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# Personality and Social Influence Characteristic Affects on Ease of Use and Peer Influence of New Media Users Over Time

David M. Ho

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**PERSONALITY AND SOCIAL INFLUENCE CHARACTERISTIC AFFECTS ON  
EASE OF USE AND PEER INFLUENCE OF NEW MEDIA USERS OVER TIME**

THESIS

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AFIT/GRD/ENV/11-M01

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AFIT/GRD/ENV/11-M01

PERSONALITY AND SOCIAL INFLUENCE CHARACTERISTIC AFFECTS ON  
EASE OF USE AND PEER INFLUENCE OF NEW MEDIA USERS OVER TIME

THESIS

Presented to the Faculty

Department of Systems and Engineering Management

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In Partial Fulfillment of the Requirements for the  
Degree of Master of Science in Research and Development Management

David M. Ho, MS

Captain, USAF

March 2011

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AFIT/GRD/ENV/11-M01

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### **Abstract**

New Media technologies such as online social networking sites (SNSs) have emerged in today's society as seen in the SNS Facebook and its over 500 million users. Millions of people across the world are forming large social networks through these internet-based SNSs by sharing similar interests, friends, and personal information. New Media technologies now allow people to communicate messages to a greater audience through these networks not previously feasible with other technologies. This research seeks to understand these New Media users by examining the personality and social influence characteristics through the three phases of New Media acceptance: trial, adoption, and continual use.

This study conducted a quantitative study on 64 university students concerning their experience with Facebook. Subjects were questioned on the three phases of New Media acceptance and completed personality surveys based on the Big Five taxonomy and social influence characteristics. The research revealed that conscientiousness, susceptibility to interpersonal influence, and social desirability bias moderated the effects of peer influence and ease of use across the three phases of New Media acceptance.

*To my loved ones who supported me during this venture*

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# PERSONALITY AND SOCIAL INFLUENCE CHARACTERISTIC AFFECTS ON EASE OF USE AND PEER INFLUENCE OF NEW MEDIA USERS OVER TIME

## I. Introduction

“Without Facebook, without Twitter, without Google, without YouTube, this [Egyptian revolution] would have never happened” (Ghonim, 2011).

### Background

Google executive Wael Ghonim has emerged as the symbol of the revolution in Egypt (Ghonim, 2011). Ghonim was jailed and beaten during the Egyptian revolution for organizing protest dates and locations through the social networking site (SNS) Facebook (Ghonim, 2011). Through the Facebook page created by Ghonim “We are all Khalid Sayid,” protest organizers shared protest dates and locations while page followers could share photos and videos of the abuse and mistreatment in Egypt. Half a million users followed Ghonim’s page within months of creation (Ghonim, 2011).

New Media SNSs like Facebook and MySpace, have exploded in popularity within the past decade. New Media SNSs allow users to communicate beyond their current means while creating new online communities and social networks. Users share personal information through visible online profiles which are linked to other users based on shared interests and common friends. The SNS Facebook is examined in this study of New Media acceptance.

Since Facebook’s inception in February 2004, it has garnered more than 500 million active users (Facebook Factsheet, 2011). This large user community is being utilized in many ways, one of which is advertising. Letzing (2010) reported that the 2010

revenue estimate for Facebook is \$1.28 billion. The large user community and potential marketshare has not gone unnoticed, organizations such as Fortune 500 companies are flocking to Facebook to advertise by creating company profiles on the SNS to share product information (Letzing, 2010).

Despite the growing impact of New Media, sparse literature exists on the characteristics of New Media users. Personality characteristics have long been used to predict individual behavior and performance (Barrick & Mount, 1991), but fails to be included in current technology acceptance models. Unlike personality characteristics, social influence characteristics have been included in current technology acceptance theories. The social influence characteristics focus on the beliefs of the user's surrounding peer group or other referent groups the user may deem significant. This research investigates both personality characteristics and social influence characteristics in the context of New Media acceptance.

Abundant research exists in the literature concerning technology acceptance models and user behavior in the information systems domain with various work-focused productivity information technology (IT) systems. Technology acceptance theories attempt to explain user behavior concerning different types of IT systems. These models and theories range from social psychology models incorporating behavior intentions and attitudes such as the Theory of Reasoned Action (Fishbein & Ajzen, 1975) to models such as the Innovation Diffusion Theory that describes the dissemination of various innovations across a network (Rogers, 2003). These theories fail to explain the constructs across time through the three phases of New Media acceptance: trial, adoption, and continual use. These models exist to explain technology acceptance, but fail to

address the impact of personality or social influence characteristics of New Media users over these three phases. The intent of this research effort is to examine the impact of individual personality characteristics and social influence characteristics over the three phases.

### **Social Network Sites Defined**

SNSs are based on individual profiles created by users typically detailing their interest, hobbies, and other personal information through a web-based service site (Boyd & Ellison, 2008). The user profiles are unique in that they are visible networks linked with other users based on their interests and offline social connections (Boyd & Ellison, 2008). However, the users can limit visibility to these individual profiles too. Boyd and Ellison (2008) describe the public visibility of these user connections and profiles as a critical component of the SNSs. Various SNSs exist that offer a wide variety of features to users, but they all offer the basic function of creating user profiles as well as visibility of user social networks and connections (Boyd & Ellison, 2008).

For the purpose of this study, social network sites, sometimes known as social networking sites in the public media, are defined by Boyd and Ellison (2008) as

“...web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.”

### **Purpose and Significance of the Study**

The impact of New Media can be easily seen from the recent revolution in Egypt. Within 18 days since the beginning of the revolution, former Egyptian President Hosni Mubarak was overthrown on February 11, 2011 (Levinson et al., 2011). SNSs were



utilized to organize and disseminate information concerning protest rallies and thoughts on the Egyptian people's grievances with the overthrown government (Ghonim, 2011). Not only are SNSs used as political and social agenda platforms, but also as a source for consumer marketing. Fortune 500 companies are creating user profiles in order to reach out to their customer-base in large volumes (Letzing, 2010). With more than 500 million users and growing, SNSs like Facebook are connecting individuals among the world on a virtual network unlike any technology previously seen.

The United States Air Force (USAF) recognizes the emergence of SNSs in today's culture especially among the New Media domain (Clavette et al., 2009). The USAF recognizes a shift towards digital news outlets and the use of New Media by its airmen. According to *New Media and the Air Force* (2009), the USAF intends to have its airmen on the frontline of New Media in order to "combat negative influence of enemy propaganda, misinformation, and misrepresentation." People recognize the influential power of SNSs and the ability to communicate with millions of users, hence the development and marketing of SNSs at a dramatic rate (Boyd & Ellison, 2008; Lampe, Ellison, & Steinfield, 2006). Millions of users can now be linked together on the Internet through these social networks. With the emergence of New Media SNSs, this study seeks to investigate the user community by studying individual personality characteristics and social influence characteristics over time.

This study focused on eight technology acceptance models from the IS domain: the Theory of Reasoned Action, the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the combined TAM and TPB, the Motivational Model, the Model of Personal Computer Utilization, the Innovation Diffusion Theory, and the Social

Cognitive Theory. The previous literature on the eight models used in this study have lacked the inclusion of the Big Five personality characteristics (openness, conscientiousness, extraversion, agreeableness, and neuroticism) though personality characteristics have long been used to predict job performance and behavior in various domains (Barrick & Mount, 1991). New Media is an inherently different technology examined in the previous literature due to the voluntary aspect of SNS as well as the highly social/peer influence component to New Media. This research effort will examine the personality characteristics as well as the social influence characteristics of susceptibility to interpersonal influence (SII) and social desirability bias (SDB) over the technology acceptance phases of trial, adoption, and continual use.

### **Research Questions**

This thesis seeks to identify individual personality characteristics common to SNS users, and how those characteristics impact peer influence and the ease of use of a technology over time. The two following research questions guided the study:

- 1. What individual personality and social influence characteristics are significant among SNS users over time?*
- 2. How do the individual personality and social influence characteristics affect SNS users over time?*

### **Thesis Overview**

The following chapter will briefly examine the literature on the eight technology acceptance models as well as the potential effects of personality and social influence characteristics on the three technology acceptance phases. The constructs from the eight acceptance models fall into five general categories (utility expectancy, difficulty,

affective perception, social influence, and technology system characteristics) which reveal gaps for beneficial areas of research. Chapter 3 discusses the procedures and background of the data collected from this research effort. Chapter 4 will review the data analyses conducted, and finally Chapter 5 will conclude this research effort with the significant findings discovered as well as limitations to the study.

## II. Literature Review

### Introduction

The purpose of this chapter is to examine current literature on technology acceptance models in order to identify areas in which this research can contribute to the current literature. An examination of eight information technology (IT) acceptance models revealed the exclusion of personality characteristics, discussed in the latter sections of this chapter. Along with the Big Five personality characteristics, social influence variables such as social desirability bias (SDB) and susceptibility to interpersonal influence (SII) are examined due to the highly social-based environment of New Media technologies. This chapter will discuss the benefits of including the SII and SDB into the technology acceptance models over trial, adoption, and continual use.

### What is New Media?

Though a single definition of New Media does not exist in the literature, the importance of social context in all New Media is agreed upon (Lievrouw & Livingstone, 2002). This study uses the framework proposed by Lievrouw and Livingstone (2002) which is composed of three components to view New Media:

1. Artifacts or devices (tools) that provide a means to communicate beyond our current abilities.
2. Development of the artifacts and devices through communication activities and practices.
3. Finally, the social arrangements or communities that form as a result of the devices and practices developed.

This framework provides an ensemble of components to determine which technologies are considered New Media technologies (Lievrouw & Livingstone, 2002). SNSs such as Facebook fall directly into the framework discussed by providing a means to communicate with people through an organized website with specific communication features such as instant messaging or public profiles. The most interesting aspect of New Media SNSs is the culmination of communication artifacts and devices with users which results in the formation of these online communities. With the 2011 revolution in Egypt, users conveyed messages and media with one another concerning what they believed to be mistreatment and neglect by the Egyptian government (Ghonim, 2011). This community of disgruntled citizens formed online and only met physically at protest rallies. The potential for New Media to change the world one user at a time is real.

### **Technology Acceptance Process Terms**

The technology acceptance process discussed in this research effort consists of three phases: trial, adopt, and continual use. This research effort attempts to adequately define and discriminate between these three phases. In order to view New Media acceptance as a process, it is important to discriminate between these three phases to understand acceptance over time. By not explicitly defining the phases of New Media acceptance, the literature potentially views user acceptance as a binary event as compared to a dynamic process through trial, adoption, and continual use. Therefore, this study will establish a definition of each acceptance phase.

Trial is defined as “to examine or investigate judicially (Merriam-Webster, 2011).” During the trial phase, individuals are still *testing the waters* of a new technology. Here individuals are exploring various features a technology may have to offer in order to

decide whether they will either adopt or continue to use the technology. After an individual tries a technology, they move into the adoption phase. Adopt is defined as “to accept formally and put into effect (Merriam-Webster, 2011).” Individuals adopt a technology for the inherent value they find within the technology during the trial phase. During adoption, individuals consider integrating SNSs into their routines; the individual is said to have *given SNSs a chance*. According to Merriam-Webster (2011), use is “the act or practice of employing something; habitual or customary usage” with the keyword being *habitual*. The habitual nature of New Media differentiates the continual usage phase from the adoption phase of technology acceptance. During the continual usage phase, the individual has now integrated New Media into their routine and is making New Media a habitual behavior.

### **Review of User Acceptance Models**

An abundance of theories and models exist on information technology (IT) acceptance (Davis, 1989; Moore & Benbasat, 1991). This study focuses on eight IT acceptance models emerging within the literature as the foundation for this research: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the combined TAM and TPB (C-TAM-TPB), the Motivational Model (MM), the Model of Personal Computer Utilization (MPCU), the Innovation Diffusion Theory (IDT), and the Social Cognitive Theory (SCT). In order to identify beneficial areas for further research within these models, the following sections introduces the eight theories providing a brief description of the theoretical constructs and the corresponding technology phase. Table 1 represents the constructs of the eight

theories discussed. The original author and the technology in which the respective theory examined are listed as well.

### **Theory of Reasoned Action**

The Theory of Reasoned Action (TRA) is rooted in the social psychology work of Fishbein and Ajzen (1975) and is considered “one of the most fundamental and influential theories” in predicting human behavioral intentions (Venkatesh, Morris, Davis, & Davis, 2003). The TRA posits that an individual’s feelings towards performing a behavior, referred to as the attitude toward behavior, and an individual’s perception that important individuals believe he or she should or should not perform the behavior at hand, referred to as the subjective norm, determine an individual’s behavioral intention (Fishbein & Ajzen, 1975). Davis et al. (1989) utilized the TRA in the IS domain to explain individual IT acceptance through behavioral intention by examining MBA student use of word-processing software.

### **Technology Acceptance Model**

The Technology Acceptance Model (TAM) is utilized in the IS domain to determine individual user IT acceptance and usage in organizations through a parsimonious examination of behavioral intention (Venkatesh, 2000). TAM theorizes that perceived usefulness and perceived ease of use (EOU) explain individual behavior intentions concerning IT systems (Davis, 1989). Perceived usefulness is defined as the degree to which an individual believes a system will enhance his or her performance, and perceived EOU is defined as the degree to which an individual believes that using the system will require little effort (Davis, 1989). However, Venkatesh and Davis (2000) included subjective norm as a third predictor in a second TAM (TAM2) in order to reflect

the importance of social influences that individuals face when adopting or using a new technology. The technologies examined by the TAM and TAM2 in the original studies included an electronic mail and file editor system at an organization, two graphics systems used by MBA students, scheduling and personnel assignment system, financial services system, customer account management system, and stock portfolio management system (Davis, 1989; Venkatesh & Davis, 2000).

### **Theory of Planned Behavior**

The Theory of Planned Behavior (TPB) extends the TRA with a third antecedent of intention, perceived behavioral control (Ajzen, 1991). Ajzen (1991) describes perceived behavior control as the “perceived ease or difficulty of performing the behavior” which assumes past experience and anticipated obstacles. TPB has been shown to have high predictive ability in various domains, including the IT domain, with only three antecedents (Mathieson, 1991).

### **Combined TAM-TPB**

The Combined TAM-TPB (C-TAM-TPB) model examined technology acceptance in a different sample than had previously been studied in the TAM and the TPB (Davis, 1989). The C-TAM-TPB addressed the implications of prior experience by including both experienced and inexperienced IT users. By analyzing a computer resource center at a business school, Taylor and Todd (1995) discovered the C-TAM-TPB model was a significant tool for predicting IT adoption and usage prior to individual IT experience.



## **Motivational Model**

Davis et al. (1992) applied motivational theory from psychology to the IT domain, studying word processing programs and business graphic programs to explain individual technology adoption and usage with the Motivational Model (MM) (Davis, 1989). The MM focuses on two types of motivation as core constructs: Extrinsic Motivation and Intrinsic Motivation. The extrinsic motivations are perceived as instrumental to the individual for achieving various outcomes. However, intrinsic motivation is the perception that individuals will perform an activity with no other reinforcement other than to perform the activity (Davis, 1989). Individuals driven by intrinsic motivations strive to fulfill an internal desire through their behaviors, while external factors such as job performance or pay drive extrinsic motivations.

## **Model of Personal Computer Utilization**

The Model of Personal Computer Utilization (MPCU) utilized the Theory of Human Behavior (THB) proposed by Triandis (1980) in the IT domain to explain individual usage of technology (Thompson, Higgins, & Howell, 1991). The theory posits that PC utilization is determined by an individual's feelings (affect) toward PC usage, expected consequences of PC usage, social norms within the workplace concerning PC usage, individual habits concerning PC usage, and environmental conditions facilitating PC usage (Thompson et al., 1991). Thompson et al. (1991) revealed social norms and three components of expected consequences had a strong influence on utilization of PCs from data collected on managers and professionals at a large multinational organization.

## **Innovation Diffusion Theory**

Innovation Diffusion Theory (IDT) explains the dispersion of innovation among

individuals based on four elements: innovation, communication channels, social systems, and time (Rogers, 2003). Grounded in sociology, IDT was utilized for IT adoption with a refined set of constructs to include: relative advantage, ease of use, image, visibility, compatibility, results demonstrability, and voluntariness of use (Moore & Benbasat, 1991). Moore and Benbasat (1991) adapted the characteristics found in IDT for the IT domain, and developed a set of constructs that predicted IT adoption and eventual diffusion of innovation through the analysis of personal work stations across multiple organizations.

### **Social Cognitive Theory**

Social Cognitive Theory (SCT) was initially theorized to characterize human behavior through a triadic reciprocity of person, environment, and behavior (Bandura, 1989). Compeau and Higgins (1995) extended the SCT to computer usage by surveying Canadian managers and professionals on their computer self-efficacy. Computer self-efficacy was defined as an individual's perceived capability to utilize a computer to accomplish a particular task (Compeau & Higgins, 1995). In a longitudinal study, Compeau, Higgins, & Huff (1999) validated that self-efficacy and outcome expectations influence on an individual's affective and behavior to IT.

Table 1. Constructs of the Eight Theories

Model	Constructs	Origin in IS Domain	Initial Technology
Theory of Reasoned Action (TRA)	Attitude Toward Behavior Subjective Norm	Davis ,Bagozzi, and Warshaw (1989)	Word Processing
Technology Acceptance Model (TAM)	Perceived Usefulness Perceived Ease of Use Subjective Norm	Venkatesh and Davis (2000)	Scheduling/Personnel Assignment System Graphics programs Financial service system Account Management System Stock Portfolio Management System
Motivational Model (MM)	Extrinsic Motivation Intrinsic Motivation	Davis ,Bagozzi, and Warshaw (1992)	Business graphics program
Theory of Planned Behavior (TPB)	Attitude Toward Behavior Subjective Norm Perceived Behavioral Control Perceived Usefulness	Mathieson (1991)	General PC utilization
Combined TAM and TPB (C-TAM-TPB)	Attitude Towards Behavior Subjective Norm Perceived Behavioral Control Perceived Usefulness	Taylor and Todd (1995)	Computer resource center
Model of Personal Computer Utilization (MPCU)	Job-Fit Complexitt Long-Term Consequences Affect Towards Use Social Factors Facilitating Conditions	Thompson, Higgins, and Howell (1991)	General PC utilization
Innovation Diffusion Theory (IDT)	Relative Advantage Ease of Use Image Visibility Compatibility Results Demonstrability Voluntariness of Use	Moore and Benbasat (1991)	Personal Workstations
Social Cognitive Theory (SCT)	Outcome Expectations- Performance Outcome Expectations- Personal Self-Efficacy Affect Anxiety	Compeau and Higgins (1995)	Manager and other professional computer self-efficacy

### Overview of the Eight Models

The previous sections described the ability of the eight technology models to predict user technology behavior. However, the constructs of the eights models overlap with one another based on construct definitions. This study posits that each category affects the New Media acceptance process differently due to the characteristics of the constructs within the category. This study groups the constructs of the eight previously discussed theories into five categories: utility expectancy, affective perception, difficulty,

social influence, and technology system characteristics. The following sections will describe each of these categories.

### Utility Expectancy

Utility expectancy describes constructs with elements that seek to serve a tangible purpose, agenda, or task. Based upon this definition, constructs that describe the IT system as a *utility* to achieve a desired consequence or attain a higher (or lower) level of performance fall into this category. Utility expectancy constructs view technology systems as a means to realize tangible consequences by the user. The MPCU, MM, SCT, TAM/TAM2, CTAMTPB, and IDT contain constructs that are grouped into the utility category based on this definition. These constructs and their applicable theory, as seen in Table 2, include: job fit (MPCU), long-term consequences (MPCU), extrinsic motivation (MM), outcome expectations – performance (SCT), perceived usefulness (TAM/TAM2 and CTAMTPB), and results demonstrability (IDT).

Table 2. Utility Expectancy Category

Construct	Theory
Job Fit	MPCU
Long Term Consequences	MPCU
Extrinsic Motivation	MM
Outcome Expectations: Performance	SCT
Perceived Usefulness	TAM/TAM2 CTAMTPB
Results Demonstrability	IDT

Due to the focus on consequences and performance (long-term consequences, extrinsic motivation, performance expectations), the utility expectancy category

influences the trial and continual use phase of the New Media acceptance process through the user's belief that the technology will be, and remain, beneficial. Based on utility expectancy constructs, users trial a technology due to the initial perception or expectation that a technology will assist the user achieve a desired consequence or attain a desired level of performance for certain job tasks (job fit). Users successfully achieving initial expectancies utilizing the technology system during trial continue through to the adoption and continued use phase due to this positive affirmation. With some successful realized expectancies, users may adopt the technology still unsure of the benefits of the technology. During the adoption phase, the user is still experimenting with the technology and still determining if it is capable of achieving the expectations from trial. However, once users consistently experience successful results (results demonstrability), users would then be more likely to enter the continual use phase and habitually use the technology due to realized expectancies.

### **Affective Perception**

Affective perception describes constructs rooted in the individual's emotional disposition towards a technology. These emotional dispositions form from the user's feelings and the internalization of opinions concerning the technology. Affective perception constructs for the purpose of this research include affect towards use (MPCU), intrinsic motivation (MM), personal outcome expectations (SCT), affect (SCT), anxiety (SCT), perceived behavioral control (TPB and CTAMTPB), and attitude toward behavior (TRA, TPB, and CTAMTPB).

Affective perception constructs affect New Media acceptance across all three phases of New Media acceptance. Initially during the trial phase, users may feel

apprehensive towards the technology (affect, anxiety, or attitude toward behavior), but due to the newness of the technology or other influential factors in the trial phase, users will trial the technology despite existent apprehensions. Users may also find affective perceptions increasingly significant as more time is invested by the individual into the technology over time. After the trial phase, the user may discover that the technology brings a certain level of enjoyment with use bringing about positive affective perception towards the technology (intrinsic motivation and personal outcome expectations). As users invest more time into a technology, negative or positive feelings concerning the technology may arise. These negative and positive feelings contribute to the user's emotional disposition as they continue with the technology across time through the phases of acceptance. Negative affections would be believed to have a negative impact on user acceptance through the phases of New Media acceptance, while positive affections towards the technology would act positively towards New Media acceptance. This falls under the assumption users would not want to use a technology they do not enjoy. Table 3 shows the constructs characterized as affective perception from the eight models discussed.

Table 3. Affective Perception Category

Construct	Theory
Affect Towards Use	MPCU
Intrinsic Motivation	MM
Outcome Expectations: Personal	SCT
Affect	SCT
Anxiety	SCT
Perceived Behavioral Control	TPB
Attitude Toward Behavior	TRA

## **Difficulty**

Difficulty describes constructs that describe the arduous nature of the systemic qualities of using a technology. Four constructs from the discussed eight models fall into this category as seen in Table 4: complexity (MPCU), facilitating conditions (MPCU), self-efficacy (SCT), and perceived ease of use (TAM, TAM2). These constructs relate to the user's difficulty using a technology or factors that contribute to making the technology easier to use. Complexity describes the perceived difficulty in using a technology (Thompson et al., 1991), while the perceived ease of use (PEOU) and self-efficacy describe the user's ability to use the technology free from effort (Davis, 1989; Compeau & Higgins, 1995).

The difficulty category of constructs is believed to be more significant during the adoption and continual use phase than the trial phase. New Media technologies are voluntary IT systems and the user has a particular level of difficulty they are willing to accept. Initially during the trial phase, the new technology has a level of uncertainty the user understands is inherent with trying a new technology or is willing to accept. Users may expect this level of uncertainty and difficulty to decrease over time with more use. This would cause the difficulty constructs to grow in importance as users progress through the adoption and continual use phase as more time is invested into the technology. Should the difficulty level of the technology remain too high or constant for the user, adoption or continued use of the technology would be unlikely.

Table 4. Difficulty Category

Construct	Theory
Complexity	MPCU
Facilitating Conditions	MPCU
Self – Efficacy	SCT
Perceived Ease of Use	TAM/TAM2

### **Social Influence**

The social influence category describes five constructs which are influenced by the individual's surrounding peer or referent group. Social factors, subjective norm, image, and visibility are constructs which take into account the opinion of peers around the user. Voluntariness of use is the freedom to choose technologies and may be dictated by the user's organization. The peers and organizations around the user form peer and referent groups which become part of the societal and culturally structure around the user. These peer or referent groups suggest whether the user should, should not, or even require the use of a particular technology. The affect of social influence becomes important to the user during the trial phase when the user may look towards society and cultural norm for guidance on technology choice. Over time, the reliance on one's peers decreases as the user becomes accustomed to the technology. The impact of social influence over the phases of New Media acceptance is described in further detail later in the chapter. Table 5 lists the five constructs applicable to the social influence category.



Table 5. Social Influence Category

Construct	Theory
Social factors	MPCU
Subjective norm	TAM/TAM2 CTAMTPB
Image	IDT
Visibility	IDT
Voluntariness of use	IDT

### Technology System Characteristics

The technology system characteristics category describes constructs based on characteristics of the system which contribute to New Media acceptance. Table 6 lists the constructs grouped into this category from the models discussed previously. Both constructs in the technology system characteristics category, relative advantage and compatibility, are from IDT. This category of constructs describes characteristics in the technology system which make the technology better than other technologies in the market (relative advantage), or describe how the technology characteristics are consistent with the users' needs or past experience (compatibility) (Rogers, 2003).

The technology system characteristic category of constructs gains importance in the adoption and continual use phase of New Media acceptance as users gain more experience with the technology. Technology system characteristics in the trial phase have less bearing on user behavior due to the lack of experience with the technology. As users become familiar with the technology and time is invested, technology system characteristics are learned and the user internalizes other motivations to adopt and continually use the technology.

Table 6. Technology System Characteristics Category

Construct	Theory
Relative advantage	IDT
Compatibility	IDT

### Five Category Overview

Table 7 breaks down the eight technology acceptance models, their constructs, and the applicable phases based on the categories discussed previously. The categories fail to examine the individual, specifically personality characteristics, in order to predict behavior. Though social influence characteristics are examined in the eight models discussed, this research introduces two other social influence constructs which warrant further investigation in New Media acceptance. This research chooses to focus on the social influence category and the excluded personality characteristics due to the nature of New Media.

As seen in Table 1, the technologies initially examined with the models pertained to productivity-based systems utilized in organizations for performance-based outcomes. These tools lacked the social arrangements and communities found in New Media technologies. Due to the social nature of New Media, the social influence category of constructs warrants further investigation, discussed later in the chapter.

Table 7. Theory Constructs and Applicable Technology Phase

MPCU				
Construct	Category	Trial	Adoption	Continual Use
Job fit	Utility Expectancy	•		•
Complexity	Difficulty		•	•
Long-term consequences	Utility Expectancy	•		•
Affect towards use	Affective Perception	•	•	•
Social factors	Social Influence	•		
Facilitating conditions	Difficulty		•	•
MM				
Construct	Category	Trial	Adoption	Continual Use
Extrinsic motivation	Utility Expectancy	•		•
Intrinsic motivation	Affective Perception	•	•	•
SCT				
Construct	Category	Trial	Adoption	Continual Use
Outcome expectations: performance	Utility Expectancy	•		•
Outcome expectations: personal	Affective Perception	•	•	•
Self – efficacy	Difficulty		•	•
Affect	Affective Perception	•	•	•
Anxiety	Affective Perception	•	•	•
TRA				
Construct	Category	Trial	Adoption	Continual Use
Attitude toward behavior	Affective Perception	•	•	•
Subjective norm	Social Influence	•		
TAM/TAM2				
Construct	Category	Trial	Adoption	Continual Use
Perceived usefulness	Utility Expectancy	•		•
Perceived ease of use	Difficulty		•	•
Subjective norm	Social Influence	•		
TPB				
Construct	Category	Trial	Adoption	Continual Use
Attitude toward behavior	Affective Perception	•	•	•
Subjective norm	Social Influence	•		
Perceived behavioral control	Affective Perception	•	•	•
CTAMTPB				
Construct	Category	Trial	Adoption	Continual Use
Attitude toward behavior	Affective Perception	•	•	•
Subjective norm	Social Influence	•		
Perceived behavioral control	Affective Perception	•	•	•
Perceived usefulness	Utility Expectancy	•		•
IDT				
Construct	Category	Trial	Adoption	Continual Use
Relative advantage	Tech System Char		•	•
Ease of use	Difficulty		•	•
Image	Social Influence	•		
Visibility	Social Influence	•		
Compatibility	Tech System Char		•	•
Results demonstrability	Utility Expectancy	•		•
Voluntariness of use	Social Influence	•		

## Theory Development

The categorization of the constructs provide a strategy to decompose the constructs across all models in order examine their affects over time. The evaluation of the five categories revealed commonality among the constructs of the eight models discussed previously. These commonalities are expressed through the categorization of the constructs into the five overarching groups. These five categories provide an avenue to parsimoniously evaluate the impact of the five categories across the three phases of New Media acceptance. These five categories differ among each other based on their influence on various phases of New Media acceptance.

The categories of particular interest in this study are Difficulty and Social Influence due to the nature of New Media. New Media is a voluntary IT system in which users behave in a consumer-like fashion selecting the desired New Media technologies to trial. Social systems and cultures may dictate the user's opinion on which technology to utilize, as compared to previous studies on acceptance of productivity-based technology systems dictated by an organization as seen in Table 1. New Media technologies are used in a social setting in which users interact with one another, as compared to utilizing the technology directly to accomplish job tasks. The influence of characteristics over time may differ due to users finding internal reasons to utilize a New Media technology instead of relying on the surrounding social system.

Hu (2003) identified the intensification of perceived ease of use (PEOU) over time. This intensification may stem from increased use and dedication of resources towards the technology resulting in user expectations to increase. PEOU is categorized

into the Difficulty group of constructs the lack of effort needed by the users to utilize a technology.

In the context of New Media, individuals view the PEOU as less important during the trial phase but the significance of PEOU progressively increases through the adoption phase and continual use phase. This suggests users of New Media may trial a technology, but if the technology becomes complicated, the user may not continue use. New Media technologies are IT systems used for social interaction (Lievrouw & Livingstone, 2002). Should this technology become a distraction or overly complicated to users primarily focused on other tasks, then the likelihood of use overtime would decrease. Ease of use and the level of difficulty using a technology over time would be particularly important to conscientious individuals who are task-oriented, particularly on job task performance, which will be discussed later in this section.

Research has emerged supporting the idea that the impacts of the studied constructs may vary over time (Davis, 1989; Moore & Benbasat, 1991). A longitudinal study on technology acceptance of PowerPoint by teachers observed the diminishing importance of subjective norm as individuals gained experiencing in the technology (P. Hu, 2003). Hu (2003) suggested that individuals initially may subconsciously align their acceptance decisions with peers around them, but as time passed, individuals became increasingly independent in decision-making as they gained more knowledge and more experience with the technology over time.

This implication translates into the IS domain by suggesting the diminishing effect of the social influence category in the TRA, TAM, TPB, C-TAM-TPB, MPCU, and IDT over time. Peer influence impacts subjective norm, a core construct to the TRA,

TAM, TPB, and C-TAM-TPB, through the belief that peers believe an action should or should not be performed (Ajzen, 1991; Davis, 1989; Taylor & Todd, 1995; Venkatesh & Davis, 2000). In the TAM, TPB, and C-TAM-TPB, peer influence affects an individual's behavior since the individual perceives the peer opinion to be important. Similarly, an individual's peer set influences the MPCU construct of social factors which are defined by the cultural and interpersonal agreements in social situations within the peer group (Thompson et al., 1991). Peer influence affects the MPCU by shaping the individual's culture and interpersonal agreements in social situations. By shaping the culture and interpersonal agreements in social situations, peer influence can leverage particular New Media technologies that the individual's culture finds acceptable or unacceptable. Finally, peer influence affects the IDT construct of image by defining certain innovations (or IT systems) as avenues to elevate an individual's social status within a social system through the acceptance of the innovation (or IT system) (Moore & Benbasat, 1991). Individual New Media trial behaviors elevate that individual's status within a social system based upon peer perceptions of the New Media technology.

It can be seen from the social influence category that peer influence may be a contributing factor to New Media acceptance. Peer influence impacts on users of New Media are of particular importance during the trial phase of acceptance and may diminish over time according to Hu (2003). Users may seek approval from peers concerning New Media technology choice or seek to improve social status based on technology choice. Peers utilizing a New Media technology would then be influential to others within the social system by recommending the trial of a New Media technology in order to align others with the same belief. Peers currently using a New Media technology can also

provide clarity to users considering New Media trial due to uncertainties that may exist in the trial phase.

### **Social Influence Characteristics**

Social influence characteristics exist in various forms as manifestations of different constructs in the technology acceptance models. This section discusses two specific social influence characteristics used in this research effort: susceptibility to interpersonal influence (SII) and social desirability bias (SDB). This section provides a definition of SII and SDB as well as their potential influence on New Media trial, adoption, and usage.

SII is a general trait that varies within individuals, and measures the degree to which an individual is influenced by real or imagined others (Kropp, Lavack, & Silvera, 2005). In consumer marketing, Bearden, Netemeyer, and Teel (1989) define SII as:

“The need to identify or enhance one’s image with significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others and or seeking information from others” (p. 474).

The implications on New Media trial, adoption, and usage by individuals high in SII can be seen. Individuals may choose New Medias based on those technologies used by their peers in order to attain a higher social status. This can be particularly important during the trial phase, in which the New Media is new and many of the features may be unknown.

The uncertainty of various aspects of the New Media during the trial phase may lead the user to rely more upon peers for information or guidance. This uncertainty leaves the user in a state in which the user is more receptive to their peers for information

and guidance (Goldstein, Cialdini, & Griskevicius, 2008). Kropp et al. (2005) echoes dynamic levels of influence over time dependent on the needs of the individual. Individual behavior is then influenced by peers since individuals seek information from peers on New Media.

The second social influence characteristic examined in this research effort is social desirability bias (SDB). SDB describes an individual's need for social approval and acceptance through culturally acceptable and appropriate behavior (Marlowe & Crowne, 1961). An individual low in SDB has a low need for social approval implying a greater degree of independence, while an individual high in SDB seeks the social approval and acceptance of their peers through their behaviors. In terms of New Media, high SDB individuals will initially trial a New Media in order to seek acceptance and approval from peers. Studies suggest SDB could be viewed as a motivational variable (Kropp et al., 2005). This may be applied in the IS domain through the MM to explain technology acceptance. As a motivation variable, SDB could directly, or indirectly, affect behavior and intentions, as seen in Davis et al. (1992). The behaviors and intentions are affected by communication with peers which influence the social motivations driving individual behavior (Kropp et al., 2005).

### **Personality Characteristics**

The categorization of the constructs presented in Table 7 lacks the inclusion of personality characteristics as a behavioral predictor. However, personality theory proposes that personality traits or characteristics are the fundamental determinants of behavior with considerable literature supporting the personality and behavior linkage (Conner & Abraham, 2001). Personality characteristics have long been used to predict



individual behavior, from job and performance to the learning process (McCrae & John, 1992). Much of the personality research has utilized the Big Five taxonomy of personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) (McCrae & Costa, 1987; McCrae & Costa, 2004).

According to Barrick and Mount (1991), conscientiousness has emerged as the most influential Big Five personality characteristic related to job performance. Three related facets manifest conscientiousness: achievement orientation, dependability, and orderliness (Judge, Higgins, Thoresen, & Barrick, 1999). Conscientiousness was further described by six factors: order, virtue, traditionalism, self-control, responsibility, and industriousness (Roberts, Chernyshenko, Stark, & Goldberg, 2005). Conscientiousness has also been described as the will to achieve (Botwin, 1989) or described as efficient, organized, planful, reliable, responsible or thorough (McCrae & John, 1992). These descriptors of conscientiousness describe the characteristics and motivations behind conscientious individuals supporting the research on personality characteristics as predictors of behavior especially job performance (M. R. Barrick & Mount, 1991; M. R. Barrick, Mount, & Judge, 2001). Barrick and Mount (1991) conducted a meta-analysis that investigated the Big Five personality characteristic relationships to job performance supporting conscientiousness as a predictor of job performance. The descriptors lead to the deduction that conscientious individuals are motivated by achievement-based goals in order to perform, while having the self-control to stay on task or conduct themselves in a thorough and efficient manner to achieve that goal. These achievement-related characteristics of conscientiousness were shown to be valid predictors of performance (Hough, 1988).

Empirical evidence revealed conscientiousness as a valid predictor through multiple occupational domains (Barrick et al., 2001). This suggests the possibility that conscientiousness could be used in the IS domain. Previous research on IT acceptance models have predominantly focused on productivity-based IT systems such as the graphic systems, word processing systems, personnel assignment system, and financial services system (F. D. Davis, 1989; F. D. Davis, Bagozzi, & Warshaw, 1989; F. D. Davis, Bagozzi, & Warshaw, 1992; V. Venkatesh & Davis, 2000). Conscientious individuals, who are described as achievement-oriented, reliable, efficient, and responsible, would tend to use productivity-based IT systems in their occupations to perform job tasks at a higher level. The implication of personality traits to describe individual behavior potentially affects the IS domain and the technology acceptance models discussed in earlier sections.

The eight technology acceptance models discussed excluded personality characteristics from their respective models as seen in Table 1. TRA included the construct attitude toward behavior defined as an individual's feelings toward a particular behavior (Davis, Bagozzi, & Warshaw, 1989), and the MM uses extrinsic and intrinsic motivation as constructs (Davis, Bagozzi, & Warshaw, 1992). Should conscientious individuals feel an IT system is neither productive or beneficial to a job task, then they may be less likely to try, adopt, or use the IT system. Conscientious individual behaviors may be influenced through the three phases of technology acceptance if their extrinsic motivations change due to their achievement orientations. These extrinsic motivations, in the form of job satisfaction, pay, etc., drive conscientious individuals toward achieving a

valued outcome such as job performance (Barrick & Mount, 1991; Barrick et al., 2001; Davis et al., 1992).

Research has shown that an examination of personality characteristics over time may expose beneficial constructs within the IT domain concerning technology acceptance models. Specifically, prior research supports the examination of conscientiousness as a potential impact on IT systems over trial, adoption, and usage. The research has also suggested the importance of examining peer influence. The eight IT acceptance models discussed earlier do so through various constructs as seen in the social influence category of constructs, but lacks the process examination of the constructs through trial, adoption, and usage. The following section will discuss two characteristics used in this research effort related to peer influence: susceptibility to interpersonal influence (SII) and social desirability bias (SDB).

### **Hypotheses**

The following section provides the rationale formed from the literature review conducted on potentially significant relationships between personality and social influence characteristics with the three phases of technology acceptance. It can be seen from the eight IT acceptance models in Table 1 and the construct categories discussed earlier that the personality characteristics of users were not used as constructs to technology acceptance despite literature supporting the importance of personality characteristics. This is unusual considering the vast amounts of research conducted on personality characteristics and job/task performance.

Conscientious individuals are described to be achievement-oriented, responsible, and efficient (Botwin, 1989), which are traits conducive to positive job performance.

New Media differs from the previous technologies studied in the eight IT acceptance models discussed due to the voluntary social nature of New Media versus the productivity-based IT systems. Because of the voluntary nature of New Media, conscientious individuals would find the ease of use significantly more important through trial, adoption, and continual use. New Media, specifically social networking sites (SNSs), exist outside the work environment and is considered extracurricular. Over time, conscientious individuals find the technology more burdensome if the New Media do not get easier to use. Thus, ease of use becomes increasingly significant in high conscientious individuals over time through trial, adoption, and continual use. Figure 1 and Figure 2 illustrate H1A and H1B.

***H1A:** During the trial phase, conscientiousness will be positively related to ease of use in New Media users.*

***H1B:** The effect of conscientiousness will intensify the influence of ease of use through trial, adoption, and continual usage of New Media.*

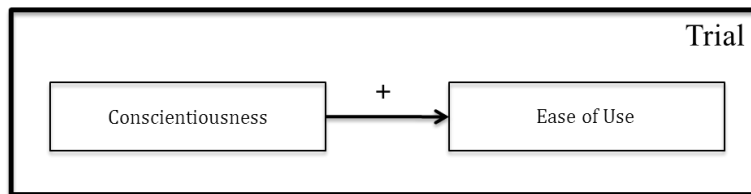


Figure 1. Hypothesis H1A

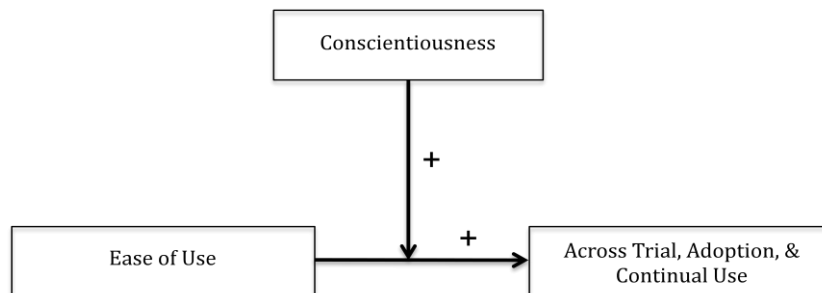


Figure 2. Hypothesis H1B

High SII individuals are defined as individuals that seek to improve their image or gain knowledge on products through their peers or social system (Bearden, Netemeyer, & Teel, 1989). Griskevicius et al. (2008) stated uncertainty leaves the user more receptive to their peers for information and guidance. This state of uncertainty exists during the trial phase of New Media acceptance due to the lack of experience and newness of the technology to the individual. Due to the propensity of high SII individuals to align with their peers, it would then be expected that high SII individuals find peer influence to be significant in the trial phase.

*H2A: During the trial phase, SII will be positively related to peer influence in New Media users.*

*H2B: The effect of SII will lessen the influence of peer influence through trial, adoption, and continual usage of New Media.*

Similarly, high SDB individuals solely perform a behavior to align with social approval; however, this social approval may decrease over time as social motivation decreases (Kropp et al., 2005). High SDB individuals are believed to find inherent advantages within New Media as time passes and the individual progresses from trial to adoption and continual use. Thus, individuals high in SDB will view peer influence significantly higher during the trial phase, but in this case, the significance of peer influence decreases over time through adoption and continual use. Figure 3 illustrates hypotheses H2A and H3A, and Figure 4 illustrates hypotheses H2B and H3B.

*H3A: During the trial phase, SDB will be positively related to peer influence in New Media users.*

*H3B: The effect of SDB will lessen the influence of peer influence through trial, adoption, and continual usage of New Media.*

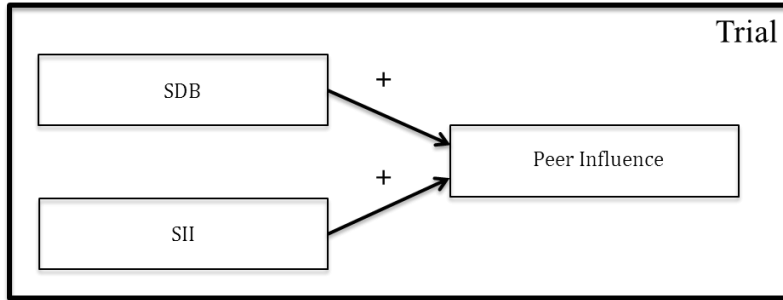


Figure 3. Hypothesis H2A and H3A

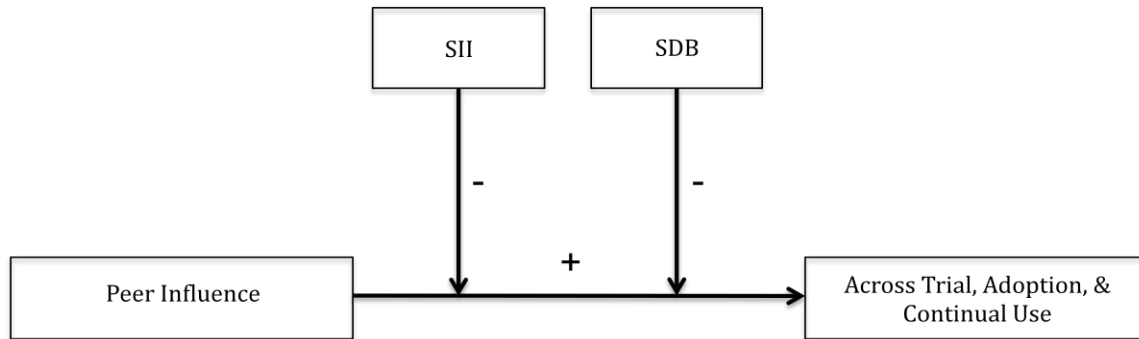


Figure 4. Hypothesis H2B and H3B

### **III. Methodology**

#### **Overview**

The purpose of this chapter is to describe the methodology used for this research effort beginning with the research design. The section following will discuss the sample population examined, the procedures used, measures, and instruments utilized for data collection.

#### **Research Design**

This study primarily used a quantitative research design to examine New Media through the users of the social networking site, Facebook.com; however, qualitative data was also collected for analysis during future research. Quantitative research is defined as any type of research that produces results and/or findings in mathematical terms that arrive via statistical analysis or any other form of quantification (Bordens & Abbott, 2007).

#### **About Facebook**

Mark Zuckerberg, founder and chief executive officer of Facebook, created the SNS in his Harvard dorm room as a social utility for people to communicate more efficiently (Facebook Factsheet, 2011). According to Facebook's Factsheet (2011), Facebook develops technologies that "facilitate the sharing of information through the...digital mapping of people's real-world social connections." User profiles and home pages are the fundamental features of Facebook allowing users to share interests, education, work backgrounds, and contact information with each other through visible social networks. Facebook users can utilize core applications to upload photos, create event notifications/flyers, upload and share videos, create groups, or create pages.

Various communication features exist such as private messaging, wall posts, instant chat, status updates, or pokes.

### **Sample Characteristics**

The sample population used to acquire the data for this research effort consisted of 65 university students. Each student participated in a semi-structured interview session that was documented via an audio recorder and on paper using an approved interview guide. The race/ethnicity of the participants included African American (22%), Asian/Pacific Islander (17%), Caucasian (57%), Native American (2%), and Bi-Ethnic (3%). Slightly more males (52%) participated than females (48%). Participants ranged between 18-21 years of age (69%) and 22-25 years of age (31%). Most of the participants were from the United States (80%), with the others being from Western Europe (3%), Taiwan (2%), China (2%), India (11%), and Other Regions (2%). The reported family income ranges of the student participants were less than \$40,000 (28%), between \$40,000 and \$50,000 (30%), and more than \$50,000 (42%).

### **Procedures**

Student volunteers were solicited through an advertisement campaign on the university campus and the university's portal website. A copy of this research advertisement/flyer is located in Appendix C. Eligible participants were compensated with a \$15 gift card for volunteering.

Once potential subjects responded to the research solicitation, they were asked to fill out a short self-reported screener to obtain demographic data and to determine their level and frequency of New Media usage. This satisfied issues of content validity by ensuring participants have used New Media. The self-reported screener was designed to



ensure that the interviewees have trialed, adopted, and/or continually used New Media technologies. A copy of the self-reported screener is located in Appendix D. Once participant eligibility was determined based on the self-reported screener, the student subjects were scheduled for a one-hour semi-structured interview. Upon completion of the interview, participants accomplished a personality survey in order to measure individual personality characteristics.

### **Interview Procedure**

One-hour semi-structured interviews conducted at a local university were used for quantitative and qualitative data collection in this study. The interviews were described as semi-structured due to the arrangement and types of questions used. Participants also provided their approximate frequency and duration of use for each phase during these interviews. Also, for each phase, items measuring peer influence, ease of use, and experimentation were answered on a 7-point Likert scale. Participants were asked to elaborate on their answers at the end of each section and/or question. These elaborations allowed the individual to freely speak about their answers giving more in-depth, unbounded answers which can be later used in a qualitative study.

### **Measures/Instruments**

The following three items were used to collect data for this study: (a) self-reported screener, (b) semi-structured interview guide, and (c) personality survey. Once the data was collected, the self-reported screener, interviews, and personality survey data were transcribed into a consolidated database for further analysis in the statistical programs SPSS and SAS. The three instruments used for this research are detailed below

## Self-Reported Screener

The self-reported screener (Walinski, 2009), seen in Appendix D, verified exposure to New Media technologies, collected frequency of use data, and collected demographic data (i.e., sex, age, ethnicity, country of origin, and household income). To be eligible for the research, participants must have previous experience with the New Media technology. Furthermore, the screener helped determine the level of New Media technology experience each subject possessed.

The screener was sent to subject matter experts to generate the questions listed on the screener. Before the screener was used for this research, a pilot study was conducted to test the proposed questions used in the screener. The goal of this pilot study was twofold: (1) to evaluate the competency of the questionnaire and (2) to use grounded response distribution to determine the appropriate cut-off values for each section of the screener that the participants would need to meet in order to remain eligible for the survey. Once finalized, the screener was used to determine participant eligibility for the study.

The screener consisted of eleven questions broken up into three different sections. Section 1 of the screener was comprised of four questions relating to New Media exposure. Eligible participants answered “yes” to at least three of the following four questions:

1. Do you have your own blog or personal website (this doesn't include your own page on Facebook, MySpace or similar sites)?
2. In the last month, have you contacted someone through a social networking site like MySpace or Facebook on more than one occasion?

3. In the last month, have you searched for content on social media sites like YouTube or Flickr on more than one occasion?
4. In the last month, have you made a purchase, submitted a product review, read a product review, or searched a product online on more than one occasion?

Section 2 was used to determine frequency of use of New Media technologies.

Eligibility for this section was determined by the number of hours per week the individual used New Media technologies. The participant must have met at least two of the following six activity target ranges in order to remain eligible for the study: two hours contributing to your own website or blog, five hours reading blogs or online forums, six hours visiting social networking sites (e.g., MySpace/Facebook), six hours visiting video sharing sites (e.g., YouTube/Flickr), two hours searching for and listening to Podcasts, or three hours spent playing games online. If the subject's usage exceeded the threshold of the target ranges, they would be allowed to participate in the semi-structured interview.

Section 3 of the screener asked participants to provide information on demographics such as sex, age, ethnicity, country of origin, and household income. This process concluded with a total of 64 participants being identified as eligible to participate in the semi-structured interview discussed in the following section.

### **Semi-Structured Interview**

The second instrument used to collect data was the semi-structured interview. Once eligibility for the study was determined via the screener, a semi-structured interview was scheduled for each eligible respondent. The questions asked related specifically to the participants' use of Facebook. Prior to conducting each interview, a consent form explaining the purpose of the research and rights of the interviewee were

reviewed and signed by each participant. A copy of this Consent for Participation in Research form is located in Appendix E.

An interview guide was developed in order to conduct each interview session. The interview guide used a 7-point Likert-scale for each quantitative question. For each question, the respondent rated his or her answer based on this 7-point scale. The respondent then provided a descriptive answer based on their rating for inclusion in future qualitative analysis. Although the qualitative data collected in this study was not analyzed, the questions were open ended to allow the participants to discuss their connections with the New Media technology in greater detail. This not only allowed the respondents to express their opinions in their own words, but it also made each interview feel more like an open conversation, thus improving the validity of the information revealed. Qualitative data was recorded, but not examined in this study due to the scope of this research/analysis.

The interview guide consisted of twenty quantitative questions broken up into four sections. The data collected in these questions were derived based on frequency data (e.g. time in trial/adoption/continued use) and scale data based on a 7-point Likert scale. A copy of the interview guide used in this study can be located in Appendix F. Section 1 of the interview guide is comprised of four questions that pertain to how the respondent got started with Facebook and their current state of use with the technology. The questions asked in this section are as follows:

1. How long (e.g., number of months or years) have you been using Facebook?
2. How often (e.g., once a day, once a week) do you use Facebook?

3. How much time (e.g., 5 min, 30 min) do you spend with Facebook when you use it?

4. How did you know about the technology (e.g., mass media or interpersonal)?

Section 2 of the interview guide is comprised of six questions regarding the respondent's experiences with the trial of Facebook. The questions asked in this section are as follows:

1. When did you first try Facebook for yourself?
2. How would you rate experimentation as the reason to try Facebook?
3. How would you rate ease of use as the reason to try Facebook?
4. How would you rate peer influence as the reason to try Facebook?
5. How many features in Facebook have you tried?
6. How many features in Facebook have you tried (proportion of features)?

Section 3 of the interview guide is comprised of five questions regarding the respondent's experiences with the adoption of Facebook. The questions asked in this section are as follows:

1. When did you first decide to adopt Facebook for yourself?
2. How would you rate ease of use as the reason to adopt Facebook?
3. How would you rate peer influence as the reason to adopt Facebook?
4. How would you rate technology features as the reason to adopt Facebook?
5. How would you rate technology content as the reason to adopt Facebook?

Section 4 of the interview guide is comprised of five questions regarding the respondent's experiences with their continued use of Facebook. The questions asked in this section are as follows:

1. When did you first decide to continue using Facebook for yourself?
2. How would you rate ease of use as the reason to continue using Facebook?
3. How would you rate peer influence as the reason to continue using Facebook?
4. How would you rate technology features as the reason to continue using Facebook?
5. How would you rate technology content as the reason to continue using Facebook?

### **Personality Survey**

The third instrument used for data collection was the personality survey completed after the semi-structured interviews by each respondent. This survey was divided into two sections with the first section measuring the Big Five factors (e.g., agreeableness, conscientiousness, emotional stability, extraversion, and openness to experience) using the International Personality Item Pool scales. The second section of the personality survey measured the respondents' levels of social desirability bias (SDB), susceptibility to interpersonal influence (SII), and mavenism. **Table 8** includes descriptive statistics for the personality characteristics.

### **Big Five Factors**

The revised Big Five Factors scale used in the first section of the personality survey was developed and validated by Goldberg in 1992. This scale measures the personality characteristics of extraversion, agreeableness, conscientiousness, emotional stability, and openness to experiences through a 50-item survey. Each factor consisted of ten unipolar items measured on a self-reported 5-point Likert scale ranging from “Strongly Agree” to “Strongly Disagree” (Goldberg, 1992). Summing the respective

positively or negatively coded items and computing the mean resulted in the individual personality factors for each trait. A copy of the Big Five Factor personality survey used in this study is located in Appendix G.

### **SDB, SII, and Mavenism**

The second section of the personality survey measured the personality characteristics of social desirability bias (SDB), susceptibility to interpersonal influence (SII), and mavenism through the use of a 16-item survey. Each item was measured using a 7-point Likert scale that ranged from “7” for “Completely True” to “1” for “Completely False.” A copy of the SDB/SII/Mavenism personality survey is located in Appendix H. Table 8 includes descriptive statistics for the social influence characteristics.

### **Social Desirability Bias Measures**

Individual levels of SDB were measured using 6 of the survey’s 16 items. This scale measures how likely the subjects are to bias their responses. Mean SDB scores above 4.0 are commensurate with individuals who believe they need social approval or acceptance through culturally acceptable and appropriate behavior (Crowne & Marlowe, 1960). In this study, SDB represents a motivational characteristic driven by the need to gain social approval through one’s actions.

### **Susceptibility to Interpersonal Influence Measures**

Individual levels of SII were measured using 4 of the survey’s 16 items. Used primarily in consumer marketing, SII describes the degree to which individuals are influenced by real or imagined others (Kropp, Lavack, & Silvera, 2005). Individuals with a mean SII factor score above 5.0 are more easily influenced and have a greater

disposition to seek peer opinions for information on consumer products (Bearden, Netemeyer, & Teel, 1989).

### **Mavenism Measures**

Individual levels of mavenism were measured using 6 of the survey's 16 items. This scale measures the likelihood of individual to try new products and their propensity to provide general shopping and marketplace information. Subject taking this portion of the survey can be placed into one of three categories based on their mavenism scale scores (high, medium, or low). Individuals with a mean mavenism factor score above 4.0 are referred to as "market mavens" and are more likely to try new products (Feick & Price, 1987).



Table 8. Descriptive Statistics and Correlation Table

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Extra	3.43	0.65	.79													
2. Agree	4.05	0.48	.06	.71												
3. Consc	3.72	0.59	-.11	.18	.78											
4. Emotional	3.37	0.62	.28*	-.08	.13	.75										
5. Openness	3.68	0.54	.18	.27*	-.06	-.16	.74									
6. Mavenism	4.74	1.04	.34*	.05	.06	.16	.23	.77								
7. SDB	5.35	0.81	.7	.45*	.27*	.04	.07	.04	.63							
8. SII	2.70	1.13	.15	.04	.03	.01	-.18	.07	-.09	.72						
9. Trial: PI	6.14	1.48	.16	.12	-.07	.10	.00	.19	.15	.21	-					
10. Adopt: PI	6.02	1.33	.05	.25*	-.15	.05	-.03	.07	.12	.25*	.53*	-				
11. Use: PI	5.97	1.46	.06	.13	-.18	.09	.05	-.01	-.16	.17	.20	.67*	-			
12. Trial: EOU	4.98	1.72	.08	.06	-.10	-.17	.13	.09	-.05	.02	.27*	.31*	.29*	-		
13. Adopt: EOU	5.48	1.32	-.01	.02	.02	-.30*	.16	.06	-.04	-.07	.19	.11	.17	.64*	-	
14. Use: EOU	5.72	1.33	.042	.02	.18	-.26*	-.01	.15	-.06	.13	.22	.08	.08	.30*	.67*	-

\*n=64; \* represent  $p < .05$ ; Cronbach's alpha on diagonal, Descriptives using raw metrics

## IV. Results and Analysis

### Overview

The purpose of this chapter is to provide an analysis of the data obtained from the quantitative data collected from the self-reported screener, interview guide, and personality surveys. Table 8 lists the correlations, descriptive statistics, and Cronbach's alpha along the diagonal for the data collected. Correlations shown are for significant constructs found in this study. This chapter examines two sets of three sequential statistical models used to test the hypotheses proposed in Chapter 2 of this study. The results provide insight into the specific personality characteristics that interact with ease of use and peer influence to influence individuals to trial, adopt, and continue to use Facebook.

### Random Intercept Model

The first statistical model of each of the two sets of analyses was a random intercept model. This model examines the variance of initial status across individuals. Figure 5 portrays a pseudo example of what a random intercept model might look like.

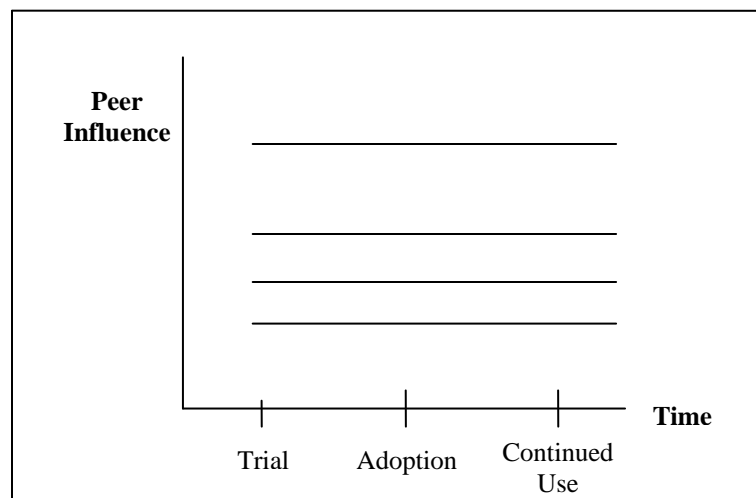


Figure 5. Pseudo Random Intercept Model

## Unconditional Growth Model

The second statistical model of each of the two sets of analyses was an unconditional growth model. With this model, both the intercept and slope may differ across individuals. Figure 6 portrays a pseudo example of what an unconditional growth model might look like.

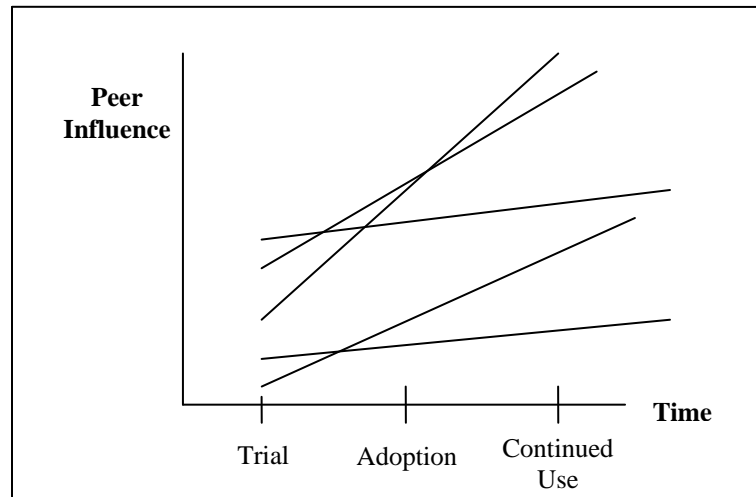


Figure 6. Pseudo Unconditional Growth Model

### Note on Centering

Many authors express their psychological constructs through arbitrary metrics, which lack a defined zero point (Blanton & Jaccard, 2006). Although centering does not completely resolve the issue of arbitrary metrics, centering can be used to establish a meaningful zero point on scales that otherwise would lack such a value (Enders & Tofighi, 2007). Although centering for this purpose is straightforward in ordinary least squares (OLS) regression (Aiken & West, 1991), the use of centering is not straightforward when dealing with Level 1 variables of 2-level multilevel models (MLM). However, like OLS regression, centering is straightforward in the centering of Level 2 variables of 2-level MLM (Enders & Tofighi, 2007). Therefore, the Level 2

predictors (e.g. individual difference variables) of the present study were grand mean centered and standardized for ease of interpretation and understanding. This practice produces a metric where the zero point of each individual difference variable represents the population average, and a one unit change represents a standard deviation difference.

### **Analysis Set I**

Before proceeding to test hypotheses H1A and H1B regarding the relationship of conscientiousness to ease of use through the stages of trial, adoption, and continued use, the intraclass correlation coefficient type 1 (ICC1; Bliese, 2000) of the criterion measure was computed. In this first set of analyses, the ICC1 indicates how much of the variability in self-reported ease of use to try, adopt, and use Facebook is a result of between-person differences across the stages of trial, adoption, and usage. The ICC1 is calculated by determining the ratio of between-person variance to overall variance as in the following equation:

\_\_\_\_\_

In this equation,  $\tau_{00}$  represents the between-person variance while  $\sigma^2$  represents the residual within-person variance of an unconditional (random intercept) mixed-effects model (Bliese & Ployhart, 2002). Analyses revealed an ICC1 of .47, indicating that between-person variance explained 47% of the variance in the ease of use for people to try, adopt, and use Facebook, and suggests, because considerable inter-individual differences in ease of use exists across time, hierarchical linear modeling is an appropriate analytic technique (Bliese, 2000).

Next an unconditional growth model was fit to ascertain whether enough significant inter-individual differences existed in the pattern of ease of use for individuals to try, adopt, and use Facebook through the states of trial, adoption, and continued use to warrant examining moderators of ease of use across time. This model was as follows:

$$Y_{ij} = \pi_{0j} + \pi_{1j}(TIME)_{ij} + r_{ij} \quad \text{where } r_{ij} \sim N(0, \sigma^2)$$

and

$$\pi_{0j} = \beta_{00} + u_{0j}$$

$$\pi_{1j} = \beta_{10} + u_{1j}$$

where

In this model,  $Y_{ij}$  is ease of use for a given individual at a given time. The intercept,  $\pi_{0j}$ , is coded to represent ease of use during the trial phase because  $i$  represents the number of stages from the trial stage. The parameter  $\pi_{1j}$  is the linear trend across time. Both the intercept and linear trend were modeled randomly across individuals as indicated by the  $u_{0j}$  and  $u_{1j}$ .

This model was fit using maximum likelihood and converged in two iterations due to the balanced nature of the data (e.g., Singer & Willett, 2003). The results are presented in Table 9. The results of this model suggested that individuals statistically differ in both the amount ease of use influences their decision to trial ( $\tau_{00} = 2.38, z = 4.86, p < .001$ ) and how ease of use changes across adoption and regular usage ( $\tau_{11} = 0.60, z = 4.00, p < .001$ ). Furthermore, these results suggest moderators of ease of use on how one

initially reacts to new media and how they continue to interact with that media may be predictable.

The hypotheses regarding conscientiousness on ease of use intercepts and slopes were answered with a conditional growth model. This model was as follows:

$$Y_{ij} = \pi_{0j} + \pi_{1j}(TIME)_{ij} + r_{ij} \quad \text{where } r_{ij} \sim N(0, \sigma^2)$$

and

$$\pi_{0j} = \beta_{00} + \beta_{01}(sex) + \beta_{02}(z_{extra}) + \beta_{03}(z_{agree}) + \beta_{04}(z_{conscience}) + \beta_{05}(z_{emotional}) + \beta_{06}(z_{open}) + \beta_{07}(z_{maven}) + \beta_{08}(z_{social}) + \beta_{09}(z_{susceptible}) + u_{0j}$$

$$\pi_{1j} = \beta_{10} + \beta_{11}(sex) + \beta_{12}(z_{extra}) + \beta_{13}(z_{agree}) + \beta_{14}(z_{conscience}) + \beta_{15}(z_{emotional}) + \beta_{16}(z_{open}) + \beta_{17}(z_{maven}) + \beta_{18}(z_{social}) + \beta_{19}(z_{susceptible}) + u_{1j}$$

where

In this model,  $Y_{ij}$  is ease of use for a given individual at a given time. The intercept,  $\pi_{0j}$ , is coded to represent ease of use during the trial phase because  $i$  represents the number of stages from the trial stage. The parameter  $\pi_{1j}$  is the linear trend across time. In this model, both the intercept and linear parameters from the unconditional growth model are now predicted from the nine predictor variables (sex, extraversion, agreeableness, conscientiousness, emotional stability, openness, mavenism, social desirability bias, and susceptibility to interpersonal influence) but still allowed to randomly vary across individuals. The predictors were grand mean centered and standardized for ease of interpretation and understanding.

This model was fit using maximum likelihood and converged in two iterations due to the balanced nature of the data (e.g., Singer & Willett, 2003). The results are presented in Table 9. The intercept,  $\beta_{00} = 5.43$ ,  $t(64) = 17.64$ ,  $p < .001$ , and linear slope,  $\beta_{10} = 0.23$ ,  $t(64) = 1.35$ ,  $p = .18$ , estimates suggest that on average individuals report ease of use as being a considerable reason for trying Facebook, and that this influence does not seem to change much over the stages of adopt and continued use.

Hypothesis H1A which stated that conscientiousness would be positively related to the effects of ease of use to trial Facebook during the trial stage was not supported,  $\beta_{04} = -0.17$ ,  $t(64) = -0.81$ ,  $p = .21$ . This finding suggests conscientiousness does not play a part in the influence of the ease of use of Facebook for an individual to trial the technology.

Hypothesis H1B which stated that conscientiousness would intensify the effects of ease of use on the continued use of Facebook was supported,  $\beta_{14} = 0.25$ ,  $t(64) = 2.10$ ,  $p = .02$ . This finding suggests that as one progresses through the stages of trial, adoption, and continued use, higher conscientious people will report ease of use as changing more quickly than lower conscientious individuals. This finding suggests that higher conscientious people are more aware and influenced by the ease of use of Facebook over time than lower conscientious people.

## **Analysis Set II**

Before proceeding to test the remaining hypotheses regarding the relationship of social desirability bias and susceptibility to interpersonal influence with peer influence, the intraclass correlation coefficient type 1 (ICC1; Bliese, 2000) of the criterion measure needs to be computed. In this set of analyses, the ICC1 indicates how much of the

variability in the self-reported peer influence as a reason to trial, adopt, and use Facebook is a result of between-person differences across the stages of trial, adoption, and usage. The ICC1 is calculated by determining the ratio of between-person variance to overall variance as in the following equation:

---

In this equation  $\tau_{00}$  represents the between-person variance while  $\sigma^2$  represents the residual within-person variance of an unconditional (random intercept) mixed-effects model (Bliese & Ployhart, 2002). Analyses revealed an ICC1 of .45, indicating that between-person variance explained 45% of the variance in the effect of peer influence for people to try, adopt, and use Facebook, and suggests because considerable inter-individual differences in ease of use exists across time, hierarchical linear modeling is an appropriate analytic technique (Bliese, 2000).

Next an unconditional growth model was fit to ascertain whether enough significant inter-individual differences existed in the pattern of influence afforded from peers for individuals to try, adopt, and use Facebook through the states of trial, adoption, and continued use to warrant examining moderators of peer influence across time. This model was as follows:

$$Y_{ij} = \pi_{0j} + \pi_{1j}(TIME)_{ij} + r_{ij} \quad \text{where } r_{ij} \sim N(0, \sigma^2)$$

and

$$\pi_{0j} = \beta_{00} + u_{0j}$$

$$\pi_{1j} = \beta_{10} + u_{1j}$$

where



In this model,  $Y_{ij}$  is peer influence for a given individual at a given time. The intercept,  $\pi_{0j}$ , is coded to represent peer influence during the trial phase because  $i$  represents the number of stages from the trial stage. The parameter  $\pi_{1j}$  is the linear trend across time. Both the intercept and linear trend were modeled randomly across individuals as indicated by the  $u_{0j}$  and  $u_{1j}$ .

This model was fit using maximum likelihood and converged in two iterations due to the balanced nature of the data (e.g., Singer & Willett, 2003). The results are presented in Table 9. The results of this model suggested that individuals statistically differ in both the amount peers influence their decision to trial ( $\tau_{00} = 1.64, z = 4.45, p < .001$ ) and how that influence changes across adoption and regular usage ( $\tau_{11} = 0.60, z = 3.89, p < .001$ ). Furthermore, these results suggest moderators of peer influence on how one initially reacts to new media and how they continue to interact with that media may be predictable.

The hypotheses regarding social desirability and susceptibility to interpersonal influence with peer influence intercepts and slopes were answered with a conditional growth model. This model was as follows:

$$Y_{ij} = \pi_{0j} + \pi_{1j}(TIME)_{ij} + r_{ij} \quad \text{where } r_{ij} \sim N(0, \sigma^2)$$

and

$$\pi_{0j} = \beta_{00} + \beta_{01}(sex) + \beta_{02}(z_{extra}) + \beta_{03}(z_{agree}) + \beta_{04}(z_{conscience}) + \beta_{05}(z_{emotional}) + \beta_{06}(z_{open}) + \beta_{07}(z_{maven}) + \beta_{08}(z_{social}) + \beta_{09}(z_{susceptible}) + u_{0j}$$

$$\pi_{1j} = \beta_{10} + \beta_{11}(sex) + \beta_{12}(z_{extra}) + \beta_{13}(z_{agree}) + \beta_{14}(z_{conscience}) + \beta_{15}(z_{emotional}) + \beta_{16}(z_{open}) + \beta_{17}(z_{maven}) + \beta_{18}(z_{social}) + \beta_{19}(z_{susceptible}) + u_{1j}$$

where

In this model,  $Y_{ij}$  is peer influence for a given individual at a given time. The intercept,  $\pi_{0j}$ , is coded to represent peer influence during the trial phase because  $i$  represents the number of stages from the trial stage. The parameter  $\pi_{1j}$  is the linear trend across time. In this model both the intercept and linear parameters from the unconditional growth model are now predicted from the nine predictor variables (sex, extraversion, agreeableness, conscientiousness, emotional stability, openness, mavenism, social desirability bias, and susceptibility to interpersonal influence) but still allowed to randomly vary across individuals. The predictors were grand mean centered and standardized for ease of interpretation and understanding.

This model was fit using maximum likelihood and converged in two iterations due to the balanced nature of the data (e.g., Singer & Willett, 2003). The results are presented in Table 9. The intercept,  $\beta_{00} = 6.29$ ,  $t(64) = 24.44$ ,  $p < .001$ , and linear slope,  $\beta_{10} = 0.20$ ,  $t(64) = 1.22$ ,  $p = .23$ , estimates suggest that on average individuals report peer influence being a considerable reason for trying Facebook, and that this influence does not seem to change much over the stages of adopt and continued use.

Hypothesis H2A which stated that susceptibility to interpersonal influence would be positively related to the influence from peers to start trying Facebook during the trial stage was supported,  $\beta_{09} = 0.34$ ,  $t(64) = 1.92$ ,  $p = .03$ . Persons susceptible to

interpersonal influence are more likely to trial Facebook than persons immune to such influence.

Hypothesis H2B which stated that susceptibility to interpersonal influence would temper the influence of peers on the continued use of Facebook was not supported,  $\beta_{19} = -0.01$ ,  $t(64) = -0.13$ ,  $p = .45$ . This finding suggests that susceptibility to interpersonal influence is not related to peer influence as one progresses through the stages of trial, adoption, and continued use. Taken together with the findings of hypothesis H2A, it appears susceptibility to interpersonal influence can serve as an impetus for peer influence to start trying Facebook but does nothing to change initial reports of the influence of peers to adopt or continue using Facebook.

Hypothesis H3A which stated that social desirability would be positively related to the influence from peers to start trying Facebook during the trial stage was partially supported,  $\beta_{04} = 0.30$ ,  $t(64) = 1.60$ ,  $p = .06$ . This finding suggests individuals more susceptible to social desirability will be more susceptible to peer influence as a reason for trying Facebook as compared to individuals lower in such susceptibility.

Hypothesis H3B which stated that social desirability would temper the influence of peers on the continued use of Facebook was supported,  $\beta_{14} = -0.29$ ,  $t(64) = -2.34$ ,  $p = .01$ . This finding suggests that as one progresses through the stages of trial, adoption, and continued use, people more susceptible to social desirability will report peer influence as changing less quickly than individuals lower in such susceptibility. Taken together with the findings of hypothesis H3A about people susceptible to social desirability reporting higher levels of peer influence as a reason for trying Facebook, it is likely that social

desirability serves to get one trying Facebook and also serves to help them also adopt and continue using Facebook.

Table 9. Unconditional and Conditional Growth Models

Fixed Effects	Sym.	Unconditional Model				Conditional Model			
		Coef.	Coef. SE	<i>t</i>	Std. coef.	Coef.	Coef. SE	<i>t</i>	Std. coef.
Level 1 Model									
Intercept	$\beta_{00}$	4.92	0.23	21.37 <sup>a***</sup>	2.68	5.52	0.32	17.36 <sup>b***</sup>	3.00
Linear	$\beta_{10}$	-0.05	0.12	-0.38 <sup>a</sup>	-0.03	-0.23	0.16	-1.42 <sup>b</sup>	-0.13
Level 2 Model									
Sex	$\beta_{01}$					-1.12	0.46	-2.44 <sup>a*</sup>	-0.61
Extraversion	$\beta_{02}$					-0.21	0.23	-0.89 <sup>a</sup>	-0.11
Agreeableness	$\beta_{03}$					-0.10	0.25	-0.42 <sup>a</sup>	-0.06
Conscientiousness	$\beta_{04}$					-0.59	0.22	-2.66 <sup>a**</sup>	-0.32
Emotional Stability	$\beta_{05}$					0.20	0.23	0.89 <sup>a</sup>	0.11
Openness	$\beta_{06}$					-0.30	0.24	-1.27 <sup>a</sup>	-0.16
Mavenism	$\beta_{07}$					0.02	0.22	0.08 <sup>a</sup>	0.01
Social Desirability	$\beta_{08}$					0.17	0.24	0.71 <sup>a</sup>	0.09
Susceptibility	$\beta_{09}$					-0.26	0.22	-1.21 <sup>a</sup>	-0.14
Linear x Sex	$\beta_{11}$					0.35	0.24	1.48 <sup>a</sup>	0.19
Linear x Extraversion	$\beta_{12}$					0.02	0.12	0.13 <sup>a</sup>	0.01
Linear x Agreeableness	$\beta_{13}$					0.01	0.13	0.09 <sup>a</sup>	0.01
Linear x Conscientiousness	$\beta_{14}$					0.22	0.11	1.87 <sup>a*</sup>	0.12
Linear x Emotional Stability	$\beta_{15}$					-0.21	0.12	-1.83 <sup>a*</sup>	-0.12
Linear x Openness	$\beta_{16}$					0.15	0.12	1.21 <sup>a</sup>	0.08
Linear x Mavenism	$\beta_{17}$					0.21	0.12	1.78 <sup>a†</sup>	0.11
Linear x Social Desirability	$\beta_{18}$					-0.17	0.12	-1.39 <sup>a</sup>	-0.09
Linear x Susceptibility	$\beta_{19}$					0.24	0.11	2.14 <sup>a*</sup>	0.13
Random Effects	Sym.	Variance	SD	<i>r</i>		Variance	SD	<i>r</i>	
1. Intercept	$\tau_{00}$	2.85	0.61			2.10	0.48		
2. Linear	$\tau_{11}$	0.64	0.18	-0.44*		0.38	0.14	-0.27	
Residual	$\sigma^2$	0.65	0.12			0.65	0.12		

Note.  $N = 63$ .  $k = 189$ . The intercept reflects peer influence during the trial stage. Predictors are grand mean centered and standardized. Standardized coefficients were derived by setting the standard deviation of all variables to 1 without altering the centering of the variables. Coef. = coefficient. Std. coef. = standardized coefficient. Sym. = Symbol. <sup>a</sup> $df = 63$ . <sup>b</sup> $df = 54$ . <sup>†</sup> $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## V. Discussion

### Overview

This chapter discusses the implications of the results from this study as well as the limitations. The chapter concludes with recommendations for future research based on the findings and limitations discussed in this chapter.

### Findings

This study examined personality characteristics and social influence characteristics through the three phases of New Media acceptance: trial, adoption, and continual usage. In order to accomplish this, two research questions guided the effort through the duration of the study:

1. *What individual personality characteristics are significant among SNS users over time?*
2. *How do the individual personality characteristics affect SNS users over time?*

The research questions provided insight concerning the six hypotheses outlined in Chapter 2. The research supported the three hypotheses (H1B, H2A, H3A, and partially H3B) while not supporting (H1A and H2B). Conscientiousness intensified the effects of ease of use (EOU) on the continual use of New Media. High SII individuals viewed peer influence significant in the trial phase of New Media acceptance. Finally, high SDB individuals found peer influence decreasingly significant through time to the continual use phase.

Conscientious individuals are achievement-oriented, efficient, responsible individuals (Botwin, 1989). They are willing to experiment with New Media during the trial phase despite possible difficulties using the technology. The traits defining conscientious individuals begin affecting EOU more during the adoption and continual usage phase. This is seen in the increase in significance of EOU among conscientious individuals. Conscientious individuals may be focused on other tasks and priorities, but the New Media could be drawing their attention away from these other

tasks and priorities. If the New Media does not become easier to use, then the individual is less inclined to adopt or continually use the technology due to focus elsewhere. During the adoption and continual use phase, the conscientious individual is driven by their achievement-oriented goals and continues to be responsible in achieving those goals. This results in the conscientious individual focusing less on New Media. H1B suggests that New Media retention across all three phases of technology acceptance may be more successful for conscientious individuals when more focus is placed on EOU.

Hypothesis H2A stated high SII individuals viewed peer influence significantly positive in the trial phase of New Media acceptance. High SII individuals strive to identify or improve their image with peers within their social systems by using similar products and brands as those significant individuals to include various types of New Media. This would suggest New Media targeted at high SII individuals may be more successful utilizing peer influence as a means of New Media introduction, but reallocating advertisement resources into other areas besides peer influence during the adoption and continual use phase.

The third hypothesis set, H3A and H3B, was supported in this study; they stated that SDB is positively related to peer influence during the trial phase and the effect of SDB would lessen the influence of peer influence through trial, adoption, and continual use. High SDB individuals need social approval and acceptance from their peers by behaving in a matter found acceptable by their peers. However, the research indicates that peer influence becomes decreasingly significant in high SDB individuals through adoption and continual use. The high SDB individual's need to align with social approval decreases in the adoption and continual use phase. Several reasons may explain this decreased significance in peer influence through the phases. Individuals may be becoming less dependent on their peers through adoption and continual use due to the increased experience with the

technology. The New Media is becoming inherently important after the individual has given the technology a chance and the need for social approval decreases. The individual has now learned the New Media to a level where the individual is a habitual user relying less on their peers for support.

This research supported the significance of peer influence and EOU as a predictor to New Media acceptance process. However, personality and social influence characteristics were shown to moderate the significance of both peer influence and EOU in certain phases of the acceptance process. This study also provided possible reasons as to why the personality and social influence characteristics affected the three phases of technology acceptance, but did not pinpoint the exact underlying reasons to the interactions.

### **Limitations**

The findings from this research effort are significant concerning New Media acceptance, but limitations are inherent in this research effort. These limitations stem from various factors such as the research sample, the selection process, and the measures used in the study. The sample used for this research effort consisted of only 64 university students and does not fully capture the entire population of New Media users despite the diversity in the sample. These self-selected university students were compensated for their time with a \$15 gift certificate, which may have introduced biases based on the advertisement. Self-selected students may be extroverted individuals willing to share the details of their New Media experience. However, the opposite may also be true, the individual may be extremely introverted spending most of the time avoiding physical social interaction preferring that of the New Media type.

Another limitation in the study was based on the measures and items. The unidimensionality of the peer influence and EOU measures introduce a limitation to the study. Though multiple item measures would have been ideal, the exploratory nature of the study limited the study's resources to



do so. With single-item measures, reliability issues may be encountered if the subject fails to understand the single item. The individual may then answer questions in a manner which does not align with the study's definition of the measure and item.

### **Future Research**

This research explores the personality and social influence characteristics on a preliminary level during the trial, adoption, and continual use phases of technology acceptance. This research effort leaves several beneficial areas for future research such as the qualitative data, further examination of the personality and social influence characteristics, and a broader examination of the population.

The data collection from this research effort included both quantitative and qualitative data collection. Future research possibilities exist utilizing the recorded qualitative data, which captured data not specifically recorded in the quantitative data set. Subjects discussed various aspects of New Media during the qualitative data collection in which subjects were allowed to elaborate on peer influence, New Media content and features, EOU, etc.

The qualitative data may provide greater insight into the personality and social influence effects during the trial, adoption, and continual usage phases found in this study. A deeper examination of New Media characteristics to identify the root causes of those effects would benefit the literature and contribute to a better understanding of New Media acceptance.

Finally, due to the limited size of the study sample, a larger and more diverse sample would provide a better representation of the New Media user population. This could be achieved through a multi-cultural examination of New Media acceptance. A multi-cultural examination would broaden the scope of New Media usage focusing on the differences the cultures has to offer. The implications

of a multi-cultural New Media study is further magnified by the Egyptian Revolution and the role of New Media in ousting former Egyptian President Hosni Mubarak.

## Appendix A – IRB Approval with Restrictions



Office of Research and Sponsored Programs  
201J University Hall  
3640 Col. Glenn Hwy.  
Dayton, OH 45435-0001  
(937) 775-2425  
(937) 775-3781 (FAX)  
e-mail: [rsp@wright.edu](mailto:rsp@wright.edu)

**DATE:** October 11, 2010

**TO:** Anand Jeyaraj, Ph.D., Faculty  
Information Systems and Operations management

**FROM:** Laurel Elder, Ph.D., Chair  
WSU Institutional Review Board

**SUBJECT:** SC#4300

*'New Media Innovations: Trial, Adoption, and Usage by Individuals'*

The above human subjects study was approved by Expedited Review on the condition that you respond to the review comments. **Please note that the activities covered by this action may ONLY be initiated when all restrictions have been received and accepted.**

In order for us to remove the conditions, please respond by sending a cover letter explaining the additions or changes along with a copy of any revised pages and/or consent document (with changes highlighted) as indicated.

Send your response to Robyn Wilks, Coordinator, Institutional Review Board, 201J University Hall. If you have any questions concerning the condition(s), please contact her at 775-4462.

Thank you!

Enclosures

RESEARCH INVOLVING HUMAN SUBJECTS

SC # 4300

ACTION OF THE WRIGHT STATE UNIVERSITY  
EXPEDITED REVIEW

Assurance Number: FWA00002427

Title: 'New Media Innovations: Trial, Adoption, and Usage by Individuals'

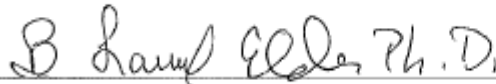
Principal Investigator: Anand Jeyaraj, Ph.D., Faculty

Department: Information Systems and Operations management

Expedited Category: 6, 7

The Institutional Review Board has approved the use of human subjects on this proposed project.

REMINDER: FDA regulations require prompt reporting to the IRB of any changes in research activity, changes in approved research during the approval period may not be initiated without IRB review (submission of an amendment), and prompt reporting of any unanticipated problems (adverse events).



Signed Chair, WSU-IRB

Expedited Review Date: October 08, 2010

IRB Meeting Date: October 18, 2010

This approval is effective only through: October 8, 2011

To continue the activities approved under this protocol you should receive the appropriate form (s) from Research and Sponsored Programs (RSP) two to three months prior to the required due date. If you do not receive this notification, please contact RSP at 775-2425.

SC # 4300

PI Name Anand Jeyaraj, Ph.D., Faculty

For Meeting Date 10/08/10

Co-PI Name

**PLEASE RESPOND:**

***\*NOTE: When responding, please highlight the requested changes made to your revised document(s). Unless otherwise noted, only one (1) copy of the requested item (s) needs to be submitted for your response.***

***Please be aware that the activities covered by this action may not be initiated until all restrictions have been removed and subsequent final approval has been recommended.***


**\*\*Recommended for approval provided the following conditions are met:**

- a. Submission of a revised petition in which the following change has been made:
  1. Q# 21: clarify if this should be \$25.00
- b. Submission of a revised consent form in which the following changes have been made:
  1. Describe the compensation (gift card) for the participants in the consent.
  2. Paragraph 1: Replace "a faculty member" with "Dr. Anand Jeyaraj". (line 3)
  3. Paragraph 2: Describe where the interviews will take place (e.g "at Wright State University").
  4. Paragraph 3: Replace "would" with "may". (line 4)
  5. Paragraph 5: Correct the RSP phone number to 775-4462.
  6. Specifically state in the consent who to contact with questions about the research itself.
- c. Submission of a revised flyer in which the following change has been made:
  1. Replace "Are you aged between 18 and 25?" with "Are you between 18 and 25 years of age?"
- d. Please submit a copy of the list serve message you plan to use for recruitment.
- e. Please submit your C.V.

## Appendix B – IRB Approval with Restrictions Lifted



Office of Research and Sponsored Programs  
201J University Hall  
3640 Col. Glenn Hwy.  
Dayton, OH 45435-0001  
(937) 775-2425  
(937) 775-3781 (FAX)  
e-mail: rsp@wright.edu

**DATE:** October 13, 2010  
**TO:** Anand Jeyaraj, Ph.D., Faculty  
Information Systems and Operations management  
**FROM:** B. Laurel Elder, Ph.D., Chair   
WSU Institutional Review Board  
**SUBJECT:** SC# 4300  
*'New Media Innovations: Trial, Adoption, and Usage by Individuals'*

This memo is to verify the receipt and acceptance of your response to the conditions placed on the above referenced human subjects protocol/amendment.

These conditions were lifted on: 10/13/2010

This study/amendment now has full approval and you are free to begin the research project. If this is a VA proposal, you must still receive a letter of approval from the Research and Development Committee prior to beginning the research project. This implies the following:

1. That this approval is for one year from the approval date shown on the Action Form and if it extends beyond this period a request for an extension is required. (Also see expiration date on the Action Form)
2. That a progress report must be submitted before an extension of the approved one-year period can be granted.
3. That any change in the protocol must be approved by the IRB; otherwise approval is terminated.

If you have any questions concerning the condition(s), please contact Jodi Blackledge at 775-3974.

Thank you!  
Enclosure

RESEARCH INVOLVING HUMAN SUBJECTS

SC # 4300

ACTION OF THE WRIGHT STATE UNIVERSITY  
EXPEDITED REVIEW

Assurance Number: FWA00002427

Title: New Media Innovations: Trial, Adoption, and Usage by Individuals'

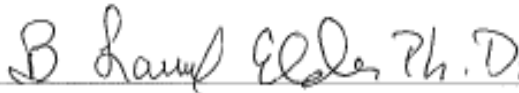
Principal Investigator: Anand Jeyaraj, Ph.D., Faculty

Department: Information Systems and Operations management

Expedited Category: 6, 7

The Institutional Review Board has approved the use of human subjects on this proposed project.

REMINDER: FDA regulations require prompt reporting to the IRB of any changes in research activity, changes in approved research during the approval period may not be initiated without IRB review (submission of an amendment), and prompt reporting of any unanticipated problems (adverse events).

 B. Lamp, Ph.D.

Signed Chair, WSU-IRB

Expedited Review Date: October 08, 2010

IRB Meeting Date: October 18, 2010

This approval is effective only through: October 8, 2011  
To continue the activities approved under this protocol you should receive the appropriate form (s) from Research and Sponsored Programs (RSP) two to three months prior to the required due date. If you do not receive this notification, please contact RSP at 775-2425.





# **SOCIAL NETWORKING & RELATED WEB SITES**

## **Research Project**

*Are you taking classes at Wright State?  
Are you between 18 and 25 years of age?*

*Do you use social networking web sites?  
Do you share videos or pictures online?  
Do you visit blogs or play games online?*

You may be eligible to participate in this research.  
Come and tell us your experiences with the above web sites.

\$15 Gift Card for your participation if eligible.

SPACES LIMITED \* FIRST COME FIRST SERVED

**Contact: Anand Joyaraj  
anand.joyaraj@wright.edu \* 775-2189**

Anand Joyaraj  
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## Appendix D – Self-Reported Screener Survey

(To verify eligibility to participate in research)

1. Do you have your own blog or personal website (this doesn't include your own page on Facebook, MySpace or similar sites)?  Yes  No

2. In the last month, have you contacted someone through a social networking site like Myspace or Facebook on more than one occasion?  Yes  No

3. In the last month, have you searched for content on social media sites like YouTube or Flickr on more than one occasion?  Yes  No

4. In the last month, have you made a purchase, submitted a product review, read product reviews, or researched a product online on more than one occasion?  Yes  No

5. In a typical week, how many HOURS do you spend performing the following activities?

Contributing to own website or blog	<input type="checkbox"/>	Visiting video sharing sites (YouTube/	<input type="checkbox"/>
Reading blogs or online forums	<input type="checkbox"/>	Flickr)	<input type="checkbox"/>
Visiting social network sites (MySpace/	<input type="checkbox"/>	Searching for and listening to podcasts	<input type="checkbox"/>
Facebook)	<input type="checkbox"/>	Spend playing games online	<input type="checkbox"/>

6. Which one of the following categories best describes your age?  18-21  22-25

7. Which one of the following best describes your ethnic background?

<input type="checkbox"/> African American	<input type="checkbox"/> Asian or Pacific Island
<input type="checkbox"/> Caucasian	<input type="checkbox"/> Native American
<input type="checkbox"/> Hispanic	Other: _____

8. Which one of the following best describes your region or nation of origin?

<input type="checkbox"/> United States	<input type="checkbox"/> South America	<input type="checkbox"/> China
<input type="checkbox"/> Middle East	<input type="checkbox"/> Sub-Saharan Africa	Other: _____
<input type="checkbox"/> Western Europe	<input type="checkbox"/> India	

9. Which one of the following best describes your hometown? Is it:

Urban  Suburban  Rural

10. What is the Zip code for your hometown city? Zip: \_\_\_\_\_ City: \_\_\_\_\_

11. Which of the following categories includes your family's annual total household income before taxes?

Less than \$40,000  Between \$40,000 and \$50,000  More than \$50,000

## Appendix E – Consent for Participation in Research

### CONSENT FOR PARTICIPATION IN RESEARCH

You are invited to participate in a research study on the trial, adoption, and usage of New Media innovations (such as social networking, video sharing, podcasting, blogging, and gaming). The research is being conducted by Dr. AnandJeyaraj with the Department of Information Systems and Operations Management in the Raj Soin College of Business at Wright State University. You are being asked to participate in the research since you have recently adopted at least one New Media innovation and may be eligible to participate. We ask that you read this form and ask any questions you may have about this research.

The purpose of the research is to understand how individuals trial, adopt, and use New Media innovations. If you participate in this research, you will be required to complete a survey and take part in an interview at Wright State University. During the interview, you will share your *perceptions* of how you made the decision to adopt New Media. You may choose to not answer any questions should you so desire. The survey will take about 15 minutes and the interview will last for about 30 minutes.

Your participation in this research is voluntary. Your decision whether to participate will not affect present or future relations with the university. If you decide to participate, you are free to withdraw at any time without affecting that relationship. There are no potential risks to participating in this study. You will receive a \$25 gift card as compensation for your time. The research may be beneficial for practitioners as they implement policies for New Media innovations.

Your responses are collected only for the purposes of this research. Interviews are tape-recorded to ensure accuracy of data collection. The audio-tapes are accessible only to the investigators and individuals who may be hired to transcribe the tapes. The transcripts will be available only to the investigators. Audio-tapes will be destroyed after the completion of this research. You are free to turn off the tape-recorder at any time during the interview. To protect your organization as well as yourself, company identities and individual identities remain anonymous throughout this research.

You may ask questions you have now. If you questions about the research, you may contact Dr. AnandJeyaraj (937-775-2189). If you have any questions about your rights as a research participant,

you may call the Office of Research and Sponsored Programs at Wright State University (937-775-4462).

---

**AnandJeyaraj, Ph.D.**  
Assistant Professor, ISOM  
Raj Soin College of Business  
Wright State University  
937-775-2189

I have read the statement above and have had the opportunity to express my concerns, to which the investigator has responded satisfactorily. I have been informed the purpose of the study, the benefits and risks involved, and I agree to be a participant in this study.

---

Signature (or Initials) of Participant

---

Date

## Appendix F – New Media Interview Guide

Name: \_\_\_\_\_ Gender: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### NEW MEDIA INNOVATIONS: TRIAL, ADOPTION, AND USAGE BY INDIVIDUALS

#### INTERVIEW GUIDE

Initially, allow respondent to pick ONE specific technology (e.g., Facebook, YouTube) that falls into any one of the following categories of technologies: blogs, social networking sites, personal web sites, video sharing sites, podcasts, and viral games. Then, ask the following questions with reference to that ONE technology. [Once all questions below are asked and answered, go back to the top and begin the same process for another technology.]

For each question below, allow respondent to first rate the answer on a 7-point scale and then provide a descriptive answer as to the rating.

#### **Technology—**

How long (e.g., number of months or years) < 1 week      1 month      > 1 year  
have you been using the [technology]?      1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

\_\_\_\_\_ (months)

How often (e.g., once a day, once a week) do      Once a      Once a      Several  
you use the [Technology]?      Month      daytimes      day  
1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

\_\_\_\_\_ times per \_\_\_\_\_

How much time (e.g., 5 min, 30 min) do you      About      About      More than  
spend with the [Technology] when you use it?      5 minutes      30 minutes      1 hour  
1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

\_\_\_\_\_ minutes

#### **Awareness—**

How did you know about the [Technology]?







Any other reasons for trialing the [Technology]?

Any other reasons for adopting the [Technology]?

Any other reasons for continuing to use the [Technology]?

NOTES:

ADDITIONAL OBSERVATIONS:



## Appendix G – Big Five Factors Personality Survey

### SURVEY

Indicate using 1, 2, 3, 4, or 5 the extent to which you disagree or agree with each statement below.

Strongly Agree 5    4	3	2	Strongly Disagree 1
<input type="checkbox"/> Am the life of party			<input type="checkbox"/> Have little to say
<input type="checkbox"/> Feel little concern for others			<input type="checkbox"/> Have a soft heart
<input type="checkbox"/> Am always prepared			<input type="checkbox"/> Often forget to put things back
<input type="checkbox"/> Get stressed out easily			<input type="checkbox"/> Get upset easily
<input type="checkbox"/> Have a rich vocabulary			<input type="checkbox"/> Do not have a good imagination
<input type="checkbox"/> Don't talk a lot			<input type="checkbox"/> Talk to a lot of different people at parties
<input type="checkbox"/> Am interested in people			<input type="checkbox"/> Am not really interested in others
<input type="checkbox"/> Leave my belongings around			<input type="checkbox"/> Like order
<input type="checkbox"/> Am relaxed most of the time			<input type="checkbox"/> Change my mood a lot
<input type="checkbox"/> Have difficulty understanding abstract ideas			<input type="checkbox"/> Am quick to understand things
<input type="checkbox"/> Feel comfortable around people			<input type="checkbox"/> Don't like to draw attention to myself
<input type="checkbox"/> Insult people			<input type="checkbox"/> Take time for others
<input type="checkbox"/> Pay attention to details			<input type="checkbox"/> Shirk my duties
<input type="checkbox"/> Worry about things			<input type="checkbox"/> Have frequent mood swings
<input type="checkbox"/> Have a vivid imagination			<input type="checkbox"/> Use difficult words
<input type="checkbox"/> Keep in the background			<input type="checkbox"/> Don't mind being the center of attention
<input type="checkbox"/> Sympathize with other's feelings			<input type="checkbox"/> Feel other's emotions
<input type="checkbox"/> Make a mess of things			<input type="checkbox"/> Follow a schedule
<input type="checkbox"/> Seldom feel blue			<input type="checkbox"/> Get irritated easily
<input type="checkbox"/> Am not interested in abstract ideas			<input type="checkbox"/> Spend time reflecting on things
<input type="checkbox"/> Start conversations			<input type="checkbox"/> Am quiet around strangers
<input type="checkbox"/> Am not interested in other people's problems			<input type="checkbox"/> Make people feel at ease
<input type="checkbox"/> Get chores done right away			<input type="checkbox"/> Am exacting in my work
<input type="checkbox"/> Am easily disturbed			<input type="checkbox"/> Often feel blue
<input type="checkbox"/> Have excellent ideas			<input type="checkbox"/> Am full of ideas

## Appendix H – SDB/SII/Mavenism Personality Survey

### SURVEY

Indicate using 1, 2, 3, 4, 5, 6, or 7 the extent to which you believe each statement below is false or true.

Completely True						Completely False
7	6	5	4	3	2	1
_____						_____
I am always willing to admit when I've made a mistake						Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores and so on but does not necessarily feel he or she is an expert on any one particular product. How strongly would you agree that this description fits you?
_____						_____
I like to introduce a new brands, products or services to my friends in technology product categories						No matter who I'm talking to. I'm always a good listener
_____						_____
I always try to practice what I preach						I never hesitate to go out of my way to help someone in trouble
_____						_____
I like to help people by providing them with information						It is important that others like the products and brands that I buy
_____						_____
People often ask me for information to get the best buy, places to shop, or sales on technology products						I rarely purchase the latest fashion trends until I know that my friends approve of them.
_____						_____
I never resent being asked to return a favor						I often identify with other people by purchasing the same products and brands they purchase
_____						_____
If someone asked me where to get the best buy on technology products, I could tell the person where to shop						When buying products, I generally purchase these brands that I think others will approve
_____						
I have never been bothered when people expressed ideas that were different from my own						
_____						
My friends think of me as a good source of information for new technology products						

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