IS FACEBOOK AFFECTING YOUR MOOD?

A STUDY OF PERSONALITY AND

DEPRESSION AMONG COLLEGE

STUDENTS

by

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ABSTRACT

This study examined whether the use of the social networking site, Facebook, is related to depressive moods among college students. The study used social comparison and SPAARS (Schematic, Propositional, Association, Analogical and Representation System) approach explaining the psychological processes that cause people to feel depressed. It aims to investigate the association between Facebook usage and depressive emotion due to different level of self-satisfaction and personalities among college students. A total of 213 college students completed an online questionnaire that assessed participants' levels of satisfaction, depressive emotions after Facebook use and their personality traits. Within the limitations of the study, results indicate that there is a moderate negative correlation between college students' levels of satisfaction and depressive emotions after Facebook use. For personality traits, neuroticism has a moderate and positive correlation with depressive emotion; conscientiousness and depressive emotions have moderate negative correlation and a weak negative correlation is found between extroversion, agreeableness, openness to new experiences and depressive emotion.

LIST OF ABBREVIATIONS AND SYMBOLS

α Cronbach's index of internal consistency

M Mean: the sum of a set of measurements divided by the number of measurements in the set

P Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value

r_s Spearman Rank correlation coefficient

< Less than

= Equal to

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CONTENTS

LIST OF TABLES

Chapter 1: Introduction

Social networking sites (SNS) have become major media outlet by which people develop their personal networks online in recent years. SNS, by definition provide a new method of communicating, employing computers as a collaborative tool to accelerate group formation and escalate group scope and influence (Kane, Fichman, Gallaugher, & Glaser, 2009; Pfeil, Arjan, & Zaphiris, 2009; Ross et al., 2009). It is a cyber environment that allows an individual to construct his/her profile, share text, images, and photos, and contact other members of the site by applications and groups provided on the Internet (Boyd & Ellison, 2008; Pfeil et al., 2009; Powell, 2009; Tapscott, 2008). Hence, SNS enable users to present themselves, connect to a social network, and develop and maintain relationships with others.

Facebook is a successful computer-mediated social networking site, which has become one of the most popular means of communication in North America. It reached 1 billion monthly active users at the end of October 2012 (Facebook, 2012). Spending time on Facebook has become a daily routine for most American college students. The most recent data, collected by the EDUCAUSE Center for Applied Research (ECAR) from a sample of 36,950 students from 126 U.S. universities and one Canadian university, showed that of the 90% of students use social networking websites, 97% of them said they used Facebook. Students reported they used Facebook multiple times daily (Smith & Caruso, 2010). The substitute face-to-face form of

social interaction at SNS such as Facebook not only provides a computer-mediated self-

presentation platform for people but also enables individuals to peer into their friends,

schoolmates and other people's lives through their status, pictures and comments posted on their

pages which make online identity as important as offline identity.

Despite its success in creating a new communication world, there are also a number of

negative effects we should not neglect regarding the impact it has on its users and society at large.

Facebook depression is one of the negative effects that researchers have recently begun to notice.

A study in the April issue of Pediatrics (2012), published by the American Academy of Pediatrics,

for example, posits that there is a "new phenomenon" known as "Facebook Depression"; kids

may become depressed when they compare their own number of "friends" and "status updates"

to those of their peers.

Facebook has established a virtual reality environment. Most of the time, students use it to

maintain their connection with friends and acquaintances in real life rather than form new

relationships through Facebook. Friends make announcements of their life events, update status

about recent activities, post pictures of a trip to a foreign country or show off an expensive

purchase, all of which make Facebook a barometer of life achievements. If you do not have a

newsfeed to post, are not academically successful and socially active in your life, seeing other

peoples' status updates and pictures posts may make you feel worse about your own life and may

lead to depression.

Depression is not an unusual health problem, with approximately 17% of American adults

receiving a diagnosis of depression during their lifetime. (Kessler et al., 2005) People

occasionally experience sad, anxious, worried and hopeless emotional states for short periods in

their lifetime. Although these depressed moods are not necessarily a mental disorder, they could

be a primary or associated feature of clinical depression. Depression is on the rise among college

students and it has become a growing public concern. The rate of college students diagnosed

with depression increased from 10% in 2000 to 15% in 2006. (American College Health

Association [ACHA], 2008). Approximately 16% of college students suffer from depression at

some point during their educational life (ACHA, 2005); 44 percent of American college students

report having symptoms of depression and young people diagnosed with depression are five

times more likely to attempt suicide than adults. Therefore, it is important to identify the

elements that contribute to the development and maintenance of mental health problems,

including depression. This study aims to examine the use of the social networking site, Facebook,

which has become a part of college students' everyday routine, and investigates whether its use is

related to depressive moods among its users.

Prior research has explored many factors leading to depression, including personalities.

Specifically, researchers have used the "Big Five Factor" analysis of the differences of

personalities that influence Facebook usage and found that varying levels of each personality has

been associated with different mental disorders and behaviors. Previous studies have indicated

significant positive associations between social networking activities and depressive symptoms.

According to Davila et al. (2012), "depressive symptoms were associated with quality of social

networking interactions, not quantity" (p. 72). Additionally, a study which examined the social networking behaviors of 334 undergraduate students also found that more negative and less positive interactions on social networking sites were associated with greater depressive symptoms. (Davila et al., 2012)

This study is different from previous studies in terms of theoretical background. Previous studies focused on factors (gender, personality, exposure time) that may influence Facebook activities or feelings (depressed or sad) after people are exposed to the Facebook environment. However, these studies were not theoretically motivated, and they hardly explained the reasons why people may experience depressed feelings after they use of Facebook. This study adds to the literature by using psychological analysis of social comparison and explaining the psychological processes that cause people to feel depressed. It aims to investigate the association between Facebook usage and depressed emotion due to differing level of self-satisfaction and personalities in college students. Social comparison theory and SPAARS (Schematic, Propositional, Association, Analogical and Representation System) and "Big Five Factor" theory are applied in this study. Social comparison theory explains the reason that people compare themselves to others in social settings, SPAARS theory is applied to analyze why people may feel depressed after they use of Facebook, and "Big Five Factor" is used in this study to define different personalities and to determine which personality is prone to have Facebook depression on college students' Facebook usage.

Chapter 2: Literature Review

The literature review consists of four sections. The first section reviews the definitions of two kinds of depression and various symptoms of depression. The second section addresses recent relevant studies on the association of social networking sites and depression. The third part addresses research on personality and Facebook usage. The fourth part synthesizes the theoretical foundation for this study.

Depressive mood and Clinical Depression

Nearly everyone occasionally feels depressed, being down in spirit, low in energy, unhappy or miserable at one time or another for short periods of time. It is a normal reaction to certain life events and also gives us opportunity to think about life and become more mature. The word "depression" that people use in their daily life is mostly a depressed mood, which describes a state of low mood and aversion to activity that can have a negative effect on a person's thoughts, behaviors, feelings, world view, and physical well-being (Salmans, Sandra, 1997). People who have a depressed mood may feel sad, anxious, empty, hopeless, worried, helpless, worthless, guilty, irritable, hurt or restless. They may lose interest in activities that once were pleasurable, experience loss of appetite or overeating, have problems concentrating, remembering details, or making decisions, or suffer insomnia, fatigue, pains, and digestive problems (Barlow, 2005). Depressed mood is a primary or associated feature of certain psychiatric syndromes like clinical depression. But as long as these feelings are short-lived and pass within a couple of days,

they are not considered a psychiatric disorder.

Clinical depression is a mental disorder characterized by an all-encompassing low mood accompanied by low self-esteem and by loss of interest or pleasure in normally enjoyable activities (Barlow, 2005). A person who suffers from clinical depression must either have a depressed mood or a loss of interest or pleasure in daily activities consistently for at least a 2 week period. This mood must represent a change from the person's normal mood. Social, occupational, educational or other important functioning must also be negatively impaired by the change in mood. Clinical depression is characterized by the presence of the majority of these symptoms:

- Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feeling sad or empty) or observation made by others (e.g., appears tearful). (In children and adolescents, this may be characterized as an irritable mood.)

- Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.

- Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day.

- Insomnia or hypersomnia nearly every day.

- Psychomotor agitation or retardation nearly every day.

- Fatigue or loss of energy nearly every day.

- Feelings of worthlessness or excessive or inappropriate guilt nearly every day.

- Diminished ability to think or concentrate, or indecisiveness, nearly every day.

- Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

(Grohol, J. (2006))

Everyday Depression and social networking site

Some research has indicated significant positive associations between social networking activities and depressive symptoms while other recent studies have shown no relationship or just in one condition, a negative relationship between Facebook use and depression. According to Davila et al. (2012), "depressive symptoms were associated with quality of social networking interaction, not quantity" (p.72). Davila et al.'s study, which examined the social networking behaviors of 334 undergraduate students, found that more negative and less positive interactions on social networking sites were associated with greater depressive symptoms. A Croatian study (Pantic et al., 2012) found that time spent on Facebook by high school students were positively correlated with depression. A study of American university students found that more intense Facebook use predicted increased loneliness (Lou, Yan, Nickerson, & Mcmorris, 2012).

In contrast, a recent study titled *"Facebook Depression?" Social Networking Site Use and Depression in Older Adolescents* (Jelenchick, Eickhoff & Moreno, in press) found no relationship between social networking and depression with a sample of 190 older adolescents, using an experience sample method (ESM) approach. Students completed an online survey containing the Patient Health Questionnaire-9 depression screen (PHQ) and a weeklong ESM data collection period to assess SNS use. EMS survey asked participants to describe whether they were currently online, how many minutes they had been online and what they were doing online. Participants indicated their online activities from a predetermined list, including academic work, general browsing, chatting, e-mailing, downloading, SNS use, gaming and streaming other media. Results showed that there was no evidence supporting a relationship between SNS use and clinical depression. But for females with high levels of neuroticism, high

levels of Facebook activity were associated with lower levels of depression.

Personality and Facebook usage

There are several studies that relate to social media use and depression. Ross et al, (2008) examined the influence of personality and competency factors on Facebook use and found that, consistent with previous research, personality variables were associated with some aspects of Facebook use. For example, individuals high on the trait of extraversion were found to be significantly more active on Facebook. Since extraverts are more likely to engage in social activities (Costa & McCrae, 1992a, 1992b), it is reasonable to assume that these individuals maintained stronger ties to their groups through Facebook. Levels of extraversion were not associated with the number of "Facebook Friends," or communicative functions of Facebook. These results suggested that although those high on the trait of extraversion may utilize Facebook as a social tool, they did not use Facebook as an alternative to social activities. This is consistent with research by Amiel and Sargent (2004) who found that extraverts do not use the Internet as a substitute for real-world interactions. Those high on the trait of neuroticism reported that the Wall was their favorite Facebook component, whereas those low on neuroticism preferred photos. In other words, people low on neuroticism would like to pay more attention to photos posted on Facebook. Their emotional change would more likely relate to photo content. Openness to Experience was found to be related to online sociability knowledge. A willingness to consider alternative methods of communication was found to be important in Facebook use. As expected, higher levels of Openness to Experience were associated with a greater tendency to be sociable through Facebook. Considering that those who are high on the trait of Openness to Experience are more likely to have a wide variety of interests and willingness to pursue those interests through unusual means (Butt & Phillips, 2008).

8

Ross et al. (2009) and Amichai-Hamburger and Vinitzky (2010) looked specifically at the relationship between the Big Five factors and usage of Facebook. Their results showed that a number of these factors were associated with particular patterns of Facebook use. For example, extraverted individuals generally had more Facebook Friends (Amichai-Hamburger & Vinitzky, 2010), and belonged to more Facebook Groups (Ross et al. 2009) than introverted individuals. Furthermore, individuals who were high in neuroticism were more likely than emotionally stable individuals to prefer to use the Wall (Ross et al. 2009). As Ross et al. (2009) explained, a possible reason for the latter result was that the Wall offered people with neurotic tendencies the opportunity to take their time formulating messages and responses. As a consequence, the potential for unintentionally revealing personal information to others was reduced.

Theoretical background

Social Comparison theory. As the name implies, social comparison involves comparisons between self and others. It is a fundamental psychological mechanism influencing people's judgments, experiences, and behavior. People constantly engage in social comparisons. Whenever they are confronted with information about how others are, what others can and cannot do, or what others have achieved and have failed to achieve, they relate this information to themselves (Dunning & Hayes, 1996). Whenever they want to know how they themselves are or what they themselves can and cannot do, they do so by comparing their own characteristics, fortunes, and weaknesses to those of others (Festinger, 1954). Facebook unintentionally provides a perfect platform for people comparing themselves with others. People use their real identity to register a Facebook account and then create a personal profile page on which they can post pictures and update status to show their recent activities. They could add schoolmates and acquaintances as friends to establish online social circles, check friends' news feeds, post recent

9

activities of their own, exchange messages, make comments, share links and tag friends to sustain social connections. Facebook seems to be a new medium for people to make comparisons with one another, especially among members of a similar group. Festinger (1954) hypothesized that people select comparison standards that are similar to themselves on the critical dimension. The selection of a similar other is important, because only comparisons with similar standards provide diagnostic information for self-evaluation (Festinger, 1954). In that way, on Facebook platform, users can not only easily acquire direct information about other people's life through perusing their pages, but also establish standards of self-evaluation more efficiently by comparing with their peers, friends or other people on Facebook who share similar demographic factors.

There are two kinds of social comparisons: upward social comparison and downward social comparison. Wills (1981) postulates in his theory of downward social comparison that people seek such standards to boost their self-view with a favorable comparison. Because downward comparisons have the potential to protect or enhance one's self-view, people with a threatened self-view will be especially prone to engage in them (Wills, 1981). Upward social comparison occurs when we compare ourselves with those whom we believe are better than us. Upward comparisons can motivate people and can provide information on how to make progress (Bandura, 1986, 1997). People who are slightly better than oneself, especially, are selected as the comparison standard for this purpose. Those upward standards could serve as models and might, for example, improve performance through increased perceived self-efficacy (e.g., Lirgg & Feltz, 1991; Maddux, 1995). However, only if the self is perceived as mutable (Stapel & Koomen, 2000) and the standard as attainable (Lockwood & Kunda, 1997), are people motivated by such comparisons. Downward comparison is self-enhancing while upward comparison is self-

deflating (Lyubomirsky & Ross, 1997). People evaluate themselves to be worse after a comparison with a high, superior standard than a low, inferior standard (e.g., Morse & Gergen, 1970), people may avoid comparisons to upward standards, because comparing oneself to others who are superior may endanger one's self-esteem.

Facebook is an exhibition system, which includes newsfeeds of one's friends and acquaintances. It makes it easier for us to compare ourselves with our friends as we share pictures and posts about our academic achievements, romantic relationships, wonderful experiences and social life, and also to see how many friends we have, how many comments we get on our pictures, posts, and walls, and what is said about each. Many people base their sense of social worth on these factors, and no matter how popular they feel through Facebook, there are always other friends or classmates who seem to be more popular. Facebook newsfeeds can turn into a parade of good news about other people's lives. Although everybody knows intellectually that people use Facebook to show off, all of this information can make them feel worse about their own achievements. We compare ourselves to others and always find ourselves lacking, which leads to a perpetual sense of low self-esteem.

SPAARS approach Social comparison theory addresses that there exists a drive in the human organism to evaluate one's opinions and abilities. Comparing with other people might be an efficient way to evaluate oneself without binding to many cognitive resources. Facebook, which shows newsfeeds of users' friends and allows users to check their friends' personal information, provides a convenient platform for people to compare themselves with others. That explains why people may engage in social comparison activities when they use Facebook. But what emotions do people generate when they use Facebook? What do people feel when they see other friends on Facebook move forward to their goals while they stand still or even move back

11

forward? Do these people feel depressed after they use Facebook?

On the basis of more recent philosophical and psychological models, SPAARS (Schematic, Propositional, Association, Analogical and Representation System), there is a set of components which make up all emotional states (an initiating event, an interpretation, an appraisal of the interpretation especially in relation to goal relevance, a physiological reaction, an action potential or tendency to action, conscious awareness, and overt behavior); one emotional state can be distinguished from another on the basis of the appraisal component. (Power & Dalgleish, 1997).

The initial processing of stimulus occurs through sensory systems such as the visual, auditory, tactile, proprioceptive, and the olfactory, which we have grouped together and termed the Analogical Representation System. The Analogical Representation System stores information and memories in an analogical form. The information includes visual, auditory, gustatory, body state, and images that are either episodic or semantic. This means they represent memories of specific events or fragments of events from an individual, or they are active representations of properties of objects, smells, sounds in the real world (Power & Dalgleish, 1997).

The output of analogical systems feed into three semantic representation systems that operate in parallel. These three systems are associative level, propositional level and schematic level (Power & Dalgleish, 1997).

The lowest level of processing occurs at the associative level, which takes in form of a number of modularized connectionist networks. Emotion at this level is produced directly via associations. This involves processes that are similar to those associated with learning a new skill such as riding a bike; eventually the skill becomes automatic. The idea is that emotion can be generated automatically and without effortful appraisal or conscious awareness if an event becomes associated with an emotion through the repeated pairing of event-emotion sequences

(Power & Dalgleish, 1997). Such architecture was in representation of lower level or automated processes in the generation of emotion.

The intermediate propositional representation system in SPAARS is encoding verbal information. In contrast to analogical representation, propositional representations are considered to be explicit, discrete, abstract entities. They represent beliefs, ideas, objects, and concepts, and the relationship between them in a form that is not specific to any one language. Propositions refer to belief and thought that can be expressed in natural language without any corresponding loss of meaning and content. However, there is no direct route to emotion via this level; rather, propositions feed either directly into the associative route or via the schematic model level.

The highest level is the schematic model level. It has the advantage of storing information in a flexible manner along with the traditional schematic approach. At this level, generation of emotion occurs through process of appraisal. Different types of appraisal exist for eliciting five basic emotions such as sadness, happiness, fear, anger and disgust (Power & Dalgleish, 1997).

An individual will feel happy when he or she moves toward or completes valued goals; an appraisal for sadness would focus on the failure to achieve valued goals; the appraisal of a physical or social threat to one's valued goals will make individuals experience fear; blocking of valued goals will make individuals feel anger.

According to SPAARS theory, the initial processing of emotional stimulus would occur when people use Facebook and view newsfeeds. People seeing and storing information including statuses, pictures, and messages on Facebook can create memories about friends' recent activities. The following step is encoding verbal information through propositional representation systems, which interprets the implication meaning conveyed by the content on Facebook pages. The interpretation process does not directly work on emotion, emotion occurs through process of

appraisal that consists of an analysis of the interpretation of the event in terms of the individual's existent goals at the schematic model level. Seeing other people's academic or social life achievements on Facebook would make some students feel sad if they do not make any progress to achieve their own goals compared to their Facebook friends. The appraisal that focuses on the failure or ongoing struggle to achieve valued goals for individuals would make them feel sad. There may also be an appraisal of disgust along with sadness. Disgust is defined as elimination or distancing from persons, objects, or ideas repulsive to one's self and to valued roles and goals. People may feel self-disgust or shame resulting from strong dislike of themselves or their actions compared to their Facebook friends when their life achievements fall behind that of their friends'. They may feel self-disgust because of their physical appearance, financial status, or lack of persistence, which leads to unhappiness because they perceive themselves to be less successful than their Facebook friends. The combination of basic emotions such as sadness and disgust may be central to the formation of depression (Power & Dalgleish, 1997). If the role or goal is threatened or subsequently lost, the consequent combination of sadness and self-negativity (primarily, that is, the predominance of self-disgust) will lead to depression (Power & Dalgleish, 1997).

Facebook is a place where a majority of users would like to show their bright side, in that way, when people are immersed in a parade of positive news on Facebook, such as classmates posting pictures or updating statuses about such things as high GRE scores, unforgettable experiences of a part-time job, or a great vacation would make them feel depressed if they don't have such experiences in their own lives. Some students may perceive others as happier with a better life than them have after using Facebook. In other words, if people do not have equivalent achievements or do not feel satisfied with certain aspect of their own lives, the experience of

14

seeing other people's happy lives portrayed on Facebook will remind them of their own situations. They will experience loss or failure (actual or possible) of valued roles or goals, which is a component of emotional sadness. In the mean time, students may feel self-disgust or shame resulting from strong dislike of themselves, their physical appearance, or limitations, which leads to feelings of inferiority as compared to their Facebook friends. As a consequence, they may feel depressed when they immerse themselves in a relatively positive Facebook environment. For college students who are not satisfied with their current life, Facebook content will lead to negative emotions (sad, depressed). However, as for students who have a high level of self-satisfaction and are positively on course to achieving their goals, they will not likely experience negative feelings, such as sadness or self-disgust. So based on social comparison theory and SPAARS model, the following hypothesis will be examined:

H1: The level of self-satisfaction of college students will be negatively correlated with depressed emotions after exposure to Faceboook content.

Big Five framework of personality traits. According to Champion and Power's (1995) model, one key component of the model relates to the roles and goals that are available to an individual. If the goal is threatened or lost, individuals are likely to experience depression as a consequent combination of sadness and self-negativity. However, non-vulnerable individuals also experience a range of emotions at the loss of important roles and goals, such individuals are less likely to experience self-disgust or self-negativity and are more likely to replace the lost role or goal from a range of other valued roles and goals. In that way, it is important to identify which personality is likely to replace a valued goal while another personality is prone to experience depression. The Big Five framework of personality traits from Costa & McCrae (1992) has emerged as a robust model for understanding the relationship between personality and various

15

academic behaviors. Personality psychologists have reached a consensus that the domain of personality can best be described by the Big Five dimensions of the Five Factor Model (Devaraj, Easley, & Crant, 2008). The five personality factors are extroversion, agreeableness, conscientiousness, emotional stability, and openness to new experiences, and each is related to people's behavior in a wide variety of contexts (Wehrli, 2008).

The Big Five model is a comprehensive, empirical, data-driven research finding. The five broad factors were discovered and defined by several independent sets of researchers. These researchers began by studying known personality traits and then factor-analyzing hundreds of measures of these traits in order to find the underlying factors of personality (Digman, 1990).

Five Factor Model

The relevance of personality to depression is evident in the enormous attention that their association has received over the years in the clinical and research literatures. Although theories and conceptualizations underlying the personality-depression relationship have varied widely, the idea that personality is important to understand the cause, manifestation, or outcome of depression has persisted (Shea & Yen, 2005).

Different personal characteristics would lead to different modeling levels, so the Five Factor Model (FFM) can help explain the difference in Facebook usage among different personal characteristics and help explain which personality is prone to lead to Facebook depression.

The five personality factors are extraversion, agreeableness, conscientiousness, neuroticism, and openness to new experiences, and each relates to people's behavior in a wide variety of contexts (Wehrli, 2008).

Extraversion

Extraversion refers to the extent to which individuals are social, cheerful, optimistic, active,

and talkative. Individuals high in extraversion are expected to engage in high amounts of social interaction and approach others more easily (Wehrli, 2008).

The dimension often referred to as positive affectivity/positive emotionality/extraversion (PA/E) is conceptualized as a stable and heritable temperamental dimension that encompasses several lower order traits, including positive affects, energy, affiliation, and dominance. The core of this dimension is believed to be affective, reflecting a tendency to experience positive mood states (Clark et.al 1994). In the tripartite model of Clark and Watson (1991), high NA/N is viewed as a vulnerability to both anxiety and depression (or "distress" disorders more generally), whereas low PA/E is believed to be more specifically associated with depression.

Extraversions are likely positively related to the use of social networks. They spend more time on social network sites. When it comes to Facebook usage, extraverted individuals reported making more contact with their Facebook friends, were more likely to broadcast their activities and events on Facebook, and posted more pictures overall. And they usually like to receive the new value and lead the trend of the popularity.

Due to the characteristic of this personality trait and its relationship with depression, I propose:

H2: Extraversion will be negatively correlated with depressed emotions after being exposed to Facebook content.

Agreeableness

Agreeable persons represent the tendency to be sympathetic, courteous, flexible, kind, trusting and forgiving. Individuals high in agreeableness have been known to avoid conflicts, but are presumed to not reject an offer of friendship (Wehrli, 2008).

People who are in the trait of agreeableness may be negatively related to frequency of use,

17

wall postings about others and to regret. And they are likely to share the content that is most acceptable to society. So, I propose my hypothesis:

H3: Agreeableness will be negatively correlated with depression emotion after being exposed to Facebook environments.

Conscientiousness

Conscientiousness represents the tendency to be reliable, responsible, organized and self-disciplined. Conscientious individuals have a high intrinsic motivation to achieve and are usually trying to improve their level of job performance. The rationale is that if a highly conscientious person believes Facebook will not drive efficiency or production, they will have decreased behavioral intentions towards it (Devaraj et al., 2008). In other words, conscientious individuals will not invest a large amount of resources in Facebook because they prefer to stick to their main goals by avoiding distraction (Wehrli, 2008). Previous research indicating that conscientious people spend more time online engaged in academic pursuits than in leisure activities (McElroy et al., 2007) supports this notion, so did the finding of Wilson et al. (2010) that highly conscientious people spend less time on social networking sites. So, I propose:

H4: Conscientiousness will be negatively correlated with depression emotion after being exposed to Facebook environments.

Neuroticism

The opposite of emotional stability is neuroticism, which refers to the extent to which individuals display negative attributes such as distrustfulness, sadness, anxiety, embarrassment, and difficulty managing stress. As described by Tellegen (1985) and by Clark and colleagues (Clark and Watson 1991; Clark et al. 1994), the core of the negative affectivity/negative emotionality/neuroticism (NA/N) dimension is a stable temperamental sensitivity to negative

stimuli. A broad range of negative moods are associated with this dimension, including sadness and depression but also anxiety, guilt, hostility, and self-dissatisfaction. In addition, a wide range of non-mood aspects are related to NA/N, including negative cognitions and negativistic appraisals of self and others, low self-esteem, and life dissatisfaction (Clark et al. 1994). Neuroticism has previously been assumed to be negatively associated with social relationships (Wehrli, 2008) but positively related to the amount of time they spend online (McElroy et al., 2007).

Early studies found that individuals high on neuroticism were more frequent Internet users than extraverts ([Amichai-Hamburger et al., 2002] and [Correa et al., 2010]). Recently, Wehrli (2008) found a positive relationship between neuroticism and social media usage, offering the explanation that individuals low in emotional stability tend to spend more time on social networking sites because they may try to make themselves look as attractive as possible.

Due to the reason that Neuroticisms are negative affected and relatively have longer time exposure to SNSs of this personality trait, individuals displaying neuroticism will be more likely to have Facebook depression. So, I propose:

H5: Neuroticism will be positively correlated with depression emotion after being exposed to Facebook environment.

Openness to experience

Openness to experience represents an individual's curiosity, open-mindedness, and their willingness to explore new ideas. Openness reflects an individual's imagination and originality. Little research has been conducted on the relationship between openness and Facebook. Tangentially, McElroy et al. (2007) found that openness was a significant predictor of general Internet use. Ross et al. (2009) found that individuals high on the trait of openness to experiences

19

were more willing to consider alternative methods of communication. Correa et al. (2010) also found a positive relationship between openness and social media use. People higher in openness engaged in increased online sociability through Facebook, a finding they attributed to the novel nature of this form of social communication technology. Amichai-Hamburger and Vinitzky (2010) found that more open individuals revealed more personal information about themselves on their Facebook profile. This suggests that individuals with high scores in openness to experience will be more likely to use and keep up with Facebook. Given their curious nature, people high in openness to new experiences are less likely to regret their Facebook experiences. So, I propose:

H6: Openness will be negatively related with depression emotion after being exposed to Facebook environment.

Chapter 3: Method

Participants

Participants were recruited through the Sona Systems participant pool managed by the ICIR in the College of Communication & Information Science at the University of Alabama. Participants were asked to fill out a survey. A total of 274 students participated, 213 of them completed and received 0.5 course credit. For more accuracy data analysis, incomplete survey were deleted. The sample (N=213) was comprised of 152 females (71.4%) and 61 males (28.6%). 70 of them were Freshmen (32.7%), 50 Sophomores (23.4%), 45 Juniors (21.0%), 19 Seniors (8.9%) and 29 Graduate students (13.6%). Among the 213 participants, 64.5% were Caucasian, 7.0% were African-American, 0.5% Hispanic, 25.7% Asian and 0.5% others.

Materials

The online questionnaire, hosted on Qualtrics.com contained five parts Of items assessing demographic data, basic use of Facebook, self-satisfaction according to participants' recent living status, general feelings associated with certain Facebook posting and participants' personalities. This questionnaire included three types of instruments measuring (1) Self-evaluation, (2) Facebook usage and related emotions, (3) (John & Srivastava, 1999) and The Big Five Inventory (BFI). In addition, demographic data were collected including: gender, birth year, grade, and ethnic background.

Self-evaluation. The first two hypothesis stated that the level of students' life satisfaction correlated with their emotions after they exposed to positive Facebook content. In this survey, PartⅡ- self evaluation including self satisfaction and self-esteem was designed to measure the level of satisfaction of college students. The self satisfaction part contained eight questions assessing participants' satisfaction compared to their personal expectation (e.g., "Compared to what you feel you should have accomplished so far, how satisfied are you?") and their satisfaction in academic performance, social life, family life and peer cognition aspects when compared to friends and classmates (e.g., "Compared to the academic performance/social life/family life/peer cognition of your friends and classmates, how satisfied are you?"). Each item utilized a five-point scale ranging from 1 (Very Satisfied) to 5 (Not At All Satisfied).

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES). RSES developed by sociologist Dr. Morris Rosenberg, is a self-esteem measure widely used in social-science research. It is a ten-item Likert-type scale with items answered on a four-point scale from "strongly agree" to "strongly disagree". Five of the items had positively worded statement and five had negatively worded ones. The scale measured self-esteem by asking the respondents to reflect on their current feelings. In this survey, five items were used including three positive statements and two negative statements with a five-point Likert scales from "strongly disagree" to "strongly agree". For items 1, 2, 5: Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5. For items 3 and 4: Strongly Disagree=5, Disagree=4, Neutral=3, Agree=2, Strongly Agree=1. Higher scores indicate higher level of self-satisfaction of students.

The reliability of outcome questions of students' self-satisfaction was tested using Chronbach's coefficient alpha. The value of Cronbach's Alpha is 0.908, which indicated the internal consistency for the scale was very high.

Facebook usage and related emotions. Participants were asked six questions concerning

their basic use of Facebook. Basic items were devised to gather data on the frequency and length

of time they use Facebook, quantity of friends, and posts types they were interested in. Fourteen

items were developed to assess students' emotions related to Facebook use. Participants were

first asked to rate the agreement to statements towards Facebook content (e.g., "Most of friends'

status updates on Facebook are positive. I often see achievement stories on Facebook") on a five-

point Likert scale from strongly disagree to strongly agree. They were also asked to rate their

general feelings after they use Facebook, and there were questions regarding negative emotions

about Facebook use (e.g., "I usually feel depressed/sad/out of place/lacking behind my peers

after I use Facebook"), positive emotion about Facebook (I usually feel happy/ I am

overachieving/better than most of my friends after I use Facebook) on a five-point Likert scale

from "Never" to "Always".

Among the 14 items, there are eight questions assessed the feelings of college students after

they used Facebook. Higher scores indicated higher level of positive emotions. Some of the

questions were reverse scored due to the opposite direction. The reliability of the outcome was

also tested by Cronbach's Alpha. The value of Cronbach's Alpha is 0.738, which is statistically

acceptable.

The Big Five Inventory (BFI). Participants' personalities were measured using The Big Five

Inventory. The Big Five Inventory (BFI) is a self-report inventory designed to measure the Big

Five dimensions. It is quite brief for a multidimensional personality inventory (44 items total),

and consists of short phrases with relatively accessible vocabulary. This 44-item test, developed

by John and Benet- Martinez in 1998, is in the public domain and has been normed on tens of

thousands of adults. It provides a score for each of the Big Five personality traits

(Conscientiousness, Agreeableness, Emotional Stability, Extroversion and Intellect or Openness). Participants rated how much they endorsed the items as descriptive of themselves on a five-point Likert scale (1=Disagree Strongly, 5=Agree Strongly).

According to instruction for scoring of Big Five Inventory. Higher scores indicated higher level of each personality trait. Some of the items were reverse scored. There are 8 items in Extroversion trait with Cronbach's alpha value of .823; 9 items in Agreeableness with Cronbach's alpha value of .762; 9 in Conscientiousness trait with Cronbach's alpha value of .743; 8 in Neuroticism with Cronbach's alpha value of .763 and 10 items in Openness trait with Cronbach's alpha value of .704. Scale reliabilities for the five personality dimensions of BFI were acceptable with Cronbach's alpha value of 0.768.

Table 1 Cronbach's Alpha test of Reliability

Variables	Mean	Variance	N of items	Cronbach's Alpha
Self-satisfaction	3.87	.067	13	.908
Facebook emotion	4.32	.066	7	.738
Big Five Inventory	3.47	.28	44	.768
Extroversion	3.56	.19	8	.823
Agreeableness	3.77	.11	9	.762
Conscientiousness	3.57	.30	9	.743
Neuroticism	2.90	.21	8	.763
Openness	3.51	.268	10	.704

Procedure

This study received institutional review board approval from the University of Alabama. The survey was open to students from June 5, 2013, to September 10, 2013, and available 24 hours per day. Participants were asked to take part in an electronic, web-based questionnaire (15-20 min). They signed up for the online survey through the participant pool website and took the survey. They were given a series of questions including demographic data (age, gender, ethnicity, etc.) and general Facebook usage, they were also asked about self-evaluation questions, feelings after they see certain Facebook content and Big Five personality test questions.

Chapter 4: Results

H1 stated that the level of self-satisfaction of college students would be negatively correlated with depressed emotions after they exposed to Facebook content. Due to both variables are not normally distributed, Spearman's rank correlation coefficient analysis was performed to analyze the data. This hypothesis aimed to test the correlations between college students' satisfaction of current life and emotional states after Facebook use. The level of self-satisfaction of students was evaluated by 13 questions, students choose from Not satisfied at all (1 point) to Very satisfied (5 point) according to their current status. Opposite direction questions were reverse scored. Combine the score of each question and divided the number of questions, we get students' self-satisfaction score. Emotion scores after Facebook use were evaluated by 7 questions. Students choose from Never (1 or 6 point) to Always (6 or 1 point) based on their feelings towards certain emotion state after Facebook use. Combine the score of each question and divided seven, we get the emotion score.

Results (r_s=-0.558, p< 0.001) show that there is moderate negative correlation between college students' levels of satisfaction of current life and depressed emotions after Facebook use.

Spearman's rank correlation coefficient analysis was also used to test the effects of personality on emotional states after Facebook use. Personality test questions were included in the questionnaire. The score of each personality traits were measured by Big Five Inventory

Scoring key. The following hypotheses pertained to these personality issues.

H2 stated that extraversion would be negatively correlated with depressed emotion after being exposed to Facebook content. Spearman's rank correlation coefficient analysis showed that extroversion was weak negatively related with depressed emotion after exposed to Facebook content (r_s=-0.287, p< 0.000).

H3 stated that agreeableness would be negatively correlated with depression emotion after being exposed to Facebook environments. Results showed that agreeableness was weak negative correlated with depression emotion after being exposed to Facebook environments (r_s=-0.195, p< 0.000).

H4 stated that Conscientiousness would be negatively correlated with depression emotion after being exposed to Facebook environments. The outcome of Person Correlation showed that conscientiousness was moderately negatively correlated with depressed emotion (r_s=-0.331, p< 0.000).

H5 stated that Neuroticism would be positively correlated with depression emotion after being exposed to Facebook environment. Results showed neuroticism was moderate positively correlated with depression emotion, r_s=0.433, p< 0.000.

H6 hypothesized that Openness would be negatively related with depression emotion after being exposed to Facebook environment. Results showed that openness was weak and negatively related with depression emotion after being exposed to Facebook environment (r_s=-0.115, p< 0.001).

Table 2 Spearman's rank correlation coefficient result

Correlations	Mean	Medium	r_s	Sig. (2-tailed)	N
Self-satisfaction	3.87	3.92	-.558	.000	213
Extroversion	3.54	3.62	-.287	.000	213
Agreeableness	3.76	3.77	-.195	.000	213
Conscientiousness	3.55	3.55	-.331	.000	213
Neuroticism	2.90	2.88	.433	.000	213
Openness	3.52	3.50	-.115	.000	213

Chapter 5: Discussion

With the growing popularity of social networking site, the number of its users has escalated significantly. It has become a major medium by which people develop their personal network online in recent years. But it is also recognized as an environment in which individuals may display signs and symptoms of mental health problem (Moreno, 2011). Facebook, as one of the most popular SNSs, provide a convenience platform for people to know what is going on with other people's lives and to compare themselves with others. If someone do not have a newsfeed post, seeing other peoples' status updates and pictures posting may make them feel worse about their own life achievements, which can lead to depression.

This study investigated the correlation between self-satisfaction and depressive emotions and used social comparison theory and SPAARS approach to explain the reasons that people compare themselves to others when they are Facebooking, and to analyze why people may feel depressed after they use Facebook. Social comparison theory indicates that people would like to seek similar groups to compare for accurate self-evaluation. Facebook is a place where we can see people who share similar standards with us post pleasant activities most of the time.

Therefore, when someone is immersed in a Facebook environment, upward comparison, which could be threatening to the self, maybe inescapable. I hypothesized that the

level of self-satisfaction of college students will be negatively correlated with depressed emotions after they were exposed to Facebook content. In addition, I hypothesized that there would be correlations between personality traits and depressed emotion. Hypothesis 1 received support. Levels of satisfaction of current life did negatively correlate with depressed emotion after Facebook use. According to Social Comparison theory, people constantly compared themselves with others especially with those who shared similar standards. Facebook unintentionally provided a platform for that. People evaluated themselves to be worse after a comparison with a high standard because comparing oneself to others who were superior may endanger one's self esteem. But for people who had a high level of self-satisfaction and were positively on course to achieving their goals, it was unlikely that they felt other people's lives were better than theirs, because they were relatively satisfied with their current lives and would not likely to experience loss or failure (actual or possible) of valued roles or goals, which was a component of emotional sadness. On the contrast, for those who were not satisfied with their lives, seeing good news paraded on Facebook made them perceived themselves to be less successful then their Facebook friends. The idea that they did not make enough progress to achieve their own goals compared to their Facebook friends made them experience depressive emotions. As we can see from the data, the mean of self-satisfaction score of 3.87, higher than the average score of 3, meant that the participants were relatively satisfied with their current lives.

Results also showed that there were correlations between personality traits and depressed emotion after Facebook use. We found Extroversion was negatively correlated with depressed emotion after exposure in positive Facebook environment (r_s=-0.287, p< 0.001). Extraversion individuals were social, cheerful, optimistic, active, and talkative. The correlation was weak because people who shares these qualities tended to have relatively high level of self-satisfaction

and they could be more optimistic and confident to pursue their goals. Therefore, the appraisal of Extraversion would focus on moves toward their goal rather than failure to achieve valued goal. In addition, individuals high in extraversion were more active users of Facebook, they were more likely to broadcast their activities, events and posted more pictures on Facebook. This personality trait thus was less likely to be influenced by positive personal newsfeed posted on Facebook.

For Agreeableness personality traits, the correlation with depressed mood was very weak (r_s=-0.195, p< 0.004). Agreeableness was a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. The trait reflected individual differences in general concern for social harmony. They are generally considerate, friendly, generous, helpful, and willing to compromise their interests with other (Rothmann, 2013). Agreeableness individuals tended to avoid conflict, they were likely to share the content that were socially acceptable. People who valued getting along with others were less engaged or not likely to be influenced in social comparison or competitive situations with other people. Additionally, pervious research found that Agreeableness was negatively correlated to frequency of use and wall posting. In other words, agreeable users spent less time on Facebook. This personality trait was also unlikely to be influenced by positive personal newsfeed posted on Facebook.

Conscientiousness was negatively correlated with depressed emotion (r_s=-0.331, p< 0.000). Conscientiousness represented the tendency to be reliable, responsible, organized and self-disciplined. People with this trait would not invest a large amount of resources in Facebook because they preferd to stick to their main goals by avoiding distraction (Wehrli, 2008). In that way, people with high score on conscientiousness would be more likely to avoid negative effects from Facebook content.

Neuroticism had a moderately positive correlation with depression emotion (r_s=0.433, p< 0.000). People who scored high in neuroticism were more likely to be influenced by Facebook content and they reported higher score related to higher level of depressive emotion, because the neuroticism personality trait was the opposite of emotional stability. Neurotic individuals were more likely to display negative attributes such as distrustfulness, sadness, anxiety, embarrassment, and difficulty managing stress. These people tended to experience negative emotions and were more likely to interpret ordinary situations as threatening. When they engaged in a comparison situation, such as seeing uplifting events on Facebook, they would more likely to perceive other people as better and happier than themselves. What is more, previous studies also showed that neuroticisms individuals were likely to have longer exposure to SNSs. Facebook provided them with a space to vent, to express feelings, and to maintain stable emotions for avoiding potential risks of revealing unstable emotions or personal information in reality. However, the more time spent on Facebook, the more positive content they saw, the more likely they were to be affected. As a result, those who scored higher on neuroticisms trait were more likely to experience depressed emotion.

Openness had a weak negative correlation with depressive emotion after exposure to positive Facebook environment (r_s=-0.115, p< 0.000). Openness to experience represented an individual's curiosity, open-mindedness, and their willingness to explore new ideas. People scored high on opennesswere more creative and more aware of their feelings; they might not compare themselves to others. Given their curious nature people high in openness were less likely to be influenced about what they saw on Facebook.

The data of this study were obtained from college students at a large university, they might not be generalizable to other populations. A large proportion of the participants were female and

self-satisfaction score of tested students was higher than average, which meant that group of college students had relatively high level of self-satisfaction. Therefore, sample of this study might not be representitive to other demographic groups. Second, the measurement of this study was relatively simple and the emotion after Facebook use needs more reliable ways to test. In addition, the emotional states, the relationships with friends and academic stresses of students may influence their answers to the questionnaire that might lead to differences of outcomes. Despite these shortcomings, the results did make significant contributions. We found that there was a moderately negative correlation between levels of self-satisfaction and depressed emotions and some personality traits were related to depressive emotion of Facebook use among college students. For people who were not satisfied with their current life and were emotion instabe, less Facebooking time meant less attention on other people's achievements, which alleviated the depressive emotions. People who had a depressed emotion might feel sad, hopeless or other negative feelings. They might have problems concentrating, remembering details, or making decisions, and what is more, depressed mood was a primary or associated feature of certain psychiatric syndromes like clinical depression. It is a major public concern and also become a widespread phenomenon in college recent years. To prevent extreme upward comparison, Facebook could establish and promote anti-depression public pages for giving advice on how to regulate emotions and adjust attitudes.

A single study cannot prove or disprove a correlation; replication of our findings across diverse demographic groups is warranted. We encourage other researchers to continue exploration into this relationship. For example, among various social networking sites, newsfeed on Facebook is relatively positive. In contrast, Twitter's content is prone to be negative and critical. Emotions after expose to negative posts need to be further explored. Second, some

people behave differently from real life when they online, whether online personality is same with offline personality needs further investigation. Also, gender difference need to be considered as a factor of emotion expression in future studies.

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APPENDIX

Facebook Survey
Part I
1. Do you have a Facebook account? Active use (If yes, please continue with survey)

    Yes

    No

2. Please indicate your gender

    Male Female

3. What is your year of birth? _ _

4. What year are you in college?

    Freshman

    Sophomore

    Junior

    Senior

    Graduate student

5. What is your Race/Ethnicity?

    Caucasian

    African American

    Hispanic

    Asian

    Other

Part II- Self evaluation

    1.   In regards to your lifetime goals, ideals, and lifelong ambitions, how satisfied are you?

    Very Satisfied   1   2   3   4   5   Not At All Satisfied

2.	Compared to the academic performance of your friends and classmates, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not At All Satisfied

3.	Compared to the Social life of your friends and classmates, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not   At   All   Satisfied

4.	Compared to the Family life of your friends and classmates, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not   At   All   Satisfied

5.	Compared to the Peer recognition of your friends and classmates, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not At All Satisfied

6.	Compared to where you've been and how far you have come along in life (the progress you made, the changes you have endured, or the level of growth you have experienced), how satisfied are you?

Very Satisfied   1   2   3   4   5   Not At All Satisfied

7.	Compared to your have personal expectations, and considering your resources, strengths, and weaknesses, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not   At   All   Satisfied

8.	Compared to what you feel you should have accomplished so far, how satisfied are you?

Very Satisfied   1   2   3   4   5   Not At All Satisfied

Please rate your agreement to the following:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I feel that I am a person of worth, at least on an equal basis with others.	❏	❏	❏	❏	❏
2. I feel that I have a number of good qualities.	❏	❏	❏	❏	❏
3. All in all, I am inclined to feel that I am a failure.	❏	❏	❏	❏	❏
4. I feel I do not have much to be proud of.	❏	❏	❏	❏	❏
5. On the whole, I am satisfied with myself.	❏	❏	❏	❏	❏

Part III

1. How long have you been a Facebook user?

   1 year

   2 years

   3 years

   4 years

   5 years above

2. How often do you visit Facebook per day? (including using mobile phone and other devices)

   I don't visit Facebook everyday

   Once

   2-3 times

   4-5 times

   6-10times

   more than 10 times

3. How long do you spend on Facebook per day?

   I don't visit Facebook everyday

   Less than1 hour

   1- (Just under) 2 hours

      2-(just under) 3 hours

3-(just under) 4 hours

4 hours or more

4. How many "friends" do you have on Facebook?

Less than 150

151-250

251-350

351-450

451-550

551-650

PartIV

1. What   types   of   posts   interests   you   most   on   Facebook?

Status

Photos

log

Videos

Links

Others

2. What do you see most frequently about your friends on Facebook? (Check all applicable)

Their status change

Photos they post

Videos they post

Status/Photo/Videos they like

Status/Photo/Videos they share

Others

3. Regarding Facebook status and photos, please rate your agreement to the following statements:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

	Never	Seldom	About half time	Usually	Always
1. Most of friends' status updates on Facebook are positive.	❏	❏	❏	❏	❏
2. A majority my friend's photos show they have a great time	❏	❏	❏	❏	❏
3. A majority of my friends show their bright side on Facebook.	❏	❏	❏	❏	❏
4. I often see achievement stories on Facebook.	❏	❏	❏	❏	❏
5. I rarely see sad stories on Facebook.	❏	❏	❏	❏	❏

4. Generally speaking, how do you feel after use Facebook? Please rate your agreement

	Never	Seldom	About half time	Usually	Always
1. I always unintentionally compare myself with friends when I check their Facebook pages.	❏	❏	❏	❏	❏
2. I usually feel happy after I use Facebook.	❏	❏	❏	❏	❏
3. I usually feel depressed after I use Facebook.	❏	❏	❏	❏	❏
4. I usually feel sad after I use Facebook.	❏	❏	❏	❏	❏
5. I usually feel out of place after I use Facebook.	❏	❏	❏	❏	❏
6. I always feel like an underachiever after I use Facebook.	❏	❏	❏	❏	❏
7. I always feel I am better than most of my friends after I use Facebook.	❏	❏	❏	❏	❏
8. I always feel I am lacking behind my peers after I use Facebook.	❏	❏	❏	❏	❏
9. I always feel I am overachieving more than most of my friends.	❏	❏	❏	❏	❏

PartⅤ- Personality

How I am in general

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1	2	3	4	5
Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly

1._____ Is talkative

2._____ Tends to find fault with others

3._____ Does a thorough job

4._____ Is depressed, blue

5._____ Is original, comes up with new ideas

6._____ Is reserved

7._____ Is helpful and unselfish with others

8._____ Can be somewhat careless

9._____ Is relaxed, handles stress well.

10._____ Is curious about many different things

11._____ Is full of energy

12._____ Starts quarrels with others

13._____ Is a reliable worker

14._____ Can be tense

15._____ Is ingenious, a deep thinker

16._____ Generates a lot of enthusiasm

17._____ Has a forgiving nature

18._____ Tends to be disorganized

19._____ Worries a lot

20._____ Has an active imagination

21._____ Tends to be quiet

22._____ Is generally trusting

23._____ Tends to be lazy

24._____ Is emotionally stable, not easily upset

25._____ Is inventive

26._____ Has an assertive personality

27._____ Can be cold and aloof

28._____ Perseveres until the task is finished

29._____ Can be moody

30._____ Values artistic, aesthetic experiences

31._____ Is sometimes shy, inhibited

32._____ Is considerate and kind to almost everyone

33._____ Does things efficiently

34._____ Remains calm in tense situations

35._____ Prefers work that is routine

36._____ Is outgoing, sociable

37._____ Is sometimes rude to others

38._____ Makes plans and follows through with them

39._____ Gets nervous easily

40._____ Likes to reflect, play with ideas

41._____ Has few artistic interests

42._____ Likes to cooperate with others

43._____ Is easily distracted

44._____ Is sophisticated in art, music, or literature

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R E S E A R C H

Yujiao Wang
Dept. of Telecommunication & Film
College of Communication & Information Sciences
Box 870152

Re: IRB # 13-OR-189, "Does Facebook affect your mood?"

Dear Ms. Wang:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on May 23, 2014. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB application number.

Good luck with your research.

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