6	0.803	0.503
Personality: Conscientiousness	5	4	0.818	0.636
Personality: Neuroticism	-	8	0.898	0.585
Personality: Openness	4	6	0.813	0.510
Facebook: Positive Status Updates (High Affect)	2	7	0.905	0.631
Facebook: Negative Status Updates (High Affect)	3	6	0.914	0.698
Affect (trait): Positive	2	8	0.908	0.608
Affect (trait): Negative	-	10	0.924	0.595
Facebook: Positive Status Updates (Low Affect)	2	7	0.905	0.633
Facebook: Negative Status Updates (Low Affect)	3	6	0.914	0.700
Affect (trait): Negative: Fear	-	6	0.907	0.684
Affect (trait): Negative: Hostility	-	6	0.891	0.646

Affect (trait): Negative: Guilt	-	6	0.918	0.704
Affect (trait): Negative: Sadness	-	5	0.906	0.727
Affect (trait): Positive: Joviality	-	8	0.939	0.700
Affect (trait): Positive: Self-Assurance	2	4	0.856	0.692
Affect (trait): Positive: Attentiveness	-	4	0.812	0.630

In addition to assessing reliability, we must assess validity. This was done using the AVE calculated in SmartPLS version 3.2.4 (Ringle, Wende, & Will, 2005). Convergent validity requires that the composite reliability values are greater than the AVE and the AVE is greater than the minimum 0.500 threshold (Hair, Black, Babin, & Anderson, 2010). This was found to be true in all cases.

In addition to convergent validity, discriminant validity must also be considered. Discriminant validity was accepted if the indicators and blocks of indicators did not load higher with other constructs than the one they were intended to measure. Again, this criterion was met in each case. Additionally, discriminant validity was tested by employing the Heterotrait-Monotrait Ratio (HTMT) technique (Henseler, Ringle, & Sarstedt, 2015). Satisfactory discriminant validity is indicated in all instances. Therefore, discriminant validity has been obtained.

4.4 Structural Model

Once we have been thorough in our evaluation and refinement of our measurement models, we should turn our attention to the structural models. Since we have three unique measurement models, we also have three structural models. The amount of variance explained for each instance is noted in the table that follows.

Table 4: Percent of Variance Explained

Psychological Factor	Positive Status Updates	Negative Status Updates
Personality	10.6%	5.0%
Trait Affect (higher order)	2.4%	3.9%
Trait Affect (lower order)	3.8%	5.9%

Overall, the variance explained ranges from 2.4% to 10.6%. Considering both the simplicity and single psychological factor approach taken in these models, as well as the exploratory nature of the study, this isn't necessarily surprising. It does nonetheless indicate that the psychological factors under examination only partially account for the variation in the type of status updates individuals post on Facebook. Next, we turn our attention to the hypotheses of this study.

4.5 Hypotheses

In this study, we explored 16 different hypotheses. In the table that follows we identify which of the hypotheses were supported and under what context. In other words, some hypotheses were supported using simple correlations, while others were supported using structural equation modeling.

Table 5: Results of Hypotheses

Hypothesis	Path Coefficient	Supported in Model	Supported in Correlation

H1: PERS: ↑Extraversion → ↑Positive Status Updates	(0.208)**	YES	YES
H2: PERS: ↑Extraversion → ↑Negative Status Updates	(0.112)**	YES	NO
H3: PERS: ↑Agreeableness → ↑Positive Status Updates	(0.178)**	YES	YES
H4: PERS: ↑Conscientiousness → ↓Negative Status Updates	(-0.063)*	YES	YES
H5: PERS: ↑Neuroticism → ↓Positive Status Updates	(0.227)**	NO[+]	NO[+]
H6: PERS: ↑Neuroticism → ↑Negative Status Updates	(0.214)**	YES	YES
H7: PERS: ↑Openness → ↑Positive Status Updates	(0.037)	NO	YES
H8: ↑PA → ↑Positive Status Updates	(0.156)**	YES	YES
H9: ↑NA → ↑Negative Status Updates	(0.202)**	YES	YES
H10: ↑NA: Fear → ↑Negative Status Updates	(0.087)	NO	YES
H11: ↑NA: Hostility → ↑Negative Status Updates	(0.102)*	YES	YES
H12: ↑NA: Guilt → ↑Negative Status Updates	(-0.068)	NO	YES
H13: ↑NA: Sadness → ↑Negative Status Updates	(0.126)**	YES	YES
H14: ↑PA: Joviality → ↑Positive Status Updates	(0.224)**	YES	YES
H15: ↑PA: Self-Assurance → ↑Positive Status Updates	(-0.028)	NO	YES
H16: ↑PA: Attentiveness → ↑Positive Status Updates	(-0.020)	NO	NO
* Significant at the 0.05 level ** Significant at the 0.01 level			
[+] Significant, but in the opposite direction of what was hypothesized			
PERS = Personality PA = Positive Affect NA = Negative Affect			

Overall, only two hypotheses were not supported in at least one of the two statistical analysis techniques. Neuroticism was found to be positively associated with positive status updates on Facebook rather than negatively associated, while higher levels of attentiveness was not associated with higher levels of positive status updates on Facebook. Ten of the hypotheses were supported in the PLS-SEM model, while 13 were supported based on statistically significant Pearson correlations. In nine instances the hypotheses were supported using both statistical techniques.

In addition to assessing the relationships above, we also examined whether there were statistically significant differences in means between two groups for the variables measured. This was done using the Independent Samples t Test function in SPSS. We began by looking at whether there were differences between females and males. We found that females were more likely to post positive (p < .01) and negative (p < .05) status updates on Facebook, have higher levels of agreeableness, conscientiousness, and neuroticism (p < .01), and have higher levels of fatigue (p < .05). In contrast, males were more likely to have higher levels of self-assurance (p < .05) and serenity (p < .01).

Next, we examined whether there were differences between younger (18-34) and older (35 and above) individuals. Younger individuals were more likely to post positive Facebook status updates (p < .01), and had higher levels of neuroticism, trait negative affect, fear, hostility, guilt, sadness, shyness, and fatigue (p < .01). In contrast, older individuals were more likely to have higher levels of agreeableness, conscientiousness, trait positive affect, joviality, self-assurance, attentiveness, and serenity (p < .01). Thus, younger individuals are more likely to post positive status updates on Facebook, but less likely overall to be happy.

Finally, we tested to see if there were differences based on those that were more highly educated (Bachelors degree or higher) vs. those that had less education. Those with less education were more likely to post positive (p < .05) and negative (p < .01) status updates on Facebook and had higher levels

of neuroticism (p < .01). In contrast, those that were more highly educated had higher levels of joviality and were more frequent users of Facebook (p < .05).

Next, we will discuss these results and what the implications may be going forward.

5. Discussion

As we discussed earlier, oversharing information on social networking platforms can have negative repercussions, both from a security and privacy standpoint. For example, posting overly negative status updates may reveal more about you than what was intended. This could lead to some taking advantage of others for personal gain. And even posting positive status updates can have dire consequences. For example, revealing information about a new career opportunity could lead to a cyber-criminal targeting the individual in a spear-phishing attack.

Of course we must always balance the risks associated with some activity with the benefits it may provide, even if those benefits are nothing more than someone feeling good about sharing something positive or perhaps receiving support by posting something negative. We know that oversharing in any context can have negative consequences, but we still do not know the likelihood of that happening.

5.1 Personality

In this study, we wanted to examine the type of individual that is most likely to share either positive or negative status updates on Facebook. We did this by developing a list of representative phrases for each and then combined them with other survey instruments to develop a psychological profile of sorts for those that are most likely to post these types of status updates.

The evidence here suggests that individuals with personalities that rate more highly on scales related to extraversion, agreeableness, and neuroticism are more likely to post positive status updates on Facebook. Likewise, individuals with personalities that rate stronger on scales related to extraversion and neuroticism but lower on conscientiousness, are more likely to post negative status updates on Facebook.

While both of the hypotheses related to extraversion are supported in at least one instance with respect to both positive and negative posts on Facebook, it is important to note that it isn't a zero-sum game since it isn't a single bipolar scale; rather, two unipolar scales were used with each one representing either positive or negative status updates on Facebook. The positive association with both independent variables simply suggests that extraverts are more likely to post status updates in general, regardless of whether they are positive or negative. This makes sense based on what we know about extraversion.

5.2 Trait Affect

Beyond personality, we also examined trait affect. In most instances, support was found for the general hypothesis that higher levels of trait positive affect and its associated lower order dimensions are positively related to the posting of positive status updates on Facebook. Trait positive affect in general and joviality in particular, were supported in both statistical analysis tests. Additionally, support was found for self-assurance via a statistically significant Pearson correlation.

Likewise, there was a similar level of support found for trait negative affect and its lower order dimensions with the posting of negative status updates on Facebook. Trait negative affect in general and

both hostility and sadness in particular were supported in both statistical analysis tests performed. Fear and guilt were supported via a statistically significant Pearson correlation, albeit not in the PLS-SEM analysis.

5.3 Limitations

This study does have some limitations. As noted previously, common method bias could play a role and possibly inflate some of the relationships found. While we tested for this and took proactive measures to mitigate it, we cannot rule it out.

Second, we captured data from participants at a single point in time using a single research method. Thus, the results found should be interpreted with caution. This is in part why the use of additional research methodologies is recommended in future research that examines this topic.

Third, social networking platforms are changing frequently, including Facebook. For example, research that used to examine the number of likes in a straightforward manner has become more complicated with Facebook's modification of this feature to include other components besides "like". The same can be true for status updates. What we know today based on this research could change based on what Facebook does to its platform at any point in the future.

Next, we offer some concluding thoughts on this study.

6. Conclusion

In this study, we found support for the role of both personality and trait affect in understanding the types of people that post status updates on Facebook, whether positive or negative. Given the potential for threats to both privacy and security that oversharing can have on individuals, especially in a forum that almost ensures a permanent record of said oversharing.

The hope is that the more we know about the types of people most likely to share information so freely then the more that can be done to educate these people. In the meantime, future research is needed to further understand this problem space. This includes more exploratory and experimental research to both understand the complexities of the problem in great depth and to test for causal relationships when appropriate.

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