Understanding Individual Adoption and Use of Social Media:
A User-System Fit Model and Empirical Study

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A Thesis
In the Department
of
Decision Sciences and Management Information Systems

Presented in Partial Fulfillment of the Requirements
For the Degree of
Doctor of Philosophy (Business Administration) at
Concordia University
Montreal, Quebec, Canada

August 2012

ABSTRACT

Understanding individual adoption and use of social media: A user-system fit model and empirical study

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Concordia University, 2012

During the last few years, the phenomenon of Web 2.0, or social media, has gained growing attention both in academic research and in practice. Evidence suggests that a complex and rich set of motives drive individuals to use social media. However, traditional models of IT acceptance generally do not account for these motives, and thus are not particularly suited to explain the adoption and use of social media. Indeed, a central construct in many of these models, the 'usefulness' construct, exclusively focuses on productivity and/or performance-related motivations and seems too narrow in a social media context. The current study makes an effort to provide improved understanding of that important phenomenon by offering two contributions. First, the research expands the existing conceptualizations of usefulness through the construct of 'needs-supplies fit'. Based on theories of motivational needs and person-environment fit, needs-supplies fit is conceptualized as a second-order construct with dimensions that span a wide spectrum of needs, including both extrinsic and intrinsic needs. Building on the extant literature and extensive interviews, this research develops a user-system fit model. The model comprises the perceived user-system fit construct, a third-order multidimensional construct that is a combination of four dimensions of fit: user-expression, needs-supplies, demands-abilities, and user-group fit. Perceived user-system fit, is hypothesized to be positively associated with social media use. The

model is tested using a Web-based survey of 643 undergraduate students in a large Canadian university. Results indicate that 4 of 5 hypotheses are supported and that the user-system fit model explains 32.2% of social media usage of respondents.

DEDICATION

To my parents, without whom I wouldn't be there and without whose support I wouldn't have made it this far.

To my dear wife who was a real partner for success with her devotion and unbelievable patience.

To my two beautiful daughters who endured with me and my numerous "weekends at the office" throughout the challenging PhD journey.

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to Dr. Anne Beaudry for her continuous guidance, support, and encouragement throughout my research project. Her busy schedule never prevented her from finding time to meet me when I needed, and her insights and advice were crucial for the successful completion of my thesis. Last, but not least, her encouragement for me to strive for quality and rigor was always inspiring. I would also like to thank my other committee members, Dr. Liette Lapointe and Dr. Muhammad Jamal. Every step of the way, they never hesitated to provide me with valuable advice and comments that were integral to the completion of the thesis.

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INTRODUCTION

Social computing, or social media, is spearheading a new era of the web, where information and communication technologies are playing fundamentally new roles in facilitating organized human undertakings (Parameswaran and Whinston, 2007). This new class of technology, or "new media" (Vaast and Davidson, 2008), includes, among others, blogs, Wikipedia, Twitter, and social networks like MySpace, Facebook, and LinkedIn. Social media is gaining increasing growth and importance. For instance, Hsu and Lin (2008) describe the growth of blogs as phenomenal, while Lai and Turban (2008) discuss what they call the "unprecedented growth" of some social media websites. Numbers appear to provide support for such claims. Facebook, for example, states it has more than 900 million users in 2012 (Facebook, 2012), while Linkedin is reported to have more 161 million users (LinkedIn, 2012).

Evidence suggests that business organizations are also starting to adopt some social media technologies (Bughin and Manyika, 2007). For example, some corporations have recently become interested in adopting wikis as their new knowledge management mechanism (Okoli and Oh, 2007). More recently, social media have earned a high priority on corporate executives' agendas (Kaplan and Haenlein, 2010), being used by companies to gain valuable information and insights from customers (Ransbotham and Kane, 2011), and to both promote their products and their image (Gallaugher and Ransbotham, 2010).

Social media technologies are significantly different than more traditional information technologies (IT) in a number of aspects. First, social media adoption in firms takes place from the bottom-up rather than top-down (Pfaff and Hasan, 2006); the primary players in this type of computing are thus the individual agents rather

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than corporate entities (Parameswaran and Whinston, 2007). Second, social media are characterized by the prevalence of user-generated content, which, among other things, facilitates self-organizing mechanisms that enable people to create value by adding to, or deleting from, others' contributions (Bonabeau, 2009). Last, but not least, arguably the main defining feature of social media technologies is social interaction, since social media technologies mainly "work" on the basis of significant interaction and/or collaboration among users (e.g., Lai and Turban, 2008). It is arguably because of these characteristics that such types of technologies are adopted for many reasons that include, but are not limited to, instrumental or performance-related motivations (e.g. Kane and Fichman, 2009; Okoli and Oh 2007). While other technologies, such as email, may share one or more of those aspects, their co-existence in the case of social media usage, and such usage being *"more voluntary, more socially bound, and more evolutionary in use attributes and levels of involvement"* (Hu and Kettinger, 2008, p. 2), justify that social media technology related behaviors be studied in a different way than more traditional IT. Indeed, the limitations of current models of acceptance in their ability to explain social media use have already been recognized (e.g., Parameswaran and Whinston, 2007).

There is thus a need for constructs and models that are better suited to explain and predict social media adoption and use. To that end, this research project has two objectives. The first objective is to reconceptualize the 'usefulness' construct, a core construct in current acceptance models, in order for it to encompass a more comprehensive set of needs that include, but are not limited to, performance-related needs. The second objective is to identify, building on the person-environment fit literature, the different types of fit that exist between the

individual and social media, and to develop and test a model representing the relationship between these types of fit and the user's overall perception of fit with social media, and between that overall fit and self-reported social media use. The usefulness construct was conceptualized into Needs-Supplies Fit, a second-order construct that comprises a number of needs perceived to be satisfied by social media use. The user-system fit model was then tested, using a sample of 643 students in a large Canadian university. The results provide support to the conceptualization of User-System Fit as a third-order construct comprised of Needs-Supplies Fit, User-Expression Fit, and User-Group Fit. The results also show that User-System Fit has a positive association with social media use, explaining 32.2% of Use, which was specified as a multidimensional construct, comprising use frequency dimension, but also a dimension for leisure use, and another for instrumental use.

This research adds to the IT acceptance literature by providing a new conceptualization of the usefulness construct, one that takes into consideration a more varied and encompassing set of needs that social media users are motivated to satisfy. The research also provides a model that complements the extant acceptance models and enables more complete understanding of social media adoption and use through jointly accounting for needs satisfaction in addition to perceived value similarity with the media and its users. For practice, with companies increasingly utilizing social media technologies to communicate and connect with both their employees and their customers, understanding what actually motivates individuals to use such technologies can prove invaluable in designing social media applications and strategies that are effective in fulfilling their goals.

This thesis is organized as follows. The first chapter reviews the defining features of social media, acceptance research, and the motivational needs and person-environment fit streams of research from organizational behavior and interactive psychology. In chapter 2, a model of social media adoption and use is developed. The constructs in the model and their relationships are discussed, and research hypotheses are presented, followed by chapter 3, detailing the research methodology. Chapter 4 then presents the results, followed by discussion, research limitations, contributions, and suggested future research in chapter 5.

CHAPTER 1: LITERATURE REVIEW

In this chapter, the term *social media* is first defined and differentiated from other information technologies. Theoretical models of adoption and use of information are then reviewed and the drivers of social media adoption are considered. We then review the concepts of motivational needs and values, followed by a review of the person-environment fit stream of research.

SOCIAL MEDIA: DEFINITION AND DISTINCTIVE CHARACTERISTICS

Social media (Web 2.0) is the popular term for a class of Internet technology and applications that includes blogs, wikis, RSS, podcasting, mashups, and social networks (Lai and Turban, 2008; Wattal et al., 2010). What differentiates social media from more traditional IT, including the web, is not just one attribute, but rather a set of characteristics that together give shape to that new class of technology, and at the same time provide the field of IT literature and practice with some challenging opportunities. Major defining and unique attributes of social media include bottom-up adoption (e.g. O'Reilly, 2005), user-generated content (Cox, 2008), and greater social interaction and networking (Lai and Turban, 2008).

Bottom-up adoption, where adoption starts at the individual rather than organizational level, has serious implications for both research and practice. For example, it implies that social media adoption is, for the most part, voluntary and starts as a personal initiative rather than being pushed down to users from the corporate level. Instances of bottom-up adoption may be traced to technologies that precede social media. For example, in the literature studying adoption of groupware, Grudin and Palen (1995) used the term 'bottom-up' to describe adoption of a number of groupware systems. However, we argue that not only does social media adoption originate at the individual level, it may also stem from the *personal* level. By personal

level, we suggest that adoption may be motivated by reasons that are not performance-related (either totally unrelated to performance purposes or co-existing with such purposes). Stated otherwise, social media applications have the potential to serve multiple needs, including productivity, but also social, hedonic, and other intrinsic and extrinsic needs, and thus their adoption may be triggered by personal motives related more to the individual as a person, rather than only as an organizational actor.

In addition to the aforementioned implications of bottom-up adoption, there are also indications that such 'direction' of adoption maybe related to underlying values in social media in a way not easily matched by other types of IT. For example, it is argued that, in social media, the value of empowerment of the individual and of the communities is intertwined into the fabric of applications (IBM, n.d.). Indeed, it is stated that openness and freedom are at the core of social media (Greenemeier and Gaudin, 2008). Such freedom is exemplified by what Gillmor (2004) calls 'we, the media,' where the people who were formerly mere audiences of mass media, are now able to decide – rather than being told - what is important. In this research, we want to identify what motivates individuals to use social media without being mandated to. We also want to examine whether the perceived similarity of values between the individual and the system plays a role in motivating individuals to use social media.

User-generated content (UGC) refers to content that reflects a certain amount of creative effort, is created outside of professional routines and practices, and is made publicly available over the Internet (Wunsch-Vincent and Vickery, 2007). UGC provides new opportunities for how knowledge and culture is created and exchanged (Benkler, 2006). An example of user-generated content, and of the profound change

brought about by social media, is Wikipedia, where contributions constitute a completely volitional behavior for which their authors are not financially compensated. This is not just an example of the users being personally motivated, but also brings to the front the issue of social media underlying values that we discussed above. Specifically, the values of freedom and empowerment (e.g., Gillmor, 2004), where a user does not have to sit idly as a receiver of knowledge, but can actively and simultaneously contribute to the same pool of knowledge.

Another example of the personally motivated social media users would be the numerous bloggers, followers, and commentators who devote countless hours without being neither mandated nor paid. In this research, we are thus interested to learn what motivates users to contribute UGC without being paid to do so, with these systems not necessarily linked to productivity or performance, and, sometimes, without the user's identity being even known or recognized.

The third defining attribute of social media that we discuss here is *social interaction and networking*. A hallmark of social media is the increased interaction and collaboration among users (Lai and Turban, 2008). What makes such interactions especially interesting to study is that, while communities in real life have social dynamics that encourage participation in such interactions, in social media there may be drastically different motivations to participate (Parameswaran and Whinston, 2007). Among the personal outcomes that a user may seek by using social media is leveraging their social capital (Ellison et al., 2007). For example, one feature of Linkedin, the professional networking website, is that users can search their own network to see who has connections to a company that is hiring (CNNMoney, 2010).

For organizations, one potential implication of increased social interaction through social media technologies is the projection that employees – many of them being already users of social media - will increasingly demand incorporating such technologies in communicating and collaborating with fellow employees, customers, and business partners (Lavenda, 2008). In our research, we want to understand what motivates users, whether as employees or as persons, to use to social network sites, for example, to add 'friends', or to join 'groups'[1].

In sum, the defining characteristics of social media – bottom-up adoption, user generated content, and increased social interaction – imply a number of aspects that need to be taken into consideration when carrying out any effort to study the adoption and use of that important phenomenon. These aspects are *personal outcomes, motivational needs, values, and social issues.*

Personal outcomes reflect whether the model accounts for non productivity-related outcomes. *Intrinsic motivation/motivational needs* refer to whether the model addresses psychological needs, such as belonging, achievement, or autonomy. *Values,* reflects whether the model accounts for values, such as freedom. *Social issues,* reflects whether the model addresses social aspects such as interaction, networking, and influence. Each of these will be further discussed later in this chapter.

Current acceptance models, as will be demonstrated in more detail in the subsequent sections, are better suited to study productivity-focused systems.

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[1] 'Friend' is an online terminology for people who link to your social networking site (Netlingo, n.d.), while 'groups' are pages in FaceBook that are intended to promote collective discussion around a particular topic area (FaceBook, 2010).

Traditional models are also deterministic in nature with not enough focus on human agency (Bagozzi, 2007). These limitations, and others that will be later detailed, call for the development of models that may be better poised to deal with such rich technologies as social media. The term 'rich' is used here from the perspective of having the potential to satisfy a multitude of needs and hence having the propensity of being adopted for a multitude of motives.

ACCEPTANCE RESEARCH

In this section, we review the major theories in the IT acceptance and adoption literature. The limitations of these models in their ability to explain individual adoption of social media technologies are also discussed.

Theory of Reasoned Action

One of the most prominent theories of human behaviour, Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) seeks to explain and predict individual behavior. As shown in Figure 1, according to TRA, a person's behavior is directly and solely determined by their intention to perform that behavior. Behavioral intentions, in turn, are determined by two variables: the individual's attitude concerning the behavior - the *"individual's positive or negative feelings (evaluative affect) about performing the target behavior"* (Fishbein and Ajzen, 1975, p. 216) - and their subjective norm concerning the behavior - *"the person's perception that most people who are important to him think he should or should not perform the behavior in question"* (Fishbein and Ajzen, 1975, p. 302). Moreover, TRA entails that attitude and subjective norm be weighted according to their relative importance, which may vary according to the specific behavior under investigation, the situation, and the person being studied.

Subjective norm is a function of two components: First, normative beliefs - beliefs one has about what important others, or referents, expect one to do with regard to a specific behavior. Second is the individual's motivation to comply with each of the perceived expectations of those relevant referents. A person's attitude towards a behavior, on the other hand, is a function of the person's belief that

performing the behavior will lead to specific outcomes, and a weighted evaluation of those outcomes.

Figure 1. Theory of Reasoned Action (Figure from: Fishbein and Ajzen's, 1975)
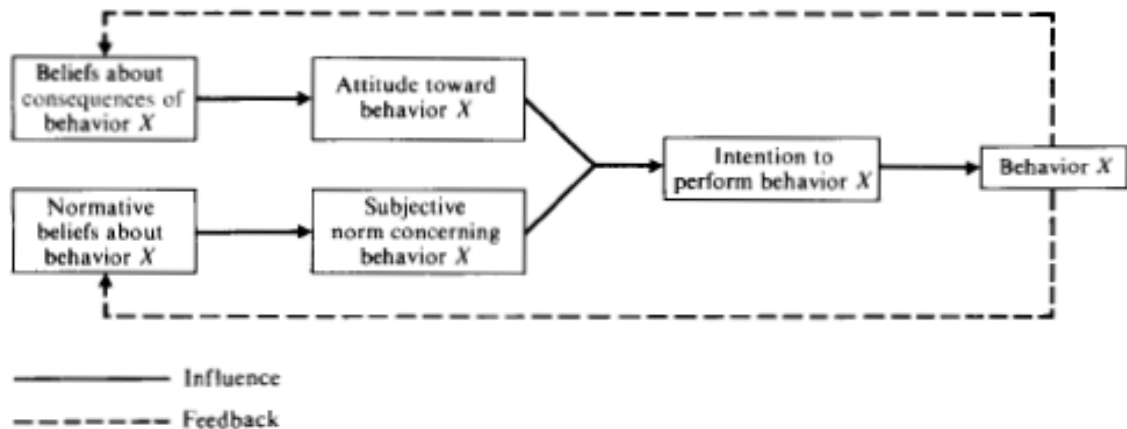
Sheppard et al., (1988) conducted two meta-analyses of 85 studies that have used TRA to investigate various behaviors in various contexts. The results of the analyses have shown TRA to be a robust and powerful model. Moreover, TRA also seems to be powerful in predicting and explaining IT adoption behavior. The findings of studies which have applied TRA in IS settings (e.g., Hartwick and Barki, 1994; Taylor and Todd, 1995b; Zhang, 2007) are quite similar to those obtained by studies of TRA in other contexts, which further corroborates the conclusions regarding the applicability and predictive validity of TRA in IS.

Technology Acceptance Model

The Technology Acceptance Model (TAM) was adapted from TRA by Davis (1989) and Davis et al. (1989). As shown in Figure 2, TAM introduced two new constructs to TRA: perceived usefulness, defined as *"the degree to which a person believes that using a particular system would enhance his or her job performance"* and perceived ease of use, defined as *"the degree to which a person believes that using a particular system would be free of effort"* (Davis, 1989, p. 320). According to TAM, both perceived usefulness and ease of use determine an individual's attitude (regarding the use of an application). The two constructs are seen to provide a useful means of aggregating important belief structures in the context of IT use (Taylor and Todd, 1995b).

TAM differs from TRA in two more aspects. First, TAM posits that perceived usefulness is also a direct determinant of an individual's intention to use an application. This direct relationship diverges from TRA, where the beliefs' influence on intention is mediated by attitude. Davis et al. (1989) based that direct relationship on the notion that in organizations *"people form intentions toward behaviors they believe will increase their job performance, over and above [attitude]"* (p. 986). Second, TAM excludes subjective norm as a determinant of intention, because of *"[subjective norm's] uncertain theoretical and psychometric status"* (Davis et al., 1989, p. 986).

Figure 2. Technology Acceptance Model (Figure from: Taylor and Todd, 1995)
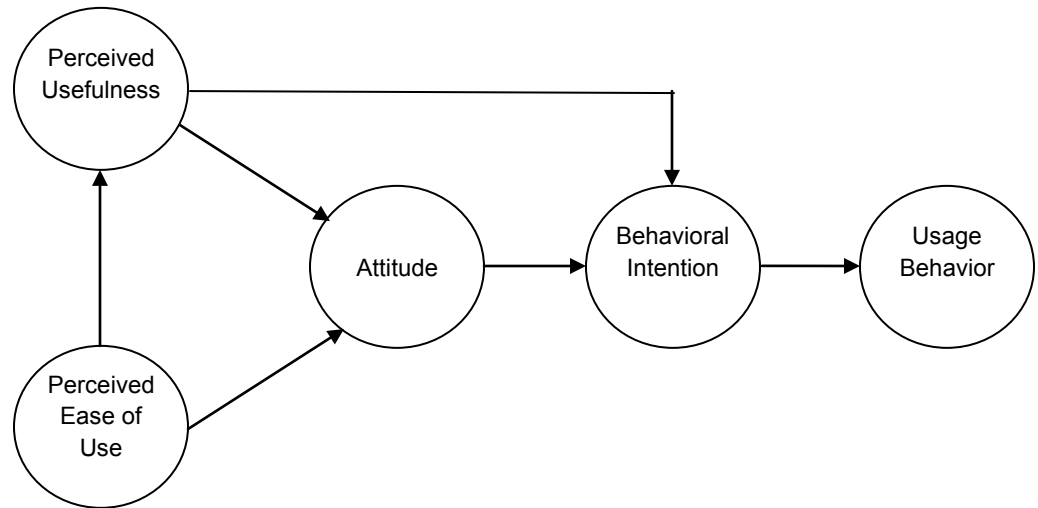
In TAM, IT usage behavior is theorized to be a direct function of behavioral intention. Intention, in turn, is a weighted function of attitude towards usage and perceived usefulness. Attitude is determined jointly by perceived usefulness and perceived ease of use. Lastly, perceived ease of use is theorized to be a direct determinant of perceived usefulness. Any additional factor not explicitly included in TAM is expected to influence intentions and usage only through perceived ease of use and perceived usefulness.

TAM is arguably the most influential and widely used model in IT acceptance research (Bagozzi, 2007). Lee et al. (2003) provide an expansive review of a number of studies, from leading IT journals and conferences, which relied on TAM. Their review shows that TAM's relationships were generally validated under different technologies, contexts, and tasks. The authors report, however, that the relationship

between perceived ease of use and behavioral intention is found to be significant in relatively less studies, compared to other relationships in the model. A similar finding was also reported by Taylor and Todd (1995b, p. 149), who asserted that, in TAM, "*The role of ease of use has been equivocal and to a large extent mediated by perceived usefulness.*" A possible explanation for that finding may be that when systems studied are by their inherent nature relatively easy to use, perceived ease of use may have less or no impact on the IT acceptance decision (Subramanian, 1994). It is also reported that the significance of ease of use changes with time. For example, Parthasarathy and Bhattacherjee (1998) found that significance to disappear in post-adoption.

A number of more recent studies, that used TAM with different technologies, also confirmed the model's theorized relationships. Technologies studied included health care information systems (e.g., Djamasbi et al., 2009), expert systems (e.g., Alshare et al., 2009), and e-learning systems (e.g., Lau and Woods, 2009).

Theory of Planned Behavior

Ajzen (1991) extended TRA to account for conditions in which individuals do not have complete control over their behavior. Ajzen modified TRA by adding the construct of perceived behavioral control (reflecting perceptions of internal and external constraints on behavior) as a direct determinant of intention (in addition to attitude and subjective norm), and as a direct determinant of behavior (in addition to intention), as seen in Figure 3. In this adapted TRA, called the Theory of Planned Behavior (TPB), perceived behavioral control refers to "*people's perception of the ease or difficulty of performing the behavior of interest*" (Ajzen, 1991, p. 183).

Figure 3. **Theory of Planned Behavior (Figure from: Taylor and Todd, 1995)**
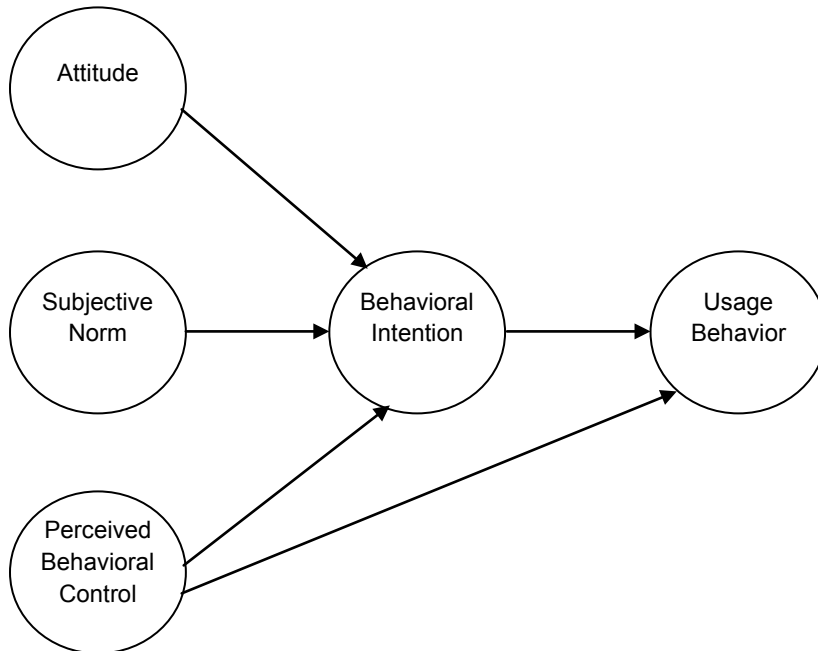
According to TPB, perceived behavioral control is a reflection of the various constraints felt by the individual in the performance of the behavior, and is determined by the individual's belief structures concerning the resources and opportunities that one has, and the impediments or obstacles that one faces (Taylor and Todd, 1995b). Perceived behavioral control is closely related to the concepts of self-efficacy (Bandura, 1986) and facilitating conditions (Triandis, 1980). An example of a recent study that examined TPB in IT literature is Dinev and Hu (2007), who validated TPB in the context of what they call protective technologies; information technologies that play the function of protect data and systems from disturbances which include viruses and unauthorized access. Another example is Khalifa and Shen (2008) who tested and validated an extended version of TPB in the context of mobile commerce. Interestingly, in that study, the relationship between perceived

behavior control and intention was not significant. The lack of significance of perceived behavioral control could be explained, the authors argued, by the respondents being familiar with mobile devices. This familiarity may have provided them with increased confidence and thus reduced the importance of self-efficacy in making the adoption decision (Khalifa and Shen, 2008). This explanation may be supported by the fact that the majority of respondents in the study are relatively young (18-30 years old), and most had more than 3 years of experience with the Internet.

Decomposed Theory of Planned Behavior

A model closely related to TPB, the decomposed TPB (DTPB), was developed by Taylor and Todd (1995b) and draws on constructs from the innovation diffusion literature (Rogers, 1983). This model, shown in Figure 4, is similar to TPB in its depiction of the direct determinants of intention. On the other hand, it is also similar to TAM (Davis et al., 1989) in that it decomposes those direct determinants into their underlying belief structures (Venkatesh et al., 2003). For example, 'attitude' is decomposed into perceived usefulness, perceived ease of use, and compatibility. Taylor and Todd (1995b) argue that their decomposition approach has advantages that include providing a better understanding of the relationships between antecedents of intention and their underlying belief structures, and providing a stable set of beliefs that can be applied in different settings.

Figure 4. Decomposed Theory of Planned Behavior (Figure from: Taylor and Todd, 1995)
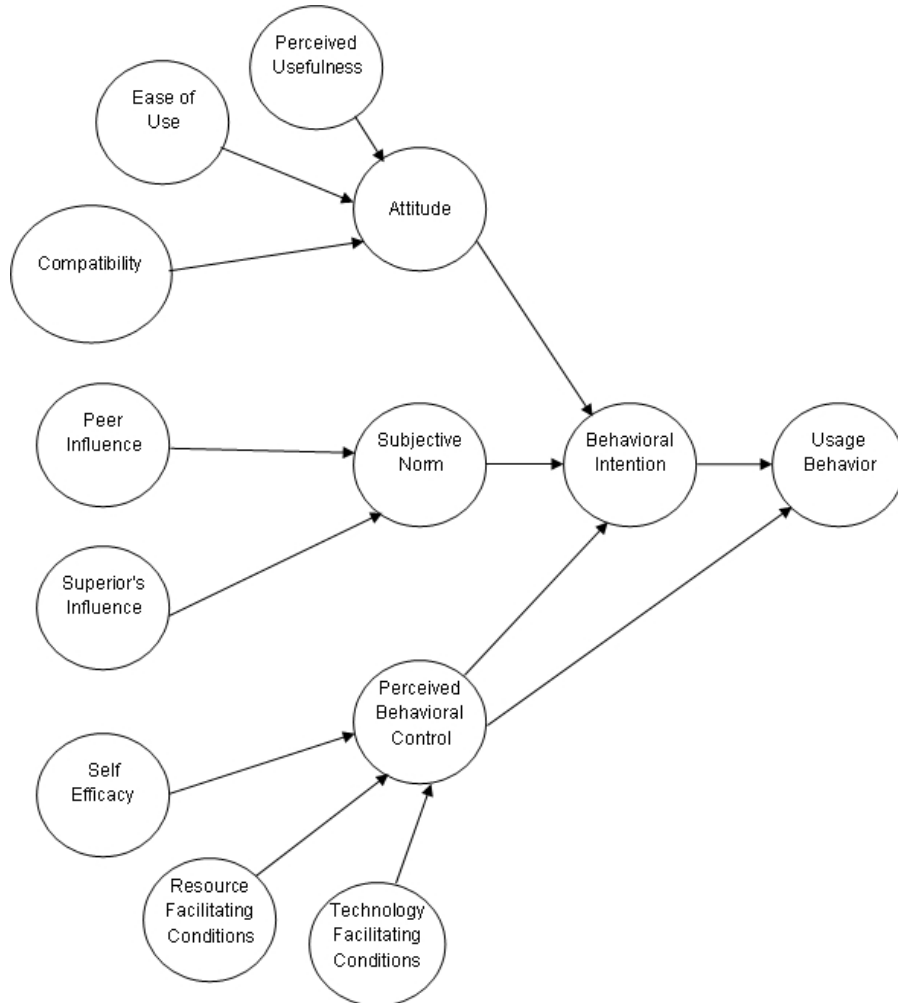
In the results of their study, where they compared TAM, TPB, and DTPB, they found that the three models were comparable when it comes to explaining IT usage behavior. However, for explaining behavioral intention, TPB and DTPB both provided more explanatory power than TAM.

Hsieh et al. (2008) used DTPB to study digital inequality through examining the continued use intentions of socio-economically advantaged versus disadvantaged users. Most of the study hypotheses were supported, lending further

confirmation to DTPB. It is worth noting, however, that while a search for papers that use TRA, TAM, or TPB resulted in numerous papers, a search for papers using DTPB in the last two years lead only to two papers. This may suggest that DTPB is yet to gain wide acceptance in IT literature.

Unified Theory of Acceptance and Use of Technology

Another model that is related to both TAM and TPB is the unified theory of acceptance and use of technology (UTAUT), developed by Venkatesh et al. (2003). This model, shown in Figure 5, essentially extends TAM through the addition of the social influences and facilitating conditions constructs, overlapping noticeably with TPB's subjective norms and perceived behavioral control (Benbasat and Barki, 2007). Similar to DTPB, UTAUT decomposes TPB's attitudes to perceived usefulness and perceived ease of use. Venkatesh et al. (2003) also add age, gender, experience, and voluntariness of use as variables that moderate the relationships between intention and use on one hand, and their antecedents on the other. With this integrated model, Venkatesh et al. (2003) were able to account for 70 percent of the variance in usage intention - a percentage that indicates a considerable improvement over other models discussed in this section. This explanatory power, however, comes at the cost of less parsimony (Bagozzi, 2007).

Figure 5. Unified Theory of Acceptance and Use of Technology (Figure from: Venkatesh et al., 2003)
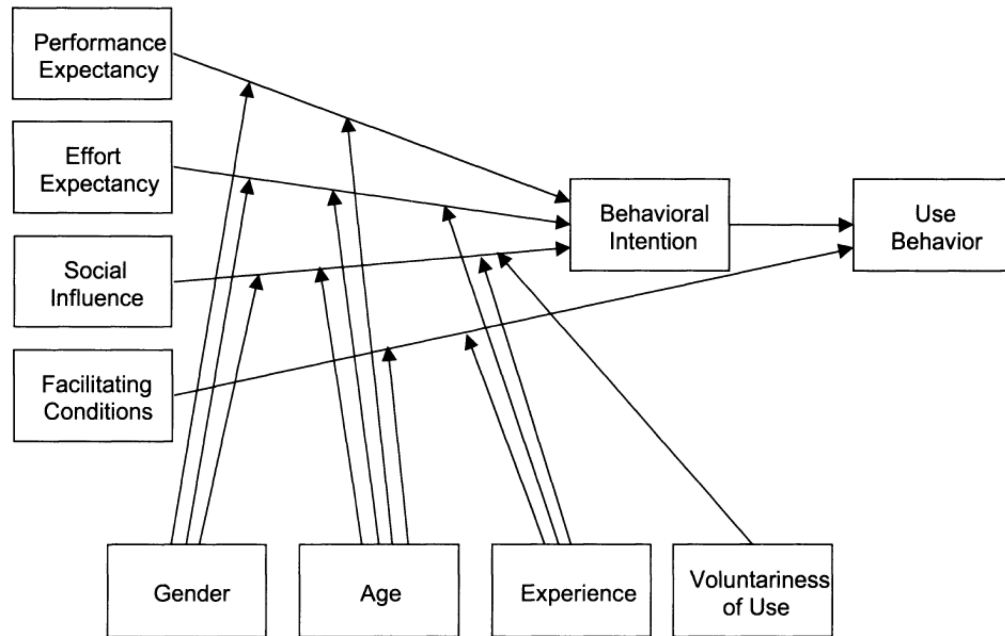
In a recent study, Wang and Wang (2010) found support for UTAUT as they used it to study the determinants of mobile Internet acceptance and to understand whether or not there are gender differences in its acceptance. Similar to DTPB, however, searching for papers that used UTAUT in the last two years resulted in only three papers, possibly an indication that UTAUT does not seem to have replaced other acceptance models.

Innovation Diffusion Theory

Innovation diffusion theory (IDT) (Rogers, 1983) views innovation diffusion, at the individual level, as a process driven by actions that potential adopters take in order to reduce uncertainty. Rogers (2003) presents five perceived attributes of innovation

that he believes may help explain different rates of adoption for different innovations. These attributes are relative advantage, compatibility, complexity, triability, and observability. Relative advantage is defined as *"the degree to which an innovation is perceived as better than the idea it supersedes"* (Rogers, 2003, p. 15). What matters, in Rogers' view, is the individual's perception of whether the innovation is more advantageous than its predecessor, rather than whether that innovation is objectively better (Rogers, 2003). The greater the perceived relative advantage of an innovation, the faster is its rate of adoption. The degree of relative advantage need not only be measured in economic terms, but other aspects, such as social prestige factors, may be taken into consideration (Rogers, 2003). Compatibility is *"the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters"* (Rogers, 2003, p. 15). An idea that is compatible with the values and norms of a social system will be adopted more rapidly than an innovation that is incompatible. Complexity is *"the degree to which an innovation is perceived as difficult to understand and use"* (Rogers, 2003, p. 16). Triability is *"the degree to which an innovation may be experimented with on a limited basis"* (Rogers, 2003, p. 16). For example, it would be expected that an innovation would be more readily adopted if it could be used first on a trial basis. Finally, observability is *"the degree to which the results of an innovation are visible to others"* (Rogers, 2003, p. 16). The easier it is for individuals to see the consequences of an innovation, the more there propensity to adopt. Overall, innovations that are perceived to be high on relative advantage, compatibility, triability, and observability, and low on complexity, will be adopted more rapidly than others (Rogers, 2003).

In IS research, Moore and Benbasat (1991) adapted and extended the characteristics of innovations presented in IDT, and developed an instrument to measure those 'perceived characteristics of Innovations', or PCIs, when studying individual acceptance of IT. In addition to the five aforementioned attributes, Moore and Benbasat (1991) suggested 'image', defined as *"the degree to which use of an innovation is perceived to enhance one's image or status in one's social system"* and 'voluntariness of use', defined as *"the degree to which use of the innovation is perceived as being voluntary, or of free will"* (Moore and Benbasat 1991, p. 195). Figure 6 shows perceived characteristics of Innovations as studied in IT literature.

Figure 6. Innovation Diffusion Theory (Figure adapted from Karahanna et al., 1999)
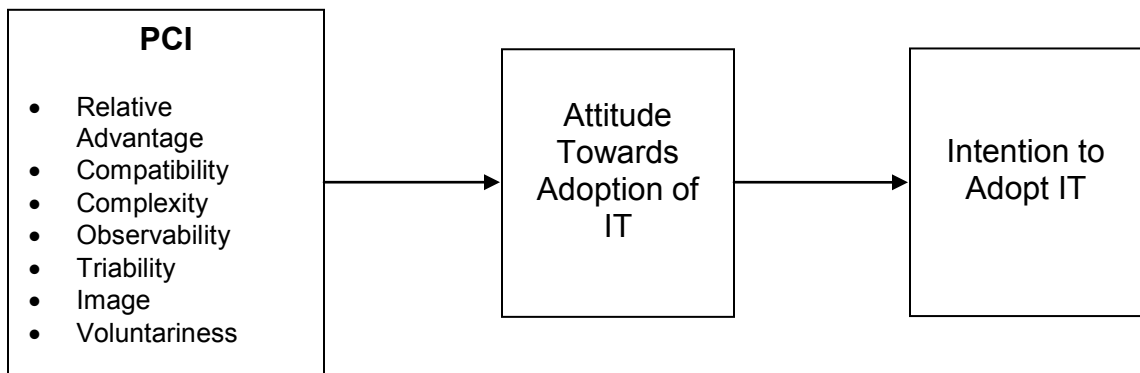
A number of studies examined PCIs in IT literature and found support for their predictive validity. Karahanna et al. (1999), for example, used PCI (with aspects from TRA) to study the differences between individuals' pre-adoption and post-adoption beliefs and attitudes in the context of organizational use of Windows technology.

Plouffe et al. (2001) compared PCI to TAM's constructs as antecedents to the decision to adopt a smart card-based electronic payment system. The results showed the PCI group of antecedents to explain more variance than do those of TAM. More recently, Compeau et al. (2007) reconceptualized and further refined the perceived characteristics of innovation, while Choudhury and Karahanna (2008) conceptualized 'relative advantage' as a multidimensional construct in their study of consumer adoption of electronic channels.

Social Cognitive Theory

Social Cognitive Theory (SCT) (Bandura, 1977; 1986) is a widely influential model of individual behavior. It is based on the premise of "triadic reciprocality." This notion implies that environmental influences, cognitive factors, other personal factors (e.g., personality), and behavior, are reciprocally determined. Hence, individuals choose the environments in which they exist while also being influenced by those environments. Also, behavior, in a specified situation, is affected by environmental characteristics, which are in turn influenced by the behavior. Finally, the behavior is affected by cognitive and personal aspects, and in turn, affects those same aspects (Compeau and Higgins, 1995).

Figure 7. Social Cognitive Theory (Figure from: Compeau et al., 1999)
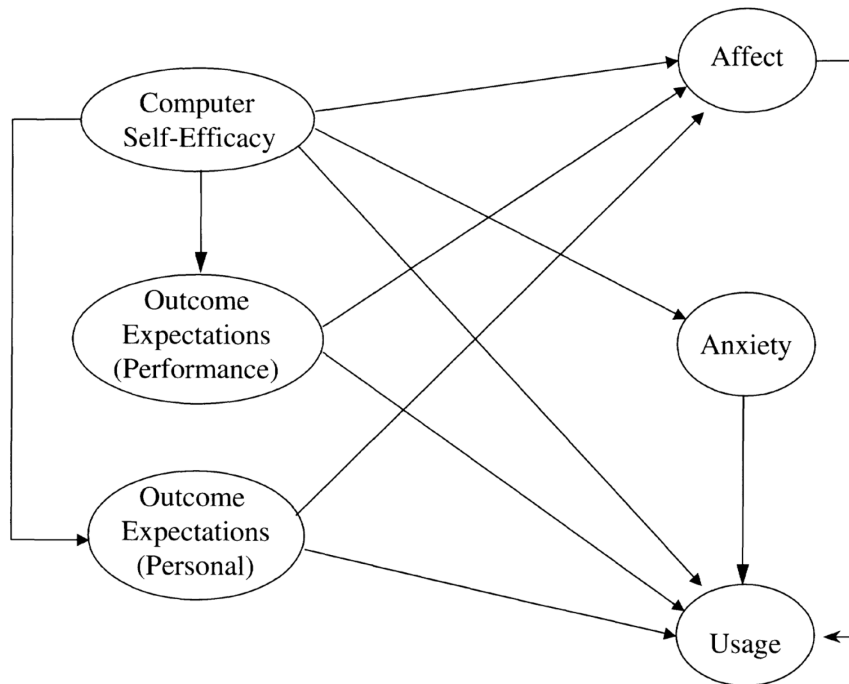
Compeau and Higgins (1995) adapted and applied SCT to the IT use context. While Social Cognitive Theory has many dimensions, Compeau and Higgins (1995) were particularly interested in the role cognitive factors play in influencing individual behavior. Specifically, two sets of expectations were studied, as shown in Figure 7. First, expectations related to outcomes - individuals are more likely to undertake behaviors they believe will result in valued outcomes than those they do not see as having favorable consequences. Second, expectations encompassing what Bandura (1986) calls self-efficacy, defined as *"people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances"* (p. 391). Self-efficacy is not concerned with the skills one has, but rather with judgments of what one can accomplish with whatever skills one possesses. Compeau et al. (1999) developed and tested a model based on SCT and

found strong confirmation for the role of 'outcome expectations' and 'self efficacy' in influencing an individual's affective and behavioral reactions to IT. In a more recent study, Lam and Lee (2006) found general support for the effects of self efficacy and outcome expectations on usage intention of computer training facilities.

Model of PC Utilization

Building on Triandis' (1980) theory of human behavior, Thompson et al. (1991) developed the model of PC utilization (MPCU) to predict use (rather than adoption). It is argued, however, that the model is also suited to predict intention (Venkatesh et al., 2003). As is often the case in current acceptance models, MPCU (shown in Figure 8) includes constructs that overlap considerably with other constructs in acceptance research. For example, job fit, similar to perceived usefulness in TAM, is defined as the *"extent to which an individual believes that using [a technology] can enhance the performance of his or her job"* (Thompson et al., 1991, p.129). An additional construct that MPCU introduces is perceived long-term consequences of use, defined as *"outcomes that have a pay-off in the future"* (Thompson et al., 1991, p.129). It would appear that MPCU is currently not widely used in IS research, as a search we have performed did not result in any recent paper that tested the model.

Figure 8. Model of PC Utilization (Figure from: Thompson et al., 1991)
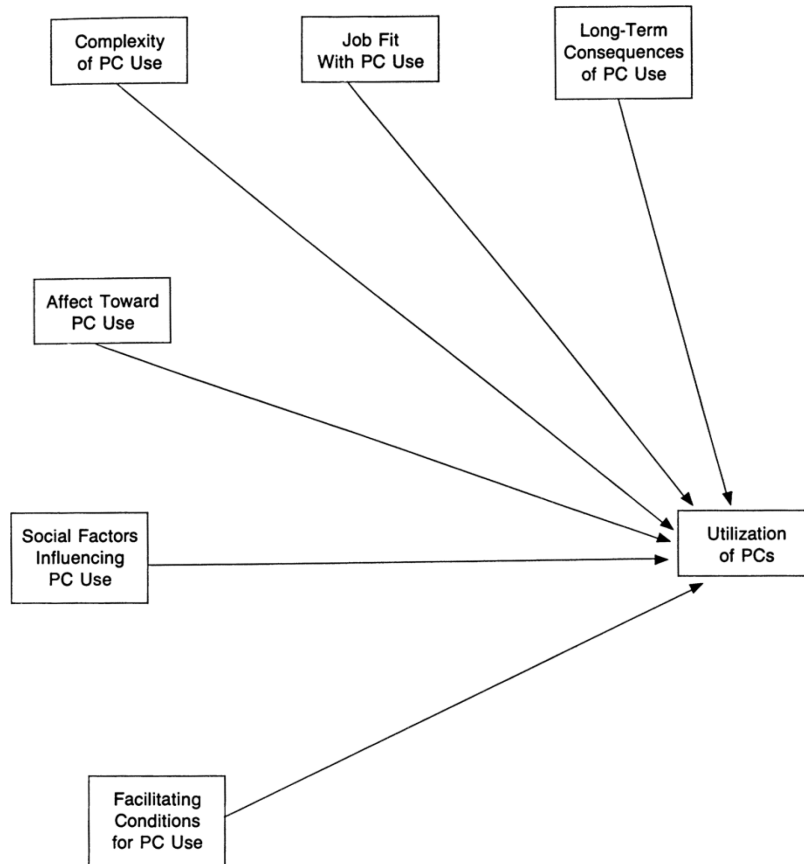
Model of Task-Technology Fit (TTF)

A well-known model addressing fit in IT literature is Task Technology Fit (TTF) model (Goodhue, 1995; Goodhue and Thompson, 1995). TTF (shown in Figure 9) postulates that the extent to which a technology helps an individual in performing their tasks influences that individual's IT usage behaviour, and also has an impact on individual performance. In other words, TTF can be considered a key antecedent to TAM's perceived usefulness construct, and also a key construct between TAM and performance (Goodhue, 2007). TTF has been instrumental in developing the

construct of Information System Use-Related Activity, which offers an expanded

conceptualization of the construct of information system use (Barki et al., 2007).

Figure 9. Model of Task-Technology Fit (Goodhue and Thompson, 1995)
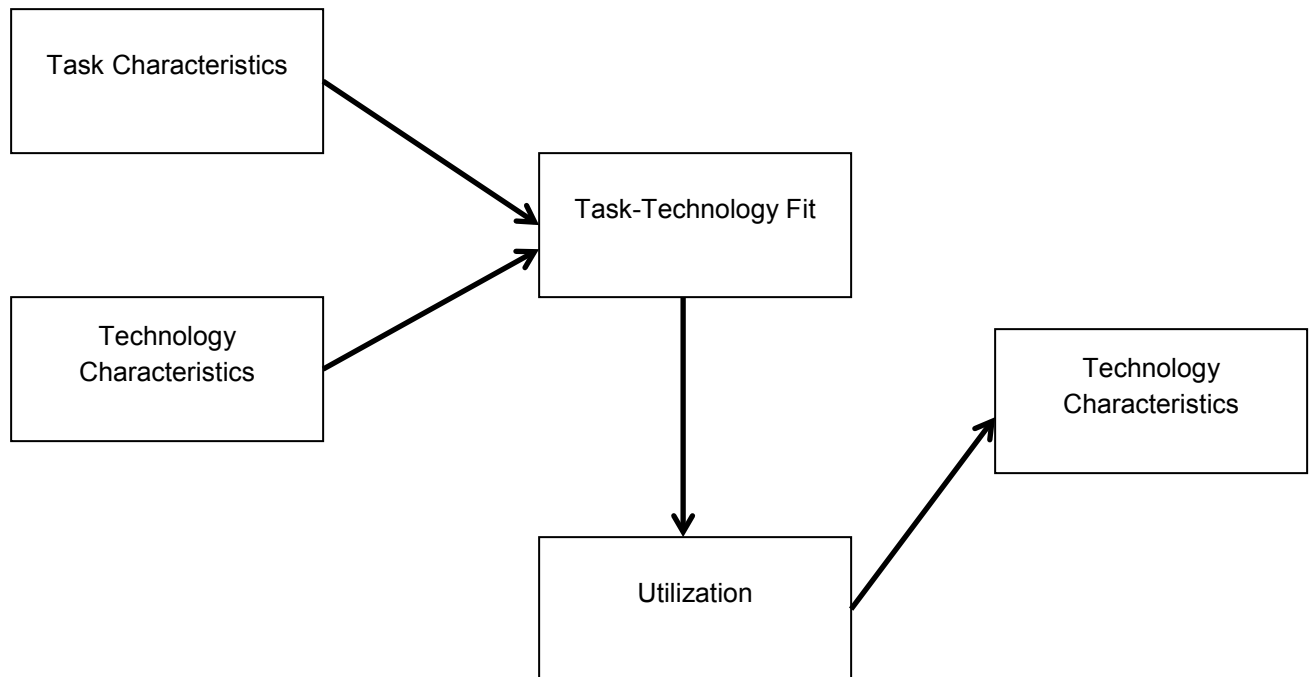
SOCIAL MEDIA ADOPTION

With the increasing growth and relevance of social media, a number of recent studies have examined the adoption and use of these applications, both at the individual and organizational levels. In this section we review the recent literature on social media adoption.

Using a diffusion of innovation theoretical lens, and reporting on the findings from a survey of 281 public relations practitioners, Avery et al. (2010) studied the adoption of social media by health agencies to disseminate health information. The authors found that the barrier most frequently mentioned by practitioners as to why they don't think constituents would benefit from health information provided online was lack of home access to the Internet. This is a reminder that, even though the number of people with Internet access has grown considerably, the digital divide is still true for many. In another study that was also guided by the diffusion of innovation theory, Mustaffa et al. (2011) studied the adoption of Facebook amongst the youth in Malaysia, and found that adoption rate of that application was in the late majority category, with most individuals waiting until most of their peers adopt the innovation. Respondents in that study did not have challenges in accessibility to the Internet or social media Websites. However, they initially were skeptical and did not foresee valuable outcomes to result from social media adoption and use. It was only when they felt peer pressure to adopt that they made the initial adoption decision.

Recent literature also reveals that social media applications are being adopted and used by individuals for more that only fun (although fun is arguably a driver). For example, Hosack et al (2012) argue that social networking websites provide consumers with important clues and information that help them make

purchasing decisions. In another study, Cheng et al. (2011) show that micro-blogging is increasingly progressing from a chatting instrument into an important means for individuals and organizations to locate and share real-time information.

An area that is gaining increasing attention is social media-based consumer communities. While customer communities have been existent for quite a while, they are currently subject to increased interest from companies as a result of the popularity of social media websites such as Twitter and Facebook (Culnan et al., 2010). Using a case study approach, Gallaugher and Ransbotham (2010) studied social media as platforms for the dialog between a company and its customers. They argue that social media intensify and create variations on three main flows of customer communication: from the company to customers (a flow which the authors argue functions as a megaphone), from customers to the company (the authors argue functions as a magnet), and from customer to customer (functioning as a Monitor). The study also shows how user-generated content and increased interaction influences those types of communication flow. Specifically, the authors assert that while the company-customer relationship existed since long ago, social media expand the communication paths and provide additional options for strengthening or shaping that relationship. For example, review sites such as Yelp and TripAdvisor not only allow users to add content and interact with each other, but these sites also offer the opportunity for a company to join the dialog by, for example, responding to a customer's suggestion or complain.

Highlighting the different nature of social media adoption compared to more traditional IT, however, Culnan et al. (2010) remind us that the use of social media by customers is voluntary, and continuous interaction among members is essential

to build online customer communities. Organizations have to be actively engaged in building these communities, encouraging user participation, and learning from the interactions. Indeed, De Hertogh et al. (2011) recommend a bottom-up and emergent approach to governing the organizational social media presence. For example, in what the authors call the "collaboration principle", they encourage companies to "let (virtual) communities and teamwork emerge from a free-flow of collaborative engagements, rather than pre-assign the bulk of roles, activities, and access rules" (p. 128, 129). This shows how, even when studying social media adoption at the organizational level, researchers and practitioners alike need to be investigating what drives and motivates individuals to join, and contribute to, organizational social media efforts.

The potential of social media for connecting, communicating with, and engaging people was also not lost on governments and politicians. Wattal et al. (2010) argue that social media have the potential to alter the nature of competition in politics and to complement, or even replace, traditional media in communicating the politicians' message. For example, many members of the U.S. Congress personally use Twitter, often to spread the news about their political efforts (Lassen and Brown, 2011). As for governments, Dadashzadeh (2010) shows examples of governments using social media in engaging citizens, and argues that social media provide the opportunity to move from e-government to e-governance, where such media are leveraged to provide web-based participatory government.

Drivers of Social Media Adoption

As suggested earlier, based on social media characteristics, there are aspects that need to be addressed by theories seeking to explain social media use. First, *personal outcomes,* reflects whether the model explicitly accounts for non productivity-related outcomes. For example, individuals may use social media to enhance their social capital (Ellison et al., 2007). Second, *intrinsic motivation/motivational needs* - whether the individual uses social media to satisfy psychological needs also have to be taken into account. For example, individuals may use social media for enjoyment (von Hippel and von Krogh, 2003) or achievement (e.g. Okoli and Oh 2007). Third, *values* have to be taken into account. On the one hand, as we discussed above, there are values, such as openness, that are viewed to be inseparable from social media. On the other hand, values are very important drivers of human action and are closely related to a person's social identity (Cable and Edwards, 2004). Such identity is especially relevant in the social media context where a user's identity, unlike the case with more traditional technology, is highly mobile (Parameswaran and Whinston, 2007) and a person may have multiple representations of self (DiMicco and Millen, 2007). Fourth, *social issues* are an important aspect to be considered. As we argued above, a defining aspect of social media, or social computing, is not only the increased social interaction, but that such interaction has different dynamics than those of real life interactions. It is thus especially important when studying adoption of social media to address the various social factors that come into the decision to adopt and use. 'Social issues' is an encompassing term that may include various aspects such as interaction, networking, and influence. It is thus important to keep it flexible to make sure it

captures efforts carried out by any of the models discussed to examine social facets of IT acceptance, even if they only look at such facets from a limited perspective.

A fifth aspect - that was not discussed before this point - is *fit*, which refers here to whether a model accounts for the congruence between the individual's characteristics and those of the system. With the richness of social media applications, the complexity of drivers that motivate individuals to use them, and the high degree of variability in individual characteristics, it becomes even more important to look at fit, rather than envisioning a deterministic view necessitating that an increase in a certain need, such as the need to be productive, will result in an increase in social media use. In the next section, current IT acceptance models are assessed along the five aspects discussed in this section.

Assessment of Current Acceptance Models in the Social Media Context

Table 1 provides a structured comparison among traditional IT acceptance models along the five dimensions discussed above.

Table 1. Comparison of Current Acceptance Models

Theory	Social media-– Related Aspects				
	Personal Outcomes	Intrinsic Motivation/ Motivational Needs	Values	Social interaction/ networking	Fit
TRA	Possible, but not explicit	No	No	SN	Implicit
TPB	Possible, but not explicit	No	No	SN	Implicit
TAM	No	No	No	No	No
DTPB	Limited	No	No	SN	Implicit
SCT	Yes	No	No	No	No
IDT	Limited	No	No	Image	No
MPCU	No	No	No	Social Factors (SN)	No
UTAUT	No	No	No	Social Influence (SN)	No
TTF	No	No	No	No	Yes

For the first aspect, *personal outcomes,* while TRA's and TPB's 'beliefs', for example, may theoretically account for non- as well as productivity related issues, these theories do not explicitly address 'personal outcomes'. Moreover, vis-à-vis using an information system, TRA only suggests two reasons to act (attitude and subjective norms), while TPB offers three (perceived behavioral control added),

without looking at these reasons as functions of further evaluations (Bagozzi, 2007).

TAM is clearly on the productivity side (Glassberg et al., 2004), so is MPCU, with its 'job fit with PC use' construct very similar to TAM's perceived usefulness. IDT and DTPB's 'compatibility' construct indirectly refers to personal outcomes. However, its operationalization in both models in the IT literature focuses solely on productivity (see Compeau et al., 2007 and Karahanna et al., 2006 for a few exceptions.) Applications of SCT do account for the personal aspect of adoption through the 'personal outcomes' construct (e.g., Compeau et al., 1999). Finally, UTAUT antecedents of intention to use information systems are clearly focused on performance-oriented outcomes.

The second aspect - whether the model accounts for *intrinsic motivation/motivational needs* - and the third aspect - whether a model accounts for *values* - are missing from the models we discussed. Again, IDT and DTPB's 'compatibility' does reflect needs and values in its definition, but not in its operationalization. The fourth aspect, social aspects, is accounted for by most of the models discussed through the construct of subjective norm (though may use different operationalizations), or a closely related construct. While SN, and image in the case of IDT, are important constructs, we believe there is more to social influences than only what action referents, or important others, expect one to do, or whether such behavior would enhance one's status in a social system. In addition to SN and image there is, for example, the need to belong or to relate (e.g. Deci and Ryan, 1991; Maslow, 1954).

The fifth and last aspect is *fit*. Models such as TRA, TPB, and DTPB take 'fit' into consideration through the issue of weighted evaluation of the outcomes. In other words, these models do not just theorize that a person would act because of the

expectation of the behavior to lead to certain outcomes, but also depending on the degree to which the person values those outcomes. TAM and UTAUT, on the other hand, exemplifies what Bagozzi (2007) terms as deterministic frameworks in acceptance research. In these two models, it is assumed that a person will find a system useful if they believe that using that system will improve their performance, without taking into consideration the extent to which the user values such an outcome. SCT, IDT, and MPCU, do not clearly take *fit* into consideration (as mentioned above, MPCU's 'job fit' construct is operationalized similarly to TAM's perceived usefulness). TTF does take fit into consideration, focusing on the fit between technology and task characteristics.

Traditional models like TAM have greatly contributed to our understanding of adoption and use of IT, and there is no reason to believe they cannot be applied to the social media context. However, with the rich and complex nature of social media, we believe that a model that addresses the social media-related aspects discussed above in a more comprehensive way would contribute to further our understanding of adoption and use of social media.

Another crucial issue to discuss, before we lay out the theoretical bases for our proposed model, is that of 'usefulness'. Usefulness is a core construct in the models discussed above and in the acceptance literature in general; for example, 'perceived usefulness' in TAM, 'perceived job fit' in MPCU and 'relative advantage' in IDT. We believe that our assessment of current IT acceptance models will thus not be complete without discussing that important construct, which we review in the next section.

THE USEFULNESS CONSTRUCT IN IT ACCEPTANCE LITERATURE

TAM's perceived usefulness (PU) construct is the most widely used conceptualization of usefulness, and the one that is most influential (Benbasat and Barki, 2007). Table 2 presents a summary of the various definitions and operationalizations of PU and closely related constructs in the IT literature (see Appendix 1 for the complete table). As shown in the table, numerous studies (e.g. Adams et al., 1992; Gefen and Straub, 1997; Grandon and Pearson, 2004; Igbaria et al., 1997; Lim and Benbasat, 2000; Szajna, 1994) have built and tested models including PU and using the same or very similar operationalizations to the one originally defined by Davis (1989, p.320) as *"the degree to which a person believes that using a particular system would enhance his or her job performance"*. A number of other 'usefulness' constructs have also focused on performance-based rewards. For example, Moore and Benbasat (1991, p.195) defined 'relative advantage' as *"the degree to which an innovation is perceived as being better than its precursor"*. Relative advantage was operationalized through nine items with a clear focus on job- and productivity-related 'advantages'. Another example is the concept of 'perceived job fit' defined as *"the extent to which an individual believes that using a PC can enhance their job performance"* (Thompson et al., 1991, p.129).

The purpose of Table 2 is to show how the usefulness construct in IT literature is overwhelmingly defined with a productivity/performance focus. To develop the table, the document texts of all papers published since 1989 (the year Davis introduced 'perceived usefulness') in *MIS Quarterly*, *Information Systems Research*, *Journal of Management Information Systems*, *Journal of the Association for Information Systems*, and *Information & Management* were searched for the term "perceived usefulness". The papers were then analyzed to find studies where PU – or a closely

related construct – had been operationalized and measured. The papers that were included in the table were mainly those that tested PU. However, the search resulted in a number of papers that, while citing PU, did not measure it, but rather measured other similar constructs, such as 'relative advantage'. These papers were also included in the table.

Bagozzi (2007) argues that PU does not comprise motives, and thus individuals may decide not to adopt a system even when they perceive it to be useful. We concur with that view, and believe the answer to this perplexing situation is that what constitutes 'usefulness' should be viewed from the perspective of an individual's specific needs and values, especially in the case of social media with its complex set of defining characteristics. While many of the commonly used 'usefulness' constructs can significantly contribute to explaining IT adoption, it is our contention that these conceptualizations are too narrowly focused on productivity and/or performance at the expense of a more comprehensive spectrum of personal motives that we expect drive the decision to adopt social media. These motives merit further investigation in order to gain deeper understanding of the drivers of social media adoption and use, formulate more richly conceptualized constructs, and develop models that can contribute a better explanation.

Table 2. An Overview of Usefulness-Related Constructs in IT Literature

Construct	Representative Studies	Definition	Number of Studies
PU	Adams et al., 1992; Agarwal and Karahanna, 2000; Ahn et al, 2007; Amoako-Gyampah and Salam, 2004; Bajaj and Nidumolu, 1998; Bhattacherjee and Premkumar, 2004.	"*The degree to which a person believes that using a particular system would enhance his or her job performance*" (Davis, 1989, p. 320).	118
Perceived Job Fit (near-term conse-quences)	Thompson et al., 1991; Chang and Cheung, 2001.	*"The extent to which an individual believes that using a PC can enhance their job performance"* (Thompson et al., 1991, p.129)	3
Performance Expectancy	Al-Gahtani et al, 2007; Chiu and Wang, 2008.	*"The degree to which an individual believes that using the system will help him or her to attain gains in job performance"* (Venkatesh et al., 2003, p. 447)	3
Relative Advantage	Agarwal and Prasad, 1998; Compeau et al., 2007.	*"The degree to which adopting/using the IT innovation is perceived as being better than using the practice it supersedes"* (Moore and Benbasat, 1991, p. 195).	7
Utilitarian Outcomes	Venkatesh and Brown, 2001.	*"The extent to which using a PC enhances the effectiveness of household activities"* (Venkatesh and Brown, p. 74).	1
Perceived Net Value	Briggs et al., 1998.	*"An attitude, a valenced subjective assessment in response to all the perceived likely consequences of changing from existing technology to the proposed technology"* (Briggs et al., 1998, p. 157).	1
Outcome expectations	Compeau and Higgins, 1995; Compeau et al., 1999.	*"The perceived likely consequences of using computers"* (Compeau et al., 1999, p. 147).	6

MOTIVATIONAL NEEDS AND VALUES

Fundamental motivation generally guides cognition and emotion (Baumeister and Leary, 1995) and motivational needs, in particular, influence the cognitive processes that produce behavioral variability (Kanfer, 1991). There is currently a resurgence of interest in needs in the organizational behavior literature (Latham, 2007; Latham and Pinder, 2005). Latham (2007) argues that needs are a crucial variable in predicting, explaining, and influencing motivation (Latham, 2007). Maslow (1954) was a pioneer in advancing a general theory of human motivation that emphasized a concept of needs (Oleson, 2004). Maslow theorized a hierarchy of motivational needs that include physiological, safety, belonging, self-esteem, and self-actualization needs. That theory was the basis of McGregor's Theory X and Theory Y (1957), and later Alderfer's (1972) reformulation of the needs hierarchy into the three levels of existence, relatedness, and growth needs. A more recent theory of motivation, the self-determination theory, argues that providing people the freedom of choice leads to personal empowerment, an elevated sense of autonomy, and a higher level of interest in a task (Deci and Ryan, 1991; Ryan and Deci, 2000). Ryan and Deci (2000) identified three psychological needs that they argue form the basis for people's self-motivation and personality integration: The needs for competence, relatedness, and autonomy. It is argued that the primary difference between the self-determination theory and most other work motivation theories is that the focus of that theory is on "the relative strength of autonomous versus controlled motivation, rather than on the total amount of motivation" (Gagne and Deci, 2005 p. 340). Among the recent theories on needs also is socioanalytic theory (Hogan and Warrenfeltz, 2003), stating that people have innate needs for acceptance, power, and predictability.

Values are enduring beliefs that a specific mode of conduct or end-state is preferable to its opposite (Rokeach, 1973). Values are key component of most work motivation theories (Latham, 2007). Examples of theories on values include Adams' (1963) Equity Theory and Vroom's (1964) Expectancy Theory. A number of such theories provided significant contributions to IT literature. For example, Joshi (1991) used Equity Theory to develop a model explaining users' resistance to IT implementation.

While psychological needs are innate, a person can still consciously choose whether to think about what their needs are, and how to satisfy them (Locke, 1991). Indeed, Latham (2007) goes as far as describing Maslow's needs as 'goals'. Values are also akin to goals, but goals are more specific (Locke, 1991).

Person–Environment Fit

Motivational needs provide insights into the rich and complex realm of needs that an IT user, as a human being, is eager to satisfy. We suggest that there is a need for a robust framework that would enable us to theorize about the relationship between such needs and IT usage. In this study, we take the stand that the person-environment fit stream of research (Kristof, 1996; Kristof-Brown et al., 2005; Ostroff et al., 2005), from interactive psychology, provides such a framework. Latham (2007, p.161) argues that *"to believe that motivation is solely a function of the person or solely a function of the job is as naïve as believing that area is primarily a function of length rather than width."* Person-environment (P-E) fit provides a strong theoretical foundation upon which to base our examination of the relationship between needs and IT use. In addition, that rich stream of research will also prove critical in

examining the degree of congruence between the user's values and those underlying IT, in addition to examining the fit between one individual user and other users of the IT.

Motivation is both an internal psychological process and a transactional one. It is the result of reciprocal interactions between people and their work environments and the fit between these interactions and the broader societal context (Franco et al., 2002). In the realm of examining such interactions, management scholars have a sustained interest in the fit between individuals and their work environments (Kristof-Brown et al., 2005).

Person-environment fit includes three categories of fit: person–job (P-J) fit, person–group (P-G) fit, and person–organization (P-O) fit (Ostroff et al., 2005). Figure 10 graphically represents P-E fit and its sub-categories on the basis of our literature review.

Person - Job (P-J) Fit

Kristof (1996) defined a job from the perspective of the tasks a person is expected to accomplish, as well as the characteristics of those tasks. Using this definition, she argued, P-J fit is to be judged relative to the tasks performed, rather the organization in which the job exists.

Edwards (1991) suggested two core dimensions of the P-J fit. The first is the demands-abilities (D-A) fit, in which employees' knowledge, skills, and abilities are commensurate with what the job requires. The second dimension of

Figure 10. Person-Environment (P-E) Fit

41
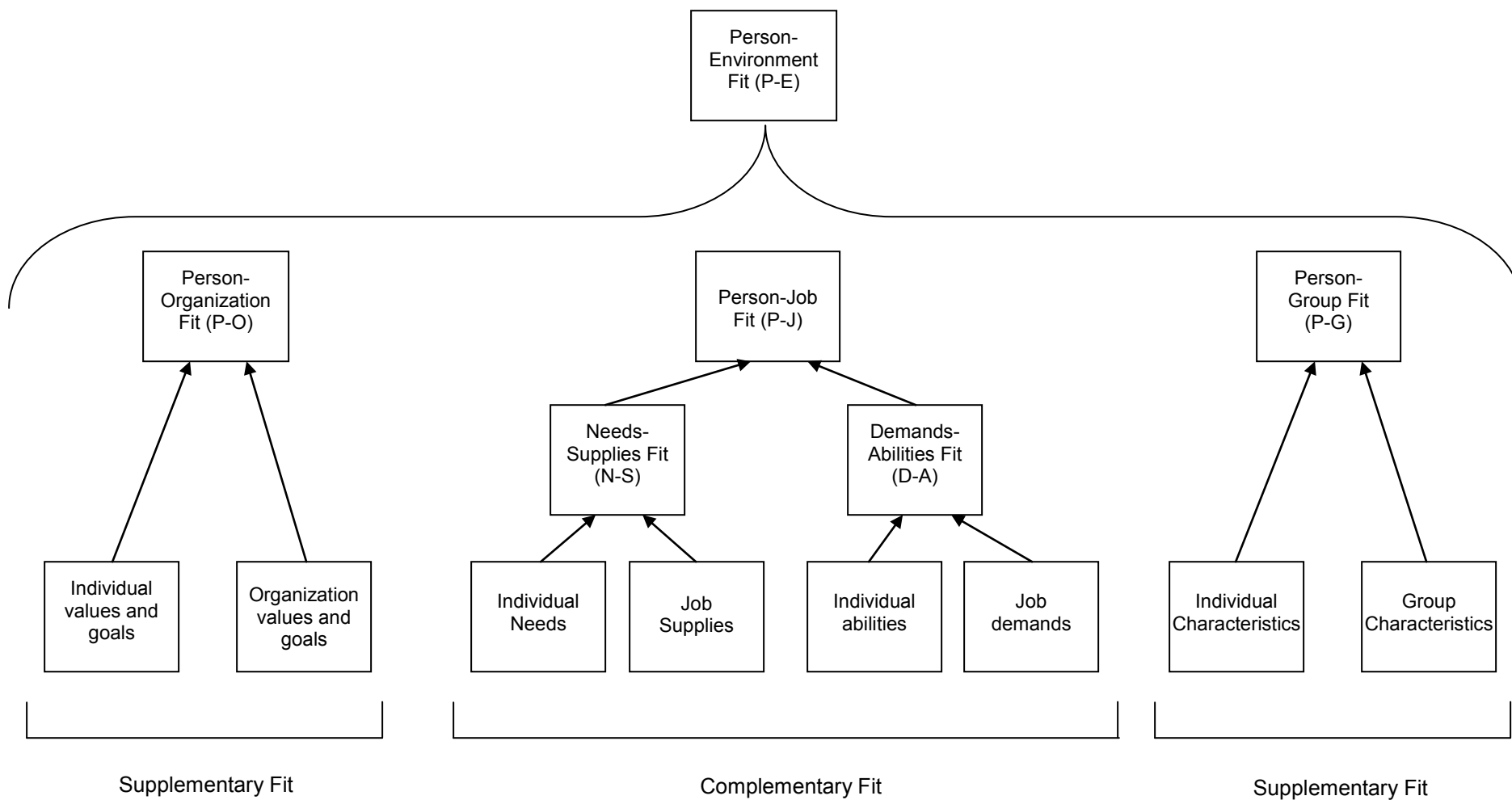
P-J fit, needs-supplies (N-S) fit, occurs when employees' needs, desires, or preferences are met by the job they perform. The N-S fit has been the emphasis of various theories of adjustment, such as the theory of work adjustment (Dawis and Lofquist, 1984). P-J fit is a complementary type of fit (Kristof-Brown et al., 2005). A complementary fit occurs when individuals' characteristics fill a gap in the current environment, or vice versa (Muchinsky and Monahan, 1987).

Person - Organization (P-O) Fit

P-O fit reflects the compatibility between characteristics of the individual such as personality, values, or goals, and those of the organization such as culture, values, goals, and norms (Kristof, 1996; Ostroff et al., 2005; Verquer et al., 2003). P-O fit is a supplementary fit, which exists when there is a similarity between the individual and the environment (Kristof-Brown et al., 2005).

While operationalizing PO fit as goal congruence is theoretically consistent (Kristof-Brown et al., 2005), value congruence is generally accepted as the defining operationalization of PO fit (Kristof, 1996; Verquer et al., 2003).

Person - Group (P-G) Fit

P-G fit is defined as "the compatibility between individuals and their work group" (Kristof, 1996, p. 7) which may range from a small group of coworkers to a functional department, or a geographic division. This type of fit reflects psychological compatibility between coworkers and is operationalized at the individual level (Kristof-Brown et al., 2005).

In accordance with the similarity-attraction paradigm (Byrne, 1971) which argues that individuals are both attracted to and have more positive attitudes towards similar others, members of more homogeneous groups tend to have more positive attitudes (e.g. Thomas et al., 1994). The similarity-attraction paradigm provides theoretical support for the distinctive role played by P-G fit as contrasted to need-fulfillment approach (such as the N-S fit) (Adkins et al., 1996). That is, in the case of P-G fit, individuals are expected to have positive attitudes by virtue of interacting with similar others, rather than as a result of the organization or the job providing opportunities for need or value fulfillment.

While different aspects of the environment may be interrelated, there is conceptual and empirical support for distinguishing among various types of fit (Cable and DeRue, 2002; Kristof, 1996) and for suggesting that those different types of fit simultaneously influence work behaviors such as turnover and performance (e.g., Kristof-Brown et al., 2005).

The way we operationalize *fit* in this research is what Venkatraman (1989) describes as *fit as matching,* under which fit is "theoretically defined match between two related variables" (Venkatraman, 1989, p. 430). Models utilizing a match between two variables or states are commonly employed in information systems research (Klein et al., 2009). In the organizational behavior literature, *fit* is generally viewed from the perspective of *fit as matching.* Specifically, that body of literature is normally concerned with person-environment (P-E) fit, where P is some characteristic of the individual (such as an individual's personal values) and E is some feature of the work environment (such as organizational values) (Ostroff et al., 2005).

CHAPTER 2: SOCIAL MEDIA USER-SYSTEM FIT: A CONCEPTUAL MODEL

> In this chapter we develop our theoretical model of social media user-system fit, and we derive hypotheses regarding the relationships between User-Expression Fit, Needs-Supplies Fit, Demands-Abilities Fit, User-Group Fit on the one hand, and between User-System Fit on the other hand. We also hypothesize regarding the relationship between User-System Fit and social media use.

A MODEL OF SOCIAL MEDIA USER-SYSTEM FIT

The research model is shown in Figure 11. It postulates that individuals use social media mainly for 'personal' reasons. Specifically, an individual will use a technology when he/she perceives congruence between that technology and his/her needs and values, whether or not these are related to performance. By adapting the various concepts of fit discussed earlier to the context of social media use, we aim to provide a theoretically sound explanation for this important phenomenon. Our model suggests that user-system fit, which we define as *the perceived overall congruence between the user and the system,* will be positively associated with social media use. Perceived user-system fit, in turn, comprises four dimensions representing various facets of fit: user-expression fit, needs-supplies fit, demands-abilities fit, and user-group fit. In the following sections, we provide definitions for the constructs in the model and discuss the relationships among them. In deriving the hypotheses regarding the relationship between perceived user-system fit and its dimensions, we are encouraged by Edwards and Bagozzi's (2000) assertion that the relationships in the measurement model, and not only those in the structural model, should be viewed as hypotheses that ought to be assessed.

Figure 11. Social Media User-System Fit Model
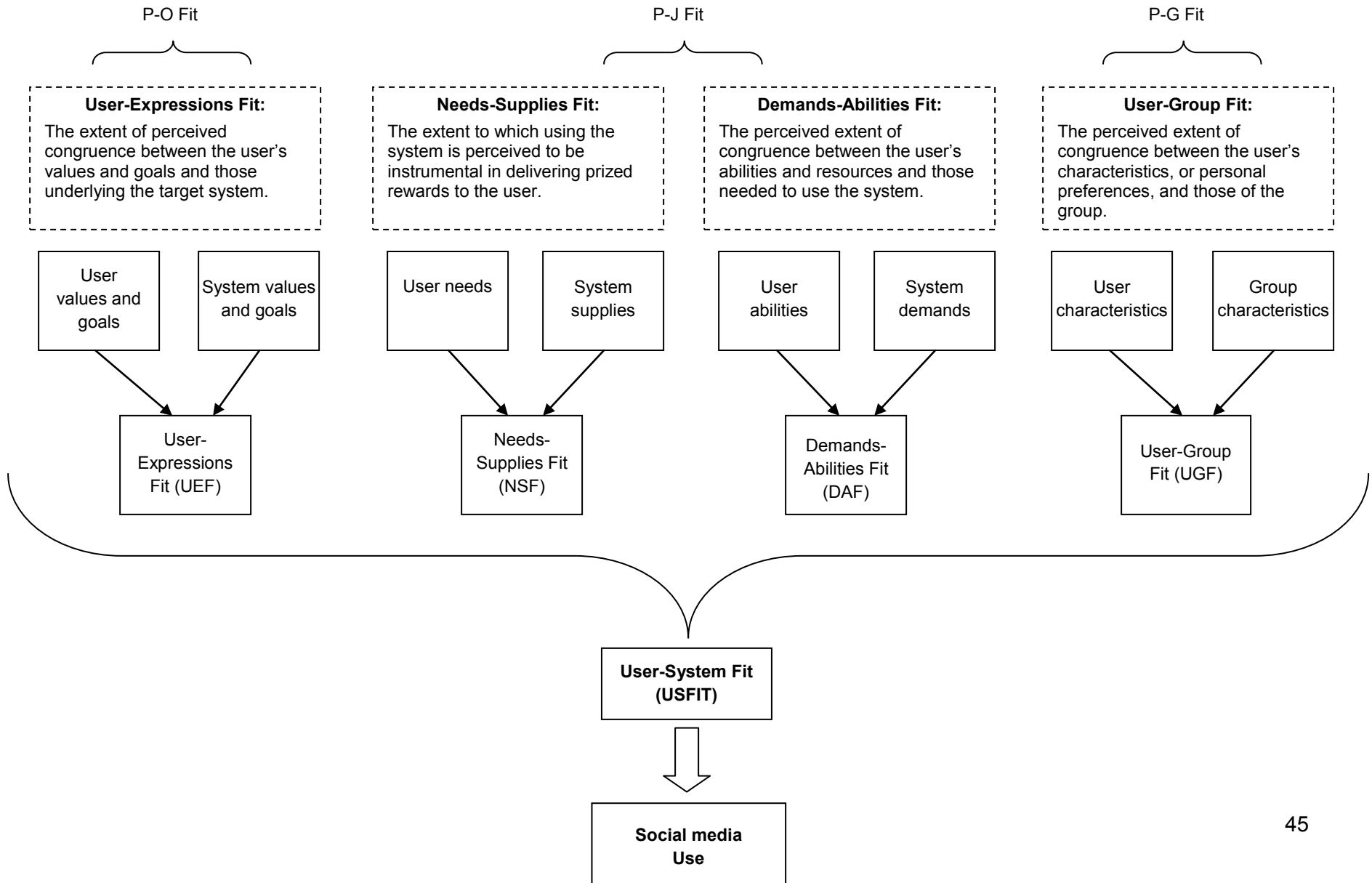
User-Expressions Fit (UEF)

In the context of social media use, we suggest that user-expression fit is analogous to person-organization fit, and we define it as *the degree of perceived congruence between the user's values and goals and those underlying the technology*. We borrow the term 'expressions' from Markus and Silver (2008) who define 'symbolic expressions' as the "*communicative possibilities of a technical object for a specified user group*" (p. 623). They argue that messages communicated include those related to 'technical objects' and others that are "pertaining to 'designers' or 'users' goals and values". It is in the latter type of messages that we are interested in with the UEF type of fit. In the social media context, an example of such values would be the values of freedom and empowerment that may be felt by whom Gillmor (2004) calls 'grassroots journalists' who, he argues, are using tools such as blogs to break out from the monopoly long enjoyed by media giants.

The importance of compatibility between values is underscored by the argument that not only do values guide a person's choices and actions, one's values also determine what will be considered rewarding (Locke, 1991). Some studies have conceptualized the 'compatibility' construct in a manner that is related to the user-expression dimension of fit (e.g., Compeau et al., 2007; Karahanna et al., 2006). Compatibility between values has been found to be positively associated with outcomes such as job satisfaction and organizational commitment (Verquer et al., 2003) in addition to citizenship behavior (Cable and DeRue, 2002). Thus our first hypothesis:

> H1: Perceived user-expression fit will be positively associated with perceived user-system fit.

Person-Job Fit

As mentioned above, Kristof (1996) defines a job from the viewpoint of tasks. We carry out this definition to the user-system relationship from the perspective that using the system can be considered a task. According to this view, and based on Edwards's (1991) conceptualization of fit as needs-supplies fit and demands-abilities fit, we adapt these conceptualizations to the social media use context and define needs-supplies fit as *the degree to which using the system is perceived to be instrumental in delivering prized rewards to the user*, while we define demands-abilities fit as *the perceived degree of congruence between the user's abilities and resources, and those needed to use the system*.

Needs-Supplies (NSF) Fit

In addition to extrinsically motivated behavior, where an individual performs a behavior to attain a specific valued outcome, theories on motivational needs (e.g. Alderfer, 1972; Hogan and Warrenfeltz, 2003; Maslow, 1954; McGregor, 1957) argue that human beings have a wide spectrum of needs, and that the satisfaction of those needs is essential to psychological well being. A closely related stream of research studies intrinsic motivation, where the reinforcement for performing a task or an activity comes from nothing more than the task or activity itself, regardless of any extrinsic outcomes (e.g., Davis et al., 1992; Deci and Ryan, 1991; White, 1959).

Research appears to support the importance of needs in general, and of needs-supplies fit in particular. Baard et al. (2004) showed that employees' experiences of satisfaction of the needs for autonomy, competence, and relatedness in the workplace predicted their performance and well-being at work. Cable and

Edwards' (2004) results demonstrate that psychological need fulfillment plays unique and influential roles in affecting work attitudes. Also, in a meta-analysis of the consequences of individuals' perceived fit at work, Kristof-Brown et al. (2005) found that needs–supplies fit has a strong impact on individual attitudes and behavior.

In the social media context, evidence suggests that individuals may adopt various social media applications to satisfy needs that include enjoyment (e.g. von Hippel and von Krogh, 2003; Hsu and Lin, 2008), reputation (e.g., Hsu and Lin, 2008; Parameswaran and Whinston, 2007), altruism (e.g. Hsu and Lin, 2008; Okoli and Oh 2007; Parameswaran and Whinston, 2007), belonging (e.g. Glassberg et al., 2004), and achievement (e.g. Okoli and Oh 2007). Needs by themselves do not, however, completely explain why an individual would perform a particular behavior in a specific context (Latham, 2007; Latham and Pinder, 2005). The concept of fit becomes instrumental here in that it accounts for the interaction between the person and the environment, or the user with the system, providing the opportunity for need fulfillment. As Locke (1976) noted, in the context of jobs, *"it is the degree to which the job fulfills or allows the fulfillment of the individual's needs that determines his degree of job satisfaction"* (p. 1303). Similarly, the theory of work adjustment suggests that job satisfaction represents an individual worker's evaluation of the degree to which his or her needs are met by the job (Dawis and Lofquist, 1984). We thus expect a positive relationship between needs-supplies fit and perceived user-system fit.

H2: Perceived needs-supplies fit will be positively associated with perceived user-system fit.

Demands-Abilities Fit (DAF)

DAF fit may be described as the 'flip side' of the NSF. That is, while NSF deals with the extent to which environmental supplies meet individual needs, DAF accounts for the individual's skills meeting environmental needs (Kristof, 1996; Kristof-Brown et al., 2005).

Applying Edwards' (1991) definition of DAF fit to the social media adoption context, this type of fit reflects the extent at which individual's abilities and resources are perceived as commensurate with those required to use the system. This concept is thus similar to the concept of perceived behavioral control (PBC). According to Ajzen (1991), PBC reflects beliefs concerning access to the resources and opportunities that are needed to perform a behavior. Two components are included in this construct (Taylor and Todd, 1995b). The first component is "facilitating conditions" (Triandis, 1980), or the availability of resources needed to perform a behavior while the second component is self-efficacy, which reflects an individual's self-confidence in their ability to perform a behavior (Bandura, 1986). Empirical evidence in IS indicates a positive relationship between ability and access to required resources and IT adoption and use (e.g., Bhattacherjee et al., 2008; Plowman and Goode, 2009; Taylor and Todd, 1995a, 1995b). Hence, we expect a positive relationship between demands-abilities fit and perceived user-system fit.

> H3: Perceived demands-abilities fit will be positively associated with perceived user-system fit.

User-Group Fit (UGF)

UGF fit reflects *the degree of perceived congruence between the user's characteristics and personal preferences with those of the group*. Evidence from empirical research in the contexts of both more traditional online communities of practice (e.g. Wasko and Faraj, 2005) and social media social networks (e.g. Boyd and Ellison, 2007; Cox, 2008) indicates that individuals use social networking web sites because of shared interests with other members of that network. Even in such vast communities such as Facebook or MySpace, users 'cluster' in groups or clubs, and sub-clubs (Lai and Turban, 2008). It could be argued that this social behavior is related to what Kelman (1974) calls internalization, which refers to taking action as a result of congruence between one's own and a group's shared values or goals. Internalization occurs pertaining to one's membership in specific cultural group(s) through processes of socialization and psychological development (e.g. Higgins, 1991). We thus expect a significant relationship between user-group fit, and perceived user-system fit.

> H4: Perceived user-group fit will be positively associated with perceived user-system fit.

User-System Fit (USFIT)

We define perceived user-system fit as *the perceived overall congruence between the user and the system*, and propose that it is a multidimensional construct comprising the four dimensions of user-expression fit, needs-supplies fit, demands-abilities fit, and user-group fit. Recent research has shown that multidimensional

constructs are helpful in explaining higher-order concepts spanning their component dimensions (Serva et al., 2005). In contrast to a collection of interrelated unidimensional constructs, "the dimensions of a multidimensional construct can be conceptualized under an overall abstraction, and it is theoretically meaningful and parsimonious to use this overall abstraction as a representation of the dimensions" (Law et al., 1998, p.741). As reflected in the hypotheses above, rather than hypothesizing a relationship between each facet of fit and social media use, we theorize that the four types of fit - which tap into different facets of fit between the user and the system - will be positively associated with perceived user-system fit, such that an increase in any of the four dimensions of fit is expected to lead to better perceived user-system fit. As perceived user-system fit comprises the four dimensions of fit, we hypothesize:

> H5: Perceived user-system fit will be positively associated with social media use.

The model developed and tested in this paper addresses both productivity-related and personal motivation through the construct of needs-supplies fit. The construct also captures social dimensions, including the need to relate (e.g., Ryan & Deci, 2000). Another important social dimension that our model captures is the issue of what Kelman (1974) calls 'internalization,' which "refers to acting out of congruence between one's own and a group's shared values or goals" (Bagozzi, 2007, p. 248). This important dimension is captured in our model through the construct of user-group fit. Finally, there is the dimension of what Kelman (1974) calls 'identification,'

which refers to 'influence based on a self-defining relationship a person has with another person or group' (Bagozzi, 2007, p. 248). The issue of identity is captured in our model through the construct of user-expression fit.

In addition to explicitly focusing on fit, our model addresses fit in a comprehensive manner by accounting for both complementary fit - where the environment meets the individual's needs - and supplementary fit - where there is a similarity between the individual's characteristics and that of the environment (Kristof-Brown et al., 2005). We believe that the user-system fit model may be helpful in furthering our understanding of IT acceptance.

In sum, in our study of social media user-system fit, the following hypotheses are proposed and tested through a survey of undergraduate business students at a large Canadian university:

H1: Perceived user-expression fit will be positively associated with perceived user-system fit.

H2: Perceived needs- supplies fit will be positively associated with perceived user-system fit.

H3: Perceived demands-abilities fit will be positively associated with perceived user-system fit

H4: Perceived user-group fit will be positively associated with perceived user-system fit.

H5: Perceived user-system fit will be positively associated with Web 2.0 use.

CHAPTER 3: RESEARCH METHOD

In this chapter we present our research approach and sampling strategy. This is followed by discussing the measurement instruments and then the data collection.

RESEARCH APPROACH AND SAMPLING STRATEGY

The research approach chosen for this dissertation is a cross-sectional study of users of social media. By 'user', we mean someone who actually uses (or who have ever used) social media, without placing limitations on the extent of use (e.g. avid user or occasional user), the type of user (e.g., whether organizational user or leisure one), or type of task (e.g. customer relationship management or just connecting with friends). Enough variability across types of users and tasks is important in order to be able to derive useful conclusions regarding the fit between various users' needs, values, and capabilities on the one hand, and the supplies, underlying values, and demands of social media applications on the other.

Our unit of analysis is the individual user of social media. Undergraduate students at Concordia University – taking an introductory course in management information systems - were used to represent the population under study. The student population at Concordia is varied in terms of ethnicity, age, and gender and seems to largely use social media applications. Furthermore, many of the students either own their own small business or study on a part-time basis while working on a full - or part-time basis. For all these reasons, this group of young adults represents an appropriate population for the proposed study.

Prior to undertaking the survey, a number of interviews were conducted with three objectives in mind. First, to provide a preliminary (face) validation of the

model's constructs and their relationships. Second, to allow for the possible identification of more variables to be included in the research model and possible refinements for the framework. Lastly, to identify pertinent social media related needs and develop an initial set of items to measure the various constructs. A semi-structured interview approach was used to increase the comprehensiveness of the data collected and make the data collection more systematic (Patton, 2001). The interview guide is presented in Appendix 2.

Interviews from a diverse population were needed to garner the rich set of motivations underlying social media adoption and use. We have conducted 33 interviews with users of different social media technologies. It has been suggested that the number of interviews to be conducted be determined according to the concept of redundancy of information (Lincoln and Guba 1985) or saturation of data (Lapointe and Rivard, 2007). These concepts indicate that no more interviews are needed when the researcher determines that no new insight is provided, or that the interviewees are repeatedly reporting the same information. In the last few interviews, we believed we had reached the saturation point. It is worth noting, however, that with such rich and diverse systems as social media applications, it cannot be claimed that we have reached a point of total redundancy, as the subjects' motivations to use those applications, and their usage behaviors, were considerably varied. The interviewees were varied in terms of age, gender, ethnicity, usage behavior, applications used, education, and employment status.

Interviews lasted 49 minutes on average, ranging from 29 minutes to 74 minutes. They were all digitally recorded. Once all interviews have been transcribed verbatim, an analysis was conducted to search for common patterns and unique features. We have performed our analysis following an analytic induction approach

where a researcher starts with propositions or theory-based hypotheses and – based on the data- verifies these theories and propositions. Based on the analysis, we have found preliminary support for our model's constructs and relationships, and we have come up with an initial set of items for measurement. Appendix 3 shows the dimensions revealed from the interviews and a sample of the related quotes.

MEASUREMENT INSTRUMENTS DEVELOPMENT

For the most part - while guided and inspired by existing instruments and by the interviews – new measures have been developed for this study. The main reason was that while validated measures for various types of fit were generally available, they were generic in nature, and we needed more specific items to tap into the rich and diverse nature of social media. Measures from Cable and DeRue (2002) inspired the development of measures for needs-supplies fit and its dimensions. The items used by Cable and DeRue (2002) include "There is a good fit between what my job offers me and what I am looking for in a job" and "The attributes that I look for in a job are fulfilled very well by my present job" (see Appendix 4 for items found in the literature). While initially guided by these items, we needed to develop items that not only reflected social media (rather than 'job') context, but that also comprised actual, specified needs – based on the literature and on the interviews - rather than a generic notion of needs.

Needs-supplies fit was conceptualized in this study as a multidimensional construct. A construct is multidimensional when it refers to several distinct but related dimensions treated as a single theoretical concept (Law et al., 1998). Multidimensional constructs may be distinguished from unidimensional constructs,

which refer to a single theoretical concept (Hattie, 1985), and from multiple dimensions regarded as distinct but related concepts rather than a single overall concept (Edwards, 2001). The relationships between a multidimensional construct and its dimensions signify associations between a general concept and the dimensions that form or constitute the construct, rather than causal forces between separate conceptual entities (Law et al., 1998).

A multidimensional construct may either exist at a deeper level or at the same level than its dimensions. If it exists at a deeper level, then this is a case of a 'latent model', where the latent construct leads to its various dimensions. This is because these dimensions are in fact different ways through which the construct is realized (Law et al., 1998). On the other hand, the multidimensional construct may be at the same level than its dimensions. In such case of the 'aggregate model', the multidimensional construct is formed from its dimensions (Law et al., 1998). We believe the latter case is more closely representative of our conceptualization of needs-supplies fit. In this case – when the multidimensional construct is at the same level than its dimensions - dimensions can be combined algebraically to form an overall representation of the construct. Law et al. (1998) provide a good example of an aggregate multidimensional construct. That construct, "motivational potential of a job" (Hackman and Oldham, 1976), is defined as a multidimensional construct, with the degree of skill variety, task autonomy, task significance, task identity, and the amount of feedback as its five dimensions. Law et al. (1998) assert that job motivating potential as defined by Hackman and Oldham (1976) is obviously an aggregate model. They argue it does not stand to reason to represent that construct as a latent model because it is conceptualized as an outcome of job characteristics. It is illogical, they suggest, to say that a job is motivating and hence it has more job

characteristics (e.g., task autonomy). Quite the opposite, it makes sense to argue that a job enjoys rich job characteristics (e.g., task autonomy) *and so* it is motivating. In a similar vein, it stands to reason to argue that when an individual perceives that social media fits their values, needs, and capabilities, and that it is used by similar others, then the individual would perceive an overall fit with social media. It would be rather odd, on the other hand, to argue that *as a result of* the individual perceiving an overall fit with social media, that they believe, for example, that social media will satisfy their specific need for achievement, or their need for self esteem.

Unlike reflective measures, where a change in the construct affects the underlying measures, formative constructs work differently: changes in the formative measures cause changes in the underlying construct (Jarvis et al., 2003), with each measure capturing a different aspect of the construct (Petter at al., 2007). While both formative and reflective are useful in modeling relevant constructs, Petter et al. (2007) criticized what they believe is an over-usage of reflective constructs in IS research. That is, they believe numerous constructs that are specified as reflective are in fact either formative or mixed. Such misspecification, they argue, may lead to research results of questionable validity.

Formative measurement differs from reflective measurement at two levels: theoretical and nomological (Cenfetelli and Bassellier, 2009). At the theoretical level, formative measurement enables the researcher to model a construct from a diverse collection of observable phenomena. Indeed, unlike reflective measures, removing any one item from formative indicators may be problematic, as each item taps into a different dimension of the construct (Petter et al., 2007). If we consider needs-supplies fit, we find that formative measures enable us to tap into various facets of usefulness, like bringing together pieces of a puzzle to form a comprehensive view

of what constitutes usefulness in the individual's perception. These facets include psychological needs (including intrinsic motivation) and extrinsic motivation (including but not limited to productivity needs).

At the nomological level, formative measurement "*facilitates the study of the causes and effects of a construct by bringing the analysis of potentially disparate indicators to the level of a holistic, single construct*" (Cenfetelli and Bassellier, 2009, p. 690). Using formative measurement enables parsimony through multiple indicators within a theoretical model with a single construct, thus allowing the researcher to examine a single structural effect rather than multiple observable indicator effects (Cenfetelli and Bassellier, 2009).

An example of formative constructs in the IT literature is provided by Mathieson et al.'s (2001) perceived user resources construct. Described by Petter et al. (2007) as a properly specified formative construct, perceived user resources is operationalized as a formative construct with indicators that include various resources needed to use a software package, such as time, financial resources, and knowledge resources[2]. While an increase in the magnitude of these indicators will cause an increase in the magnitude of the perceived user resources construct, it does not necessarily follow that an increase in the construct will result in an increase in any of the aforementioned resources (Cenfetelli and Bassellier, 2009).

On the other hand, we suggest that a good example of a reflective construct is 'supervisee trust' in Atuahene-Gima and Li's (2002) study. This construct is measured with reflective indicators that include "my supervisor and I have a sharing relationship; we freely share our ideas, feelings, and hopes about the work we do"

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[2] It is important to note here that as outlined by Cenfetelli and Bassellier (2009), a construct is an abstraction of an underlying concept. It is the nature of the indicators that is reflective or formative.

and "I can freely talk to him/her about difficulties I am having at work and know that he/she wants to listen." As is clear in these indicators, one can argue that it is the feeling of trust that led the individual to 'share ideas' with, and 'talk freely' to his/her supervisor. In other words, trust enables such sharing and openness; they are a reflection or an indication of trust. Conversely, it does not seem plausible to argue that the ability to talk freely to the supervisor causes trust, which would be the case if that construct were conceptualized as formative.

While we are not using formative indicators for the dimensions of needs-supplies fit, we are using formative dimensions. The dimensions of an aggregate construct may be compared to formative measures. However, while formative measures are observed variables, the dimensions of an aggregate construct are themselves constructs considered as components of the general construct they collectively comprise (Edwards, 2001).

User-expression fit measures were guided by instruments used by Cable and Judge (1996) and Cable and DeRue (2002). Judge and Cable (1996) defined person-organization fit as values congruence, as is widely accepted in the literature (e.g. Kristof, 1996; Kristof-Brown et al., 2005), and measured it with three items. A sample item is "do you think the values and 'personality' of this organization reflect your own values and personality?" Cable and DeRue (2002) also focused on value congruence and measured person-organization fit using three items. A sample item is "My personal values match my organization's values and culture." Such measures appear to reflect our user-expression construct, and are also consistent with our approach in this study to use direct, rather than commensurate measures, as will be discussed later. As was the case with measures for needs-supplies fit, the measures were adapted to focus on social media rather than organizations.

We based our demands-abilities fit items on research by Saks and Ashforth (1997) and by Cable and DeRue (2002). Saks and Ashforth (1997) developed four items to measure person-job fit, one of which reflects demands-abilities fit[3]. The item is "to what extent do your knowledge, skills, and abilities match the requirements of the job?" Cable and DeRue (2002) used items modified from research performed by Cable and Judge (1996). However, by examining the original measures from Cable and Judge (1996) we have found that the modified measures more closely suited our needs. Furthermore, the modified instrument displayed better reliability scores than the original measures. A sample item is "The match is very good between the demands of my job and my personal skills."

Finding validated measures for user-group fit was especially challenging. This is partly because research about person-group fit is still fledgling (Kristof-Brown et al., 2005) and also because we are interested in user-group fit as value fit, whereas much of the literature studied person-group fit as personality fit or demographic fit. Our search resulted in two studies upon which we may build our user-group measure. Hobman et al. (2003) used an instrument comprising six items to measure perceived individual dissimilarity to the team across informational, visible, and value dimensions. We benefited from the two items they developed for value dissimilarity. One of the items is "I feel my work values and/or motivations are dissimilar to other group members." We also made use of 'fit cues' used in experiments conducted by Kristof et al. (2002). The cues included "Your coworkers are all about your age and have similar interests. You also have a good working relationship with your coworkers, often socializing together outside of work."

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[3] A considerable number of studies conceptualized Person-Job fit as Demands-Abilities fit, thus resulting in confounding these two types of fit (Cable and DeRue, 2002).

Perceived User-System fit was conceptualized as the combination of the four facets of fit described above (i.e., User-Expression Fit, Needs-Supplies Fit, Demands-Abilities Fit, and User-Group-Fit), and we operationalized it as a third-order multidimensional aggregate construct. This operationalization is representative of our conceptualization of the construct and more in tune with the suggested integrative way by which researchers should view various types/facets of fit (e.g., Cable and Edwards, 2004; Kristof, 1996).

It is worth noting that, to measure the various types of fit, we have used direct measures of fit, that is, measures of perceived fit that rely on an individual's direct assessment of the compatibility between himself/herself and the environment (Kristof-Brown et al., 2005). When IS researchers measure fit between two variables, a commonly used technique is to compute a difference score. However, such scores suffer from shortcomings related to reliability, validity, dimensionality, and interpretability (Klein et al., 2009). One way to avoid those problems is to use direct measures of difference (Klein et al., 2009). Another advantage of direct assessment of fit is that it *"allows the greatest level of cognitive manipulation because the assessment is all done in the head of the respondents, allowing them to apply their own weighting scheme to various aspects of the environment"* (Kristof-Brown et al., 2005, p. 291). In addition, in a meta-analysis of 21 studies on person-environment fit, Verquer et al. (2003) found that direct assessments of fit were more strongly related to work attitudes than other approaches of measuring fit. Similar results were also found by Kristof-Brown et al. (2005).

Finally, we have measured Use using self-reported measures. Self-reported use measures, including frequency and duration of use, are widely used in information systems research (e.g., Delone and McLean, 2003), and we have thus included

questions that tap into frequency of access, duration of access, and frequency of posting to social media websites. However, given the richness of usage behaviors associated with social media, it was important to also include measures that capture as many of these usage behaviors as possible. We have thus also included questions about whether respondents use social media for work, study, and information collection (to capture the "productivity" side of use), and also for pleasure and keeping in touch (to capture the leisure or "fun" side of use).

After the initial set of items was developed, a card sorting exercise was carried out (Moore and Benbasat, 1991), using the help of 15 participants: 14 PhD students in MIS and management, and one MIS professor. Seven participants were asked to perform the exercise on the main constructs and the other eight focused on the sub-dimensions. Modifications were carried out on some items based on the exercise, and some items were removed. Appendix 5 shows the results of the coders' analysis of the initial items and dimensions.

The results of the card sorting exercise lead to 13 items being modified, 3 items moved to a different dimension, 24 items deleted, and, on the basis of coders' suggestions, 2 new items were added. Lastly, one dimension of User-Expression Fit, namely "professionalism" was removed all together. Appendix 6 lists the constructs under study, their dimensions and respective items after the changes that were made on the basis of the card sorting exercise. As a result of the card sorting exercise, Needs-Supplies Fit comprised 12 dimensions and 43 items to measure them, User-Expression Fit comprised 4 dimensions and 14 items to measure them, User-Group Fit comprised 2 dimensions and 7 items to measure them, while demands-Abilities Fit was measured by 6 items.

A pre-test was then carried out to identify any difficulties in the instrument. Five participants who did not take part in the card sorting exercise contributed: two PhD students (MIS and finance), one business undergraduate student, and two recent graduates (accounting and engineering). The participants were asked to complete the questionnaire while providing their comments about the wording of items. Some minor modifications were made based on the comments received from participants.

The next step was a pilot study, which was carried out with the participation of 151 undergraduate students enrolled in the Introduction to Management Information System course during the summer 2011 semester. Following Pinsonneault and Kraemer (1993), the pilot study aimed at testing items' wording, questionnaire flow and format with respondents representative of the target population. As shown in Table 3, the sample was rather evenly divided between males and females and the majority of respondents were between 20 and 29 years of age. Access frequency and posting frequency were each measured with a 9-point ordinal scale, with "1" indicating no access/posting and "9" indicating many times a day. Access duration was measured using a 6-point ordinal scale with "1" indicating less than 15 minutes a day and "6" indicating more than four hours a day.

Exploratory factor analysis was performed and although a few items were not loading properly on their theoretical dimension, no items were modified or removed, as the ratio between the number of observations to our total number of items was only 2:1, much less than the 5:1 minimum ratio suggested by Hair et al. (1998).

Table 3. Pilot Study Descriptive Statistics (n = 151)

Item		Min	Max	Mean	Standard Deviation	Count
Usage	Access Frequency	1	9	6.48	1.81	141
	Posting Frequency	1	9	4.91	2.40	137
	Access Duration	1	6	2.12	1.27	137
				Category	Percentage	Count
Age Distribution				Under 20 years old	6.6%	10
				20 to 29 years old	81.5%	123
				30 to 39 years old	8.6%	13
				40 to 49 years old	3.3%	5
Gender				Male	45.7%	82
				Female	54.3%	69

CONTROL VARIABLES AND GROUP COMPARISONS

A number of control variables are suggested in the present research as potentially playing a role in social media adoption and use: *personal innovativeness in the domain of IT, age,* and *IT experience.* Agarwal and Prasad (1998) conceptualize *personal innovativeness in the domain of IT* (PIIT) as a trait, and define it as "the willingness of an individual to try out any new information technology" (p. 206). The authors suggest that individuals with higher PIIT are more prepared to take risks, and hence may be expected to develop more positive intentions toward the use of

an innovation - given the same level of perceptions - compared to a less innovative individual. PIIT was found to moderate the relationship between perceptions about a new IT (compatibility) and intention to use a new IT (Agarwal and Prasad, 1998). Agarwal and Karahanna (2000) found that individuals who have higher PIIT are likely to be more inclined to experience cognitive absorption. As social media is a relatively new technology, it is possible that PIIT exerts an influence on usage decisions.

For *age*, Venkatesh et al. (2003) found that performance expectancy was more significant, as a determinant of intention, for younger workers, while the effect of effort expectancy on intention was more significant for older workers. Morris and Venkatesh (2000) found that attitude had a stronger influence on technology usage decisions for younger workers, while older workers were more strongly influenced by subjective norm and perceived behavioral control.

For *IT experience*, research found that experience with using IT had an influence on adoption. For example, Venkatesh et al. (2003) found that IT experience moderated the relationship between effort expectancy and intention, so that effect of effort expectancy on intention decreased with increased experience. In another study, Parthasarathy and Bhattacherjee (1998) found that, for experienced users, ease of use was not a significant predictor of usage behavior. It would thus be of value to compare our model across experienced versus novice users.

In addition to the previous control variables, it was believed worthwhile to compare between subsamples according to gender and ethnic origin. In prior studies, *gender* was found to moderate the relationships between attitudes and perceptions towards IT, and behavioral intentions. For example, Venkatesh et al. (2000) found that, while women were influenced by attitude, subjective norm, and perceived behavioral control, men were influenced only by attitude. Venkatesh and

Morris (2000) found that, compared to women, men gave more consideration to perceived usefulness, when making their decisions regarding the use of a new technology. On the other hand, women gave more consideration to perceived ease of use and for subjective norm, compared with men. Venkatesh et al. (2003) found that the relationship between performance expectancy and intention was more significant for men, while the effect of effort expectancy on intention was more significant for women.

Finally, given that our sample is multi-ethnic, we have gathered information about the geographical regions of origin for our respondents with the aim of conducting some analysis to see if there were differences between sub-groups classified according to geographical origin. Finding the best ways to represent cross-cultural data is not an easy task (Uleman and Lee, 1996). However, one can take guidance from Hofstede's work on culture differences, an effort that is considered a benchmark for that stream of research (Triandis, 2004). Among other contributions, Hofstede (2001) identified a number of dimensions possibly underlying culture; the most important among them Collectivism versus individualism (Triandis, 2004). We will conduct multiple group comparisons based on that measure.

The final questionnaire is presented in appendix 7.

DATA COLLECTION

Since our target population is web savvy, a web-based survey has been used. It has also been reported that Web-based surveys tend to require less time and financial resources, in addition to having relatively shorter response time and taking less effort to ensure the accuracy of data, because of automatic data entry

(Yun and Trumbo, 2000). Instructors for different sections of the "Introduction to Management Information Systems" course during the fall 2011 semester were asked to forward our invitation to complete the survey to their students. The message sent by email – presented in Appendix 8 - contained a brief introduction to our research project and asked the students to follow a link to take the survey. One bonus mark was offered to students as an encouragement to contribute. Despite the fact that they were promised confidentiality of their answers, given that they needed to provide their student identification numbers for being awarded their bonus mark, a few students chose to take the survey but without benefiting from the bonus mark[4].

Total enrollment in Bachelor of Commerce Program in 2010-2011 was of 6,202 students, out of which 48% are females. The survey invitation was sent to 940 undergraduate students enrolled in the "Introduction to Management Information Systems" course, and 716 responses - or 76% response rate - were received.

A number of responses had to be excluded, either because they the survey was incomplete or because they were non-users, and so they have not responded to the questions measuring the dependent variables. A number of responses were also excluded because, after having visually inspected the data, it appeared that some respondents had provided the same answer to all or most of the questions (for example, "strongly agree") including reverse-coded questions. As a result, data analysis was performed using 643 responses.

As can be seen from Table 4, 52% of our respondents were females and more than 91% were between 20-29 years old. 66% of respondents work either on a full-time or part-time basis. As with the pilot study, Access Frequency (how

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[4] Students had the option to complete the survey anonymously or to provide their student ID# so as to get their bonus mark.

frequent the respondent access social media) and Posting Frequency (how frequent the respondent actually posts something on social media, such as "tweeting" on Twitter or "status update" on Facebook) were each measured on a 9-point ordinal scales, with "1" indicating no access/posting and "9" indicating many times a day[5]. Access Duration, on the other hand, was measured using a 6-point ordinal scale with "1" indicating less than 15 minutes a day and "6" indicating more than four hours a day[6]. Finally, Time First Use (referring to the time the respondent first started using social media) was measured on a 10-point scale, with "1" indicating less than three months ago, and "10" indicating more than 5 years ago[7].

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[5] 1 = "I no more access social media" ("Never" for the posting question); 2 = "Less than once a month"; 3 = "Once a month"; 4 = "A few times a month"; 5 = "Once a week"; 6 = "2-3 times a week"; 7 = "Almost every day"; 8 = "Once a day"; 9 = "Many times a day".
[6] 1 = "Less than 15 minutes"; 2 = "15 minutes to less than 30 minutes"; 3 = "30 minutes to less than one hour"; 4 = "One hour to less than 2 hours"; 5 = "2 hours to less than 4 hours"; 6 = "More than 4 hours".
[7] 1 = "Less than 3 months ago"; 2 = "3 to less than 6 months ago"; 3 = "6 to less than 9 months ago"; 4 = "9 month to 1 year ago"; 5 = "1.5 years ago"; 6 = "2 years ago"; 7 = "3 years ago"; 8 = "4 years ago"; 9 = "5 years ago"; 10 = "More than 5 years ago".

Table 4. Sample Descriptive Statistics

Item	Mean	Standard Deviation	
Time First Use	8.26	1.57	
Access Frequency	7.72	1.64	
Posting Frequency	5.66	2.142	
Access Duration	2.14	1.23	
	Category	**Count**	**Percentage**
Age Distribution	Under 20 years old	41	5.73%
	20 to 29 years old	655	91.48%
	30 to 39 years old	18	2.51%
	40 to 49 years old	2	0.28%
Gender	Male	369	51.54%
	Female	347	48.46%
Work Profile	Full Time	83	11.59%
	Part Time	390	54.47%
	Does Not Work	243	33.94%
Ethnicity	Collectivistic Culture (e.g., East Asia)	298	41.62%
	Individualistic Culture (e.g., North America)	418	58.38%

CHAPTER 4: RESULTS

This chapter covers the steps we have taken to test our model, in addition to the results of this test. We start with conducting a confirmatory factor analysis to confirm the constructs and dimensions initially envisioned, and then we examine the psychometric properties of our items, and test for construct validity, both convergent and discriminant. This is followed by analyzing the structural model to test our hypotheses.

As a first step, we have conducted principal component analysis (PCA), which is used to "resolve a set of correlated variables into a smaller group of uncorrelated or orthogonal factors" (Gefen et al., 2000). We have run the PCA for a number of rounds. After each round, we removed the items that did not have the minimum accepted loading of 0.4 on any factor (Hair et al., 1998) or the items who cross-loaded on a number of factors. In addition to the removal of a number of items, the PCA exercise also lead us to remove three dimensions: Achievement and Enjoyment (from the Needs-Supplies Fit construct), and Morality (from the User-Expression Fit construct), because their items loaded indiscriminately on many factors. The exercise also resulted in merging a number of dimensions because their items loaded together on the same factor, and that we found, with hindsight, that it was also conceptually sound for them to load on the same factor, based on the content of their items. These dimensions (all from the Needs-Supplies Fit construct) are Belonging and Reputation, which were merged in the Acceptance dimension; Communication and Connection dimensions, which we merged in the Connection dimension; Curiosity and Information dimensions, which were merged in the Information dimension and Productivity and Professional Networking dimensions, which were merged in the Professional Networking dimension. Finally, Group-Values and Group-Interests were merged, making User-Group Fit a unidimensional

construct. It is also worth noting that Demands-Abilities Fit construct, which was initially viewed as unidimensional, was shown to have two dimensions, Tools Ability and Personal Ability. Table 5 shows the results of the factor analysis and the resulting dimensions and items to be tested, while Table 6 shows the descriptive statistics of all items, including range and skewness.

We used SmartPLS 2.0 (Ringle et al., 2005) to estimate the parameters in the outer and inner model –measurement model and structural model, respectively, in PLS terminology - using PLS path modeling. Our choice of PLS rather than covariance-based SEM tools was guided by Chin and Newsted's (1999) assertion that PLS path modeling is generally more appropriate for studies where the phenomenon investigated is new or changing, the model contains a relatively large number of manifest and latent variables, and were formative constructs are included in the conceptual framework. The phenomenon we are studying is relatively new and rapidly changing, and we have a rather complex model. In addition, our model comprises two higher-order constructs with formative dimensions as indicators.

Our model comprises a number of higher-order multidimensional constructs (e.g., User-System Fit) and their lower-order dimensions (e.g., Needs-Supplies Fit), and thus it is considered a hierarchical model (Wetzels et al., 2009). Such models can be specified in PLS path modeling through the repeated use of manifest variables (Tenenhaus et al., 2005). Specifically, a higher-order construct can be created through the specification of a construct that represents all the manifest variables (measurement items) of the underlying lower-order constructs (Wetzels et al., 2009).

Table 5. Items Loadings and Cross Loadings[8]

Item	NSF Connect	NSF Pro Networking	NSF Acceptance	NSF Benevolence	NSF Information	DAF Tool	UGF Group	UEF Privacy	NSF Safety	UEF Sincerity	DAF Personal	UEF Freedom
T3	0.8										0.136	0.128
T5	0.793	0.147			0.192	-0.116	0.105				0.113	
C2	0.774	0.121			0.162				0.12			
T6	0.751											0.129
C1	0.658	0.138	0.158									0.165
N3	0.186	0.726		0.261	0.112		0.146	0.153	0.133	-0.116		
N4	0.115	0.686	0.159	0.246			0.189		0.202			0.134
N1	0.152	0.676		0.131	0.294				0.155			
P5		0.616	0.211	0.126	0.122	0.168		-0.216		0.23		0.117
P6		0.6	0.19	0.123	0.138	0.23		-0.125		0.308		0.147
B3	0.106	0.192	0.784	0.114								0.102
B6	0.201	0.142	0.744		0.166		0.128			0.109		0.133
R7		0.141	0.611	0.337		0.17	0.152		0.172			
B2		0.102	0.604	0.201	0.188	0.318	0.256			0.157		0.106
U1	0.126	0.221	0.212	0.746	0.106	0.183			0.142			
U2	0.15	0.297	0.231	0.707	0.123	0.148	0.121				0.121	
U6		0.2		0.617	0.233		0.24			0.113		0.267
S4		0.183	0.298	0.588		0.31		0.107	0.26			
I2	0.249	0.264	0.181	0.128	0.717		0.103					
I10	0.252	0.29	0.142		0.704						0.142	
O4	0.168		0.116	0.219	0.659				0.142		0.176	0.203
DA8	0.105	-0.161	-0.13	-0.137		-0.855						
DA9	0.156		-0.155	-0.178		-0.838						0.126
GI5		0.13	0.142			0.214	0.813					
GV1	0.135	0.145	0.235	0.171			0.75				0.125	
GI2	0.13			0.266	0.297	-0.179	0.574					0.167
VP9						0.102	-0.121	0.766	-0.132			
VP12								0.697		0.267	-0.139	0.104
VP6	-0.14							0.669		0.172		
S1			0.102		0.175				0.851			
S2		0.174	0.148	0.153		0.102			0.84			
VS5								0.234		0.809		
VS4		0.132			-0.108			0.235		0.771		
DA2		0.123				-0.113	0.19				0.804	
DA1	0.245				0.183						0.792	
VF4	0.24	0.175		0.127	0.117	0.108		0.101				0.78
VF2	0.201	0.136	0.295		0.103				0.1			0.716
Eigen Value	3.49	2.91	2.59	2.45	2.04	1.98	1.95	1.83	1.77	1.61	1.51	1.48
R² (0.69)	.094	.079	.07	.066	.055	.054	.053	.049	.048	.044	.041	.04

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[8] The empty cells denote values equal to or less than 0.10, removed for readability.

Table 6. Items Descriptive Statistics

Item	Minimum	Maximum	Mean	Std. Deviation	Skewness
WU3	1	7	3.79	1.687	-.218
WU2	1	7	3.05	1.765	.381
LU1	1	7	6.28	1.068	-2.420
LU2	1	7	6.14	1.084	-1.971
WU1	1	7	2.91	1.788	.500
UF1	1	9	5.66	2.142	-.299
UF2	2	9	7.72	1.640	-1.376
VP6	1	7	2.32	1.322	1.214
VF4	1	7	4.39	1.375	-.460
T3	1	7	5.94	1.088	-1.257
VS4	1	7	3.12	1.382	.457
VS5	1	7	3.17	1.316	.276
VF2	1	7	4.25	1.354	-.464
T6	1	7	5.72	1.270	-1.231
B3	1	7	3.74	1.519	-.208
P5	1	7	3.60	1.650	-.048
B6	1	7	4.10	1.598	-.371
DA1	1	7	4.98	1.303	-.642
VP12	1	7	2.96	1.439	.575
I10	1	7	4.97	1.283	-.883
N1	1	7	4.30	1.428	-.429
T5	1	7	5.70	1.342	-1.239
P6	1	7	3.46	1.602	.139
VP9	1	7	3.27	1.435	.215
I2	1	7	4.62	1.403	-.551
DA9	1	7	5.75	1.399	-1.070
B2	1	7	3.37	1.600	.154
GI5	1	7	4.11	1.402	-.263
U6	1	7	4.08	1.359	-.398
DA8	1	7	5.74	1.488	-1.126
N3	1	7	4.04	1.508	-.280
U2	1	7	3.72	1.464	-.210
DA2	1	7	4.86	1.366	-.580
S1	1	7	4.44	1.608	-.509
GV1	1	7	4.11	1.312	-.327
N4	1	7	3.93	1.502	-.229
S2	1	7	3.99	1.587	-.181
R7	1	7	3.65	1.466	-.046
S4	1	7	3.25	1.483	.102
GI2	1	7	4.54	1.283	-.554
O4	1	7	4.76	1.432	-.700
U1	1	7	3.85	1.368	-.269
C2	1	7	5.40	1.480	-.995

MEASUREMENT MODEL

Our goal in this stage was to examine the psychometric properties of the measures by testing for reliability, convergent validity, and discriminant validity. To assess the psychometric properties of the measures, we specified a model containing only the first-order constructs; in this model we did not include structural relationships (Wetzels et al., 2009). This is because a measurement model is a relationship between constructs and their respective measurement items, unlike a structural model where we relate the independent variable(s) to the dependent variable(s) (Tenenhaus et al., 2005).

For reliability, defined by Gefen et al. (2000, p. 71) as the "[E]xtent to which a variable or set of variables is consistent in what it is intended to measure," we have relied on composite reliability, since Cronbach's alpha often severely under estimate the internal consistency reliability of latent variables in PLS path models (Werts et al., 1974). The composite reliability takes into consideration that indicators have different loadings, and may be interpreted similarly to Cronbach's alpha (Henseler et al., 2009). A value above 0.7 for internal consistency reliability is regarded as satisfactory in early stages of research, while values above 0.8 or 0.9 in more advanced stages are considered satisfactory (Nunnally & Bernstein, 1994). A value below 0.6, on the other hand, indicates a lack of reliability (Henseler et al., 2009). Composite reliability for all our constructs exceeded 0.7 and, for all but two constructs, exceeded 0.85.

The reliability of individual indicators (items) also needs also to be assessed, since the reliability of different indicators varies. It is suggested that the standardized outer loading (absolute correlation between a construct and its indicators) should be

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more than 0.7 (Henseler et al., 2009). Moreover, Churchill (1979) suggests the elimination of indicators if their outer standardized loadings are less than 0.4. The vast majority of our indicators had loadings of above 0.7 or above 0.8. Two indicators had marginal loadings of 0.7 and 0.68 (P5 and WU1, respectively, see Table 7 for the full item wording), and only one item had a loading of 0.59 (VP9), but that was still above the 0.4 threshold.

Convergent validity indicates that a set of indicators represents one and the same underlying construct (Henseler et al., 2009). To assess convergent validity, we have followed Fornell and Larcker (1981)'s suggestion of using the average variance extracted (AVE) as a criterion, with an AVE value of at least 0.5 indicating sufficient convergent validity. All of the constructs in our null model had AVE scores exceeding 0.5, with all but three scoring 0.61 or higher. Table 7 shows the composite reliability and AVE values, in addition to items' standardized outer loadings.

Table 7. Psychometric Properties in Null Model for First-Order Constructs*

Construct	Item	Loading*	CR	AVE
Work Use (WU)	I use social media mostly for work (WU1)	0.68		
	I use social media mostly for study (WU2)	0.71	0.77	0.53
	I use social media mostly for supporting causes (WU3)	0.78		
Leisure Use (LU)	I use social media mostly for staying in touch with friends or relatives (LU1)	0.87	0.85	0.73
	I use social media mostly for pleasure or leisure (LU2)	0.85		
Use Frequency (UF)	On average, how often do you access social media? (UF1)	0.89	0.88	0.79
	Typically, how often do you post to social media in general (for example, writing on a 'wall', commenting, 'tweeting', etc.)? (UF2)	0.89		
Demands-Abilities Fit (DAF)				
Tools Ability (T_Able)	My computer processing speed is too slow for my social media use needs (DA9)	0.93	0.83	0.62
	My Internet connection speed is too slow for my social media use needs (DA8)	0.93		
Personal_Ability (P_Able)	The match is very good between my personal skills and those required to use social media (DA1_			
	My abilities are a good fit with the requirements of using social media (DA2)			
User-Group Fit (UGF)	Most of my contacts on social media have interests that match mine (GI5)	0.80	0.93	0.86
	I share a common interest with social media groups that I join (GI2)	0.70		
	My contacts on social media have similar values to mine (GV1)	0.85		
User-Expression Fit (UEF)				
Freedom (FREE)	I believe that social media websites value 'being able to speak one's mind' as much as I do (VF2)	0.86		
	I feel that social media websites share my freedom of speech values (VF4)	0.87		
Sincerity (SINCERE)	'Friendship' on social media doesn't feel genuine to me (VS4)	0.86		
	I believe that relationships on social media are rather artificial (VS5)	0.87		
Privacy (PRIVACY)	I believe there is too much personal information being posted on social media (VP6)	0.76		
	I think there are too many cases of security breaches on social media (VP9)	0.59		
	I feel that social media websites do not share the importance I attach to privacy (VP12)	0.86		
Needs-Supplies Fit (NSF)				
Connection (CONNECT)	Social media help me stay connected with my family, friends, or colleagues as I need (T3)	0.79	0.89	0.67
	Social media fit my need to reconnect with people that I have not seen in a long time (T6)	0.75		

Construct	Item	Loading*	CR	AVE
	Social media meet my needs to communicate with my family or relatives (C2)	0.85		
	Social media fit my need to keep in touch with family, friends, or colleagues (T5)	0.86		
Acceptance (ACCEPT)	I believe that social media meet my need not to feel left out (B3)	0.74	0.87	0.62
	Social media meet my need to fit in with my friends (B6)	0.81		
	Social media fit my need to be like my friends (B2)	0.81		
	Social media satisfy my desire to receive better appreciation from people (R7)	0.79		
Benevolence (BENEV)	Social media fit my need to promote good causes (U6)	0.69	0.87	0.63
	Social media meet my need to help keep young or vulnerable people safe (S4)	0.75		
	Social media provide me with opportunities to help people as I need (U1)	0.87		
	Social media fit my need to help people (U2)	0.85		
Information (INFO)	Social media are good tools for me to stay informed as I need (I10)	0.81	0.86	0.67
	Social media help me follow the news as I need (I2)	0.86		
	Social media help me satisfy my curiosity about things I wonder about (O4)	0.77		
Professional Networking (PRONET)	Social media fit my need to get help in my study or work-related tasks (P5)	0.69	0.87	0.57
	Social media enable me to leverage my social network as needed to obtain professional benefits (N1)	0.76		
	Social media satisfy my need to carry out my work or my studies efficiently (P6)	0.70		
	Social media fit my need to build new professional relations (N3)	0.80		
	Social media fit my need to establish continuity in professional relationships (N4)	0.81		
Safety (SAFE)	If I were a parent, being on social media websites would allow me to keep an eye on my children's online activity as I require (S1)	0.88	0.90	0.82
	If I were a parent, having a profile on social media website(s) would meet my need to keep my children out of harm's way (S2)	0.92		

*Loading = standardized outer loadings; CR = composite reliability; AVE = average variance extracted

Discriminant validity necessitates that two conceptually distinct concepts should display sufficient difference. That is, it is expected that their joint set of indicators is not unidimensional (Henseler et al., 2009). In PLS, two measures of discriminant validity are used: The Fornell-Larcker criterion and the cross loadings (Henseler et

al., 2009; Wetzels et al., 2009). The Fornell-Larcker criterion (Fornell and Larcker, 1981) indicates that a construct shares more variance with its own indicators than with other constructs. Statistically, this means that the square root of the AVE exceeds the intercorrelations of the construct with the other constructs in the model. As shown in Table 8, the square root of the AVE of each construct exceeds the intercorrelations of each of them with other constructs in the model thus providing evidence for the discriminant validity of our constructs.

Added support for discriminant validity is garnered through inspecting the cross-loadings. While the Fornell-Larcker criterion assesses discriminant validity at the construct level, cross-loadings permit this inspection to be carried out at the indicator level (Henseler et al., 2009). Specifically, the loading of an indicator should be higher than all of that indicator's cross-loadings (Chin, 1998). As can be seen in Table 9, all indicators in our model meet this criterion providing further evidence of the discriminant validity of our constructs.

Table 8. Intercorrelations of the Latent Variables for First-Order Constructs*

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ACCEPT	**0.79**														
BENEV	0.54	**0.79**													
CONNECT	0.23	0.22	**0.82**												
FREE	0.43	0.38	0.32	**0.87**											
LU	0.17	0.10	0.53	0.21	**0.86**										
INFO	0.40	0.41	0.39	0.39	0.27	**0.82**									
P_Able	0.15	0.13	0.27	0.18	0.19	0.33	**0.85**								
PRIVACY	0.15	0.14	-0.09	0.19	-0.03	0.11	-0.07	**0.75**							
PRONET	0.49	0.59	0.28	0.40	0.12	0.52	0.20	0.12	**0.76**						
SAFE	0.33	0.35	0.17	0.23	0.08	0.27	0.09	0.07	0.33	**0.90**					
SINCERE	0.23	0.18	0.10	0.14	0.06	0.09	-0.05	0.36	0.19	0.03	**0.87**				
T_Able	-0.37	-0.37	0.17	-0.16	0.07	-0.03	0.15	-0.17	-0.26	-0.15	-0.11	**0.93**			
UGF	0.42	0.42	0.24	0.27	0.14	0.34	0.25	0.04	0.36	0.22	0.08	-0.13	**0.79**		
UF	0.18	0.14	0.30	0.17	0.46	0.24	0.12	0.09	0.14	0.05	0.08	0.06	0.17	**0.89**	
WU	0.31	0.47	0.17	0.25	0.05	0.35	0.07	0.02	0.56	0.16	0.09	-0.18	0.25	0.11	**0.73**

*Square root of the AVE on the diagonal.

Table 9. Item Cross-Loadings

	ACCEPT	BENEV	CONNECT	FREE	LU	INFO	P_Able	PRIVACY	PRONET	SAFE	SINCERE	T_Able	UGF	UF	WU
WU3	0.26	0.46	0.20	0.25	0.15	0.32	0.06	0.03	0.37	0.16	0.08	-0.12	0.28	0.17	0.78
B3	0.74	0.36	0.18	0.30	0.13	0.29	0.11	0.07	0.37	0.23	0.08	-0.21	0.26	0.16	0.27
B6	0.81	0.36	0.26	0.38	0.18	0.35	0.13	0.13	0.38	0.24	0.21	-0.23	0.32	0.19	0.23
P5	0.36	0.40	0.18	0.26	0.05	0.32	0.14	0.00	0.70	0.16	0.13	-0.21	0.22	0.07	0.46
T3	0.16	0.18	0.79	0.26	0.49	0.27	0.23	-0.08	0.18	0.11	0.06	0.16	0.17	0.29	0.15
T6	0.20	0.16	0.75	0.27	0.40	0.27	0.16	-0.04	0.18	0.11	0.10	0.12	0.18	0.22	0.09
VF2	0.41	0.31	0.27	0.86	0.15	0.33	0.17	0.17	0.33	0.19	0.12	-0.10	0.23	0.14	0.21
VF4	0.34	0.34	0.28	0.87	0.21	0.34	0.15	0.16	0.37	0.20	0.13	-0.17	0.24	0.15	0.23
VP6	0.14	0.12	-0.08	0.16	-0.06	0.08	-0.02	0.76	0.10	0.06	0.24	-0.12	0.04	0.06	0.04
VS4	0.19	0.15	0.10	0.11	0.04	0.04	-0.08	0.29	0.19	0.07	0.86	-0.12	0.07	0.04	0.09
VS5	0.20	0.17	0.07	0.13	0.06	0.12	0.00	0.33	0.14	-0.01	0.87	-0.07	0.08	0.11	0.08
B2	0.81	0.47	0.11	0.33	0.12	0.33	0.09	0.18	0.40	0.24	0.22	-0.41	0.37	0.08	0.22
C2	0.21	0.21	0.85	0.25	0.39	0.34	0.21	-0.10	0.27	0.19	0.08	0.10	0.21	0.24	0.15
DA1	0.10	0.08	0.29	0.16	0.19	0.29	0.86	-0.11	0.14	0.08	-0.03	0.15	0.17	0.11	0.04
DA9	-0.35	-0.35	0.18	-0.15	0.09	-0.04	0.16	-0.17	-0.21	-0.13	-0.11	0.93	-0.12	0.07	-0.16
GI5	0.36	0.31	0.15	0.17	0.08	0.24	0.18	0.05	0.29	0.16	0.08	-0.21	0.80	0.11	0.19
I10	0.30	0.29	0.35	0.31	0.18	0.81	0.29	0.08	0.44	0.18	0.08	0.03	0.26	0.18	0.28
I2	0.37	0.39	0.33	0.33	0.23	0.86	0.25	0.10	0.47	0.24	0.07	-0.09	0.30	0.20	0.33
N1	0.34	0.42	0.22	0.30	0.08	0.48	0.17	0.12	0.76	0.28	0.12	-0.17	0.27	0.10	0.39
P6	0.38	0.41	0.16	0.28	0.08	0.33	0.12	0.10	0.71	0.17	0.22	-0.25	0.23	0.03	0.45
T5	0.18	0.17	0.87	0.26	0.44	0.37	0.27	-0.08	0.27	0.13	0.08	0.19	0.21	0.23	0.15
U6	0.30	0.70	0.23	0.32	0.11	0.35	0.13	0.07	0.43	0.18	0.14	-0.13	0.36	0.13	0.46
VP12	0.15	0.15	-0.06	0.18	0.01	0.10	-0.10	0.86	0.12	0.09	0.34	-0.15	0.06	0.09	0.02
VP9	0.00	-0.03	-0.08	0.04	-0.02	0.04	-0.04	0.59	-0.02	-0.09	0.21	-0.09	-0.09	0.02	-0.08
DA2	0.15	0.15	0.17	0.16	0.13	0.27	0.85	-0.02	0.20	0.07	-0.05	0.11	0.26	0.08	0.09
DA8	-0.34	-0.33	0.14	-0.14	0.05	-0.02	0.12	-0.14	-0.27	-0.14	-0.09	0.93	-0.11	0.05	-0.17
GI2	0.23	0.30	0.22	0.22	0.15	0.33	0.22	0.02	0.26	0.17	0.06	0.03	0.71	0.14	0.22
GV1	0.39	0.39	0.19	0.24	0.10	0.24	0.20	0.03	0.31	0.19	0.06	-0.12	0.84	0.14	0.18
N3	0.36	0.50	0.27	0.32	0.12	0.43	0.18	0.12	0.80	0.28	0.09	-0.17	0.30	0.16	0.42
N4	0.43	0.49	0.22	0.35	0.11	0.40	0.14	0.10	0.80	0.34	0.16	-0.19	0.33	0.16	0.41
O4	0.31	0.32	0.28	0.31	0.25	0.77	0.27	0.09	0.37	0.24	0.07	-0.01	0.28	0.22	0.25
R7	0.79	0.50	0.18	0.34	0.09	0.29	0.13	0.10	0.41	0.31	0.18	-0.31	0.35	0.16	0.27
S1	0.26	0.26	0.15	0.19	0.08	0.26	0.09	0.05	0.26	0.88	0.02	-0.09	0.18	0.03	0.11
S2	0.33	0.36	0.16	0.22	0.06	0.23	0.08	0.06	0.34	0.92	0.04	-0.17	0.22	0.06	0.17
S4	0.47	0.74	0.05	0.25	0.02	0.22	0.00	0.17	0.41	0.36	0.12	-0.41	0.28	0.03	0.26
U1	0.46	0.86	0.20	0.32	0.10	0.34	0.11	0.11	0.49	0.31	0.16	-0.31	0.34	0.11	0.37
U2	0.48	0.85	0.22	0.30	0.09	0.38	0.17	0.11	0.53	0.25	0.16	-0.32	0.36	0.15	0.40
LU1	0.13	0.11	0.55	0.15	0.86	0.18	0.13	-0.03	0.11	0.06	0.08	0.06	0.14	0.33	0.06
LU2	0.15	0.06	0.35	0.21	0.85	0.29	0.19	-0.02	0.10	0.07	0.01	0.07	0.10	0.45	0.02
UF1	0.16	0.09	0.23	0.13	0.43	0.23	0.11	0.07	0.12	0.03	0.08	0.07	0.14	0.89	0.07
UF2	0.16	0.15	0.30	0.16	0.38	0.21	0.10	0.08	0.13	0.06	0.07	0.05	0.16	0.89	0.13
WU2	0.23	0.25	0.10	0.19	0.00	0.24	0.07	0.01	0.46	0.12	0.09	-0.15	0.11	-0.01	0.71
WU1	0.17	0.27	0.04	0.09	-0.08	0.17	0.03	0.00	0.41	0.04	0.02	-0.13	0.12	0.05	0.68

STRUCTURAL MODEL

After testing for the reliability and validity of our outer (measurement) model, the next step is to evaluate the inner (structural) model. The higher-order latent variables: Needs-Supplies Fit, User-Expression Fit, User-Expression Fit, and Use were all set up through the repeated use of indicators of the lower-order constructs.

The most important criterion for the assessment of the structural model is the coefficient of determination (R^2) of the dependent variable (Henseler et al., 2009). R^2 values can be interpreted in the same way as those values obtained from multiple regression analysis (Rai et al., 2006). The R^2 value specifies the amount of variance in the construct that the path model explains (Barclay et al. 1995). Chin (1998) suggests that R^2 values of 0.67, 0.33, and 0.19 in PLS path models are substantial, moderate, and weak, respectively. If certain inner path model structures explain an endogenous latent variable by only one or two exogenous latent variables, "moderate" R^2 is acceptable (Henseler et al., 2009). As shown in Figure 12, the R^2 of Use is 0.32, suggesting an acceptable explanatory power for our model.

Figure 12. Results of Path Analysis

First Order **Second Order** **Third Order**

ACCEPT

CONNECT

INFO

PRONET

BENEV

SAFE

NSF

.27**
.19**
.20**
.34**
.28**
.11**

.87**
H2

FREE

PRIVACY

SINCERE

UEF

.51**
.49**
.43**

.11** H1

P_ABLE

T_ABLE

DAF

.24
.93**

.015 H3

UGF

.13** H4

USFIT

H5 R² = 0.32

.57**

USE
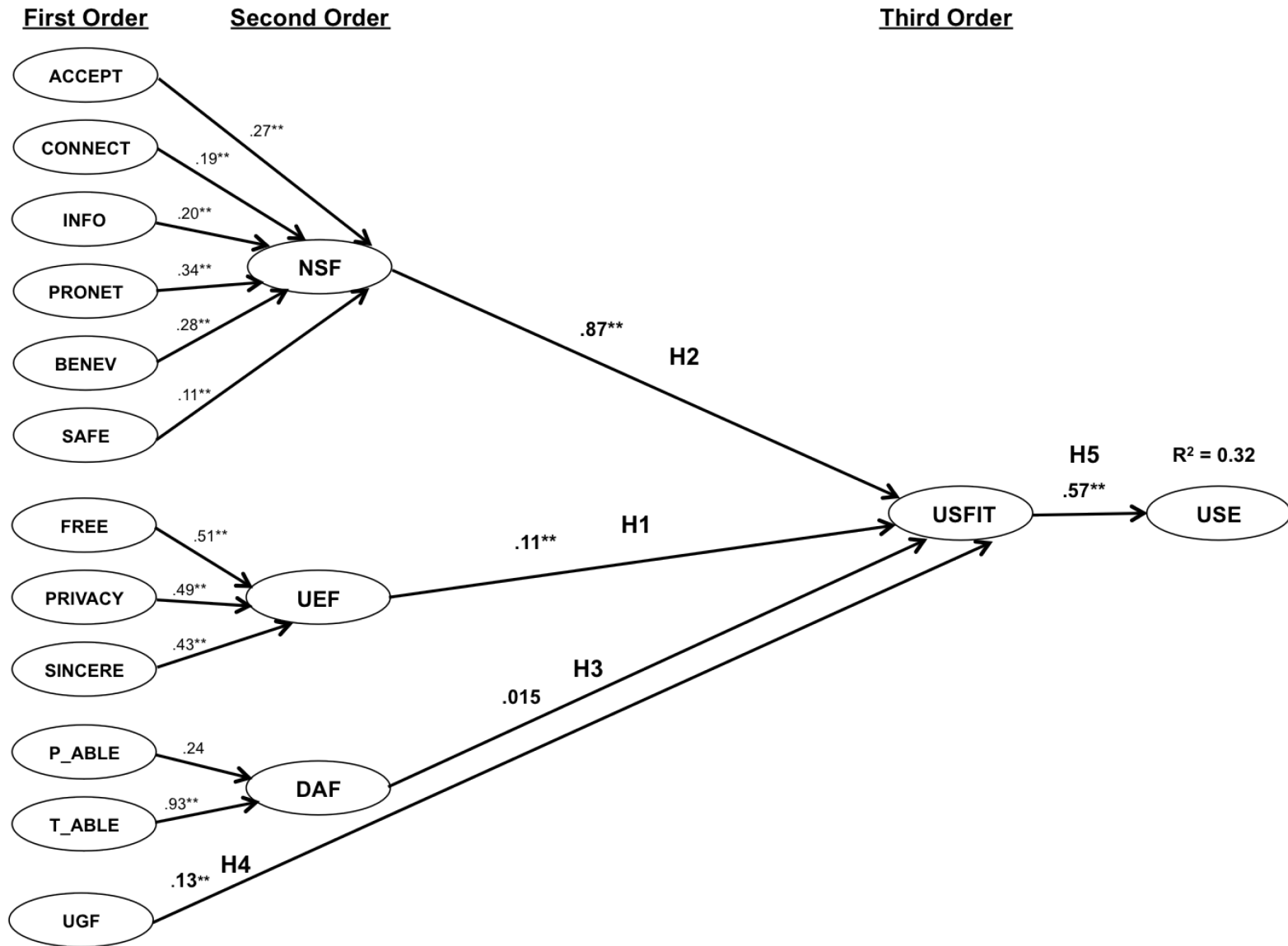
The next important step is to evaluate the estimated values for path relationships in the structural model with regards to sign, magnitude, and significance. For the significance of the model path estimates, a resampling technique, such as bootstrapping, is to be used (Tenenhaus et al., 2005). Bootstrapping considers the observed sample as if it represents the population, and then creates a pre-specified number of bootstrap samples (e.g., 5,000). These bootstrap samples are created through the random drawing of cases with replacement from the original sample. PLS then estimates the path model for each bootstrap sample, with the obtained path model coefficients forming a bootstrap distribution, which can be regarded as an approximation of the sampling distribution (Henseler et al., 2009). We have run the bootstrap algorithm with a number of cases equal to our sample (643) as specified in the literature (e.g., Hair et al., 2011). As for the number of samples, the literature suggests numbers that range from 200 (Chin, 2001) to a minimum of 5000 (Hair et al., 2011). We have used the 500 samples in our analysis, as this number falls within the recommended range. Moreover, Wetzels et al. (2009) used that number when testing their hierarchical model using PLS.

As shown in Figure 12, the path between User-Expression Fit and User-System Fit at 0.11 was positive and significant at the $p < 0.01$ level, thus supporting H1, stating a positive association between the two constructs. The path between NSF and USFIT at 0.87 was significant at the $p < 0.01$ level, thus supporting H2 stating a positive association between the two constructs. Our third hypothesis, postulating a positive association between Demands-Abilities Fit and User-System Fit, was not supported, as the path between the two constructs was insignificant. The path between User-Group Fit and USFIT at 0.13 was positive and significant at

the p< 0.01 level, hence providing support to H4 which hypothesized a positive association between the two constructs. Finally, H5, stating a positive association between User-System Fit and Use was supported with a path loading of 0.57, significant at the p< 0.01 level. Table 10 shows the results of the structural model assessment.

Table 10. Assessing the Hierarchical Model of User-System Fit and Testing the Hypotheses for the Structural Model

	Needs-Supplies Fit	User-Expression Fit	Demands-Abilities Fit	Use	Hypotheses	Hypotheses Supported
Hierarchical Model						
Second-Order Model						
Acceptance	0.267**				n.a.	n.a.
Benevolence	0.283**				n.a.	n.a.
Connection	0.193**				n.a.	n.a.
Information	0.201**				n.a.	n.a.
Professional Networking	0.336**				n.a.	n.a.
Safety	0.112**				n.a.	n.a.
Sincerity		0.436**			n.a.	n.a.
Freedom		0.514**			n.a.	n.a.
Privacy		0.491**			n.a.	n.a.
P_Able			0.244		n.a.	n.a.
T_Able			0.93**		n.a.	n.a.
Leisure Use				0.804	n.a.	n.a.
Work Use				0.398	n.a.	n.a.
Use Frequency				0.779	n.a.	n.a.
Third Order Model						
	User-System Fit					
User-Expression Fit	0.113**				H1	Yes
Needs-Supplies Fit	0.87**				H2	Yes
Demands-Abilities Fit	-0.015				H3	No
User-Group Fit	0.127**				H4	Yes
Structural Model						
	Use					
User-System Fit	0.57**				H5	Yes

*p<0.05; **p<0.01

Another assessment of the structural model involves the model's capability to predict and the main measure of predictive relevance is Stone-Geisser's Q^2 (Henseler et al., 2009). Q^2 - or cross-validated redundancy - measures the quality of

each structural equation, "it is a kind of cross-validated R^2 between the MVs [items] of an endogenous LV [dependent variable] and all the MVs [items] associated with the LVs [independent variables] explaining the endogenous LV, using the estimated structural model" (Tenenhaus et al., 2005, p.174). If the Q^2 value for a certain endogenous latent variable were larger than zero, this would lead us to conclude that its explanatory variables provide predictive relevance (Henseler et al., 2009). We have measured the Q^2 value for Use using the blindfolding procedure. "The blindfolding procedure omits a part of the data matrix for a particular variable and then estimates the model parameters (e.g., path coefficients) associated with that variable. This process is repeated as often as the omission distance, which refers to how many data points in the data matrix are skipped before omitting the next data point" (Kahai et al., 1997). The Q^2 value for the Use construct was larger than zero with a value 0.132 which is an indication of the predictive ability of our model.

COMMON METHOD BIAS

Since our data collection relied on self-reported data, there is a potential for common method bias that may result from a number of sources, including consistency motif and social desirability (Podsakoff et al. 2003). Among the procedural remedies suggested by Podsakoff et al. (2003) is protecting respondents' anonymity. This was made feasible through the use of Web-based survey. Specifically, while the students provided their student identification numbers in order to be given their bonus mark for completing the survey, the respondents remained anonymous to the researcher who forwarded the list of student IDs to the course instructors who did not have access to their students' answers.

As a statistical test for method bias, we have conducted the Harman's one-factor test (Podsakoff and Organ 1986) on first-order constructs in our model. In this procedure, the unrotated factor solution of the main factors of interest is examined. It is assumed that, if substantial common method variance exists, then either only one factor will emerge from the factor analysis or that one "general" factor will account for most of the covariance in the independent and dependent variables. The result of this test showed that eleven factors are present and the most covariance explained by one factor is 7.1 percent, which indicates that common method bias is not a likely contaminant of our results.

POST HOC ANALYSES

To examine its possible influence on our model, we have added the Perceived Innovativeness in IT (PIIT) construct to the model and tested it. The results of the analysis showed that such influence was nonexistent. First, the R^2 was almost the same, with a downward change of 0.001. Moreover, the path between PIIT and Use was insignificant.

As discussed in chapter 3, we have envisioned conducting group comparison based on age, gender, culture, and experience with IT. However, *a posteriori*, we did not find it useful to conduct comparisons based on age or IT experience because of the very low level of variance on these dimensions in our sample as indicated in Table 4. Specifically, for age, more than 90% of respondents reported belonging to the age category of 20-29, one of four age categories available. As for IT experience, we have found that more than 90% of the respondents in our sample have been using social media for two years or more. In both cases, we would have sub-samples as small as 18 respondents. This is too small, given that it is suggested

that the minimum sample size for PLS is ten times the number of items in the most complex construct (Gefen et al., 2000). As the most complex construct in our model is PRONET with five items, this indicates the need for a minimum sample size of 50 respondents to conduct data analyses.

On the other hand, we have found enough heterogeneity in our sample when it comes to culture to justify such comparisons. Moreover, for gender, our sample is almost equally split between males and females, which enticed us to conduct a group comparison on this basis as well. We present both group comparisons below.

The data collected about the geographical region of origin from our respondents was based on an initial classification of 23 regions. Upon collecting the data we found that the number of respondents from each region ranged from zero (for example, Polynesia) to 350 respondents, which was the case for North America. As a result of the small number of responses from some regions, and to be able to conduct meaningful analysis, we have taken guidance from Hofstede's (2001) and Triandis (2004) to re-classify our data into six regions, as show in Table 11. It has been decided to place all Europe regions in one group because no one region had enough responses for practically meaningful analysis, with the highest number being Western Europe, with only 25 responses.

To test for group differences among various regions, we have used the Kruskal-Wallis test (Kruskal and Wallis, 1952), a non-parametric test that evaluates whether the population medians on a dependent variable are the same across all levels of a certain factor. Table 11 shows the results that indicate the presence of statistically significant differences among groups for a number of dimensions.

Table 11. Results of Collectivistic vs. Individualistic Group Comparisons

Region ID	Geographical Region	Count
1	Africa (except South)	32
2	Middle East	45
3	Europe	74
4	Eastern and South-Eastern Asia	81
5	North America	350
6	Other[9]	61
	Total	643

Dimensions	Significant Differences Among Regions
ACCEPT	4-1, 4-2, 4-3, 4-5, and 5-6
CONNECT	No differences
BENEV	4-3, 4-5, 6-3, 5-6
INFO	4-5
PRONET	4-3, 4-1, 4-5
SAFE	4-5
FREEDOM	4-3, 4-5, 2-3
SINCERE	4-3, 4-5
PRIVACY	No differences
P_ABLE	No
T_Able	4-3, 4-5
UGF	No differences
Use_Freq	4-5
Work_Use	4-5
Fun_Use	No differences

The results show that, even for the dimensions where there were significant differences among regions, there were no significant differences between Africa, the Middle East, Europe, and North America (except for a significant difference between the Middle East and Europe on the FREEDOM dimension). On the other hand, we found the East/South East Asia to be consistently different from other groups (ranging from one group, such as the case with Work_Use to four groups, the case with ACCEPT) across dimensions. Moreover, that region has the highest median ranking on all these dimensions compared to other groups, except for T_Able and

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[9] Included all America (except North), Caribbean, Western Asia, Central Asia, Southern Asia, and Southern Africa.

Use_Freq, were it ranked lowest. Finally, it is worth noting that we were not able to conduct further group comparisons using PLS because a number of groups had a limited number of respondents, thus making it not statistically robust to run PLS analysis.

Our next step was to conduct group comparisons based on gender. We divided the original sample into two samples, a male sample of 301 respondents and a female sample of 342 respondents. In this analysis, there was only a very small difference in R^2, with a value of 0.329 for the male subsample and 0.327 for the female subsample on the dependent variable. There were, however, two differences that were significant at the 95% level. The path loading of PRIVACY on User-Expression Fit was 0.06 higher for the male sample. Also, the path loading for Needs-Supplies Fit on User-System Fit was 0.06 higher for the male sample compared to the female sample. Table 12 shows the details of path loadings for both subsamples.

Table 12. Model of User-System Fit for Male Versus Female Sub-samples

	Needs-Supplies Fit		User-Expression Fit		Demands-Abilities Fit		Use		Hypotheses	Hypotheses Supported
Hierarchical Model										
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**		
Acceptance	0.28**	0.26**							n.a.	n.a.
Benevolence	0.28**	0.28**							n.a.	n.a.
Connection	0.19**	0.19**							n.a.	n.a.
Information	0.20**	0.20**							n.a.	n.a.
Professional	0.34**	0.33**							n.a.	n.a.
Safety	0.09**	0.13**							n.a.	n.a.
Sincerity			0.42**	0.44**					n.a.	n.a.
Freedom			0.43**	0.57**					n.a.	n.a.
Privacy			0.59**	0.42**					n.a.	n.a.
P_Able					0.35	0.01			n.a.	n.a.
T_Able					0.87**	1.0**			n.a.	n.a.
Leisure Use							0.78**	0.82**	n.a.	n.a.
Work Use							0.48**	0.33**	n.a.	n.a.
Use							0.76**	0.79**	n.a.	n.a.

Third Order Model				
	User-System Fit			M	F
	M	F			
User-Expression Fit	0.09*	0.13**	H1	Yes	Yes
Needs-Supplies Fit	0.90**	0.84**	H2	Yes	Yes
Demands-Abilities Fit	0.00	-0.04	H3	No	No
User-Group Fit	0.12**	0.14**	H4	Yes	Yes

Structural Model				
	Use			M	F
	M	F			
User-System Fit	0.57**	0.57**	H5	Yes	Yes

*p<0.05; **p<0.01; M = Male; F = Female

It is worth noting that to probe for significant differences between paths of different subsamples we have followed the procedure suggested by Henseler et al. (2009). In that procedure, separate bootstrap analyses are conducted on the subsamples to be compared. The bootstrap outcomes then serve as a basis for the

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hypothesis tests of group differences. Specifically, for a specific path coefficient, the conditional probability (P) – that the coefficient for one subsample is different than the same coefficient for the other subsample - has to be determined. The researcher can then compare P to a specified alpha-level before concluding that a specific parameter (e.g., path coefficient) is greater for one of the subsamples. The equation for calculating P is embedded in a spreadsheet that Henseler made available upon request. We have contacted him and received the spreadsheet and used it to conduct our analyses.

CHAPTER 5: DISCUSSION

In this chapter we discuss the results of our model testing, along with the limitations, contributions for research and practice, and suggestions for future research.

We have carried out this study with two main objectives in mind: to reconceptualize the usefulness construct as it is currently used in IT literature and to develop and test a user-social media fit model. Guided by the person-environment fit stream of research, and based on a number of interviews with social media users, we have reconceptualized usefulness into Needs-Supplies Fit. We have also identified the main dimensions of fit between users and social media applications, and developed and tested – using an online survey of 643 social media users - a model of user-social media fit.

Our results provide support to four of our five hypotheses suggesting that User-System Fit is a third-order construct formed by User-Expression Fit, Needs-Supplies Fit, and User-Group Fit. This is in line with the integrative view which researchers are suggested to take when dealing with various dimensions of fit (e.g., Cable and Edwards, 2004; Kristof, 1996). Our results suggest that we have a construct capable of capturing needs satisfaction and value similarity through its various dimensions which, in turn, capture various specific facets of needs and values. Before discussing the individual hypotheses, it is worth noting that, on the basis of our overall results, it appears that – while value similarity with contacts on social media and with social media applications are drivers of social media usage - the most important drivers of social media usage among respondents of our sample are related to need satisfaction. Among those needs, most prominent are the need to grow and leverage one's professional network, the need to help others or support

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causes, and the need to respond to friends' wishes (of joining social media). These findings are in line with recent literature on social media adoption. For example, Skeels and Grudin (2009) found that social media applications, such as LinkedIn, are widely used by individuals to build and maintain their professional networks. As for the pressure from friends, and the role such pressure plays in social media adoption, Mustaffa et al.'s (2011) study found that younger adopters of Facebook in Malaysia were influenced by peer pressure in their adoption decision, especially with social media access and use being seen as a normal part of the daily routine of many young people. Subtle support for the notion that individuals may use social media as means of helping others comes from recent literature that studied social media-based consumer review websites (e.g., Hardey, 2011; Kunz et al., 2011). On these websites, many individuals not only read reviews and benefit from others' recommendations, but are also actively engaged in providing their own insights, sharing experiences, and offering advice. Interestingly, the power of these aforementioned needs as drivers of social media usage seem to surpass that of more intuitively appealing needs such as the need to connect and communicate and then need for information.

Our results also show that, while users do use social media, as expected, for leisure-related reasons, such as for fun and to connect and communicate with family and friends, users in our sample also use social media for work and study purposes, and to support what they believe are worthwhile causes. This doesn't come as a surprise, especially with recent literature lamenting the more encompassing usage of social media. For example, Hosack et al. (2012) argue that, more than just a pastime, social media are used by consumers as decision support systems helping

those consumers make informed decisions. For example, a consumer, they argue, may now consider the number of "likes" a product has on Facebook, or the number of "tweets" about a service, before actually making a choice. In another study, Cheng et al. (2011) corroborates what we have seen in both the interviews and the survey regarding the information role played by social media. Specifically, the authors highlight the evolving role of micro-blogging applications, such as Twitter, from just a chatting platform, to a means for individuals and organizations to locate and share real-time information.

Hypotheses 1, 2, and 4 were supported, providing evidence that User-Expression Fit, Needs-Supplies Fit, and User-Group Fit, respectively, are dimensions of User-System Fit. Sincerity, privacy, and freedom were all supported as dimensions of User-Expression Fit. This suggests that, along with looking to satisfy a number of needs, users also care about the authenticity of relationships, their privacy on social media, as well as for these applications to provide a platform for free speech. A recent study by Hardey (2011) asserts the importance of authenticity in social media, where members of a social media-based consumer review website revealed that they preferred that their contacts on the website are chosen from among their real (offline) friends, and that they trust recommendations of users who reveal their identities rather than from anonymous users. In another study, Xu et al. (2011) lament the relevance of privacy concerns, especially with the growth of social media. The authors establish an organization-individual link with regards to privacy, accounting for individual perceptions and attitudes as well as for organizational aspects such as privacy policies.

Connection, professional networking, acceptance, information, safety, and benevolence were confirmed as dimensions of Needs-Supplies Fit. Our respondents use social media to connect and communicate, whether re-establishing lost connections with old friends, keeping in contact with family and friends abroad, or professionals keeping in contact with their customers in a social, "ice breaking" context. They are also trying to satisfy their need for professional networking: building and expanding their network, and leveraging the network for value, be it a future job, or a potential business deal. Acceptance is an interesting dimension in the sense that it shows the perceived need to be "similar" to friends. As for information sharing on social media, it serves multiple purposes, from following news headlines, learning about the latest online coupons and discounts, to keeping aware of information related to the user's different friends and connections. Users are also interested in acts of benevolence or in using social media as a platform to help others. They also see the importance of keeping their loved ones safe on social media, for example by creating profiles and keeping their children as "friends" on social media, to be able to stay aware of their activities.

Contrary to our expectations, H3, stating a positive association between Demands-Abilities Fit and User-System Fit was not supported. A possible reason may be the specific sample we had. Our respondents being students at a large Canadian university, it stands to reason to expect they have little difficulty – whether personal or technology-related - that would hinder them from accessing and using social media. In fact, the majority of our respondents reported that they have been active users of social media for more than three years. This, in turn, may have resulted in them not perceiving Demands-Abilities Fit is a part of the overall fit

between them and the system. Indeed, perceived ease of use – a related construct – was found to be insignificant in post-adoption (e.g., Parthasarathy and Bhattacherjee, 1998). Moreover, with many social media websites trying to simplify their interfaces to appeal to wider audiences, it might be that respondents have not perceived a challenging "demands" are required for using such systems. Turning back to ease of use studies for guidance, it is reported that, for systems that are inherently easy to use, ease of use may have a limited or no impact on the decision to accept IT (Subramanian, 1994).

As expected, H5, calling for a positive association between User-System Fit and Use, was supported, which provides nomological validation for our model, in that User-System Fit behaved within a network of hypotheses as expected. It is worth mentioning that this relationship was still significant in a post-hoc analysis where we depicted direct relationships between lower-order constructs (Needs-Supplies Fit. User-Expression Fit, Demands-Abilities Fit, and User-Group Fit) to Use. Further, the results show an acceptable explanatory power for our model, with 32% of the variance of Use explained.

In our post-hoc group comparisons based on gender and culture, we have not found differences in support for hypotheses. As for variance explained or significant differences in the model's paths, there were a few differences. For gender, the path loading from PRIVACY to User-Expression Fit was higher for males, suggesting that males may give more weight to that value. In addition, the path loading from Needs-Supplies Fit to User-System Fit was higher, also for males, suggesting that need satisfaction may play a stronger role as a dimension of overall fit (User-System Fit), compared to females. Otherwise, we believe that the lack of more significant

differences between males and females may have resulted from the fact that our survey questions are directed to social media in general, rather than a specific category (for example, micro blogging). It might be the case that when we address a specific social media application, or study more detailed usage behaviors, that we may find significant differences between men and women. For example, anecdotal evidence suggests that women are more likely to update their personal blogs and to become fans of or followers of a brand (Nielsen, 2012).

For culture, the results generally suggest support to the convergence perspective –which postulates that organizational practices/cultures across the world are converging (moving closer)- versus the divergence perspective, which generally postulates the endurance of some of the cultural differences in the face of pressures, such as globalization (Pudelko et al., 2006). The support for the convergence view has one notable exception in our sample, namely the students from East/South East Asia region, who were consistently different than other groups.

A possible reason for the presence of only limited differences between individualistic versus collectivistic cultures in our sample may be that, even though students originate from various geographical regions, many of them were actually born or raised in Canada. It stands to reason that growing up away from their original home country, a number of their culture preferences may have been influenced and shaped by Canadian culture. Another reason similar to the one we suggested about gender; may be that studying usage behavior in more detail may shed light on significant cultural differences. For example, while the need for information is one of the needs that respondents in this study seek to satisfy, one can wonder whether the same type of information would be the focus of different cultures.

Finally, when testing the model with Perceived Innovativeness in IT (PIIT) included as a control variable, we found the path between PIIT and Use to be insignificant. Moreover, no change was observed in R^2 as a result of including PIIT. This suggests that PIIT did not have a significant influence on Use in our study, possibly because we had a computer-savvy sample with respondents already experienced users and thus PIIT – being a trait that involves the willingness to try out new IT – may not be salient in this context.

LIMITATIONS

The study has a number of limitations that must be acknowledged. First, we believe that the measures developed for this study need further refinement before they can be more effectively utilized in further research. Specifically, although we have put considerable effort in developing the items and improving them, some items were evidently not clear enough, leading to weak psychometric properties and for them being excluded from the study. This has also led to some dimensions (namely safety, freedom, sincerity, personal ability, and tools ability), In addition to the two Use dimensions of Leisure and Frequency, ending up being measured by only two items, which is sub-optimal.

We have also not been able to capture in our model an important aspect of social media experience, namely enjoyment. The items for enjoyment have failed to load adequately on any one factor and had to be excluded from the model testing. In hindsight, we believe this might have been due to the fact that, while enjoyment is an emotion (e.g., Beaudry and Pinsonneault, 2010), the item wording was framing it as a need, in keeping with the nature of Needs-Supplies Fit (of which enjoyment was envisioned to be one of its dimensions).

The second set of limitations stem from the nature of our sample. Using students as respondents limits the external validity of the results, as students do not represent the general workforce (Moores and Chang, 2006). The use of students may thus limit the generalizability of our findings to students and maybe to young educated adults. However, it is worth noting that IT researchers often use student samples to explore various phenomena (e.g., Belanger and Crossler, 2011). In addition, we expect this problem to be rather limited in the context of our study, as

results reported in prior IT usage studies that employed student subjects do not show consistent differences from those that employ organizational users (Bhattacherjee and Premkumar, 2004). Furthermore, since the majority of our respondents work either full-time or part-time, they may be representative of the younger segment of organizational end users; however, our results cannot be readily generalizable to other end-user segments.

Another sample-related limitation may have resulted from the fact that our survey was conducted online, thus raising the possibility of a selection bias, where by only students who are comfortable with computer use would be willing to answer the survey. Again, what may tame the effects of this limitation is that these are students at a big Canadian university and using computers is an integral part of their studies.

CONTRIBUTIONS TO RESEARCH AND PRACTICE

Despite the limitations, this study provides a number of contributions to research. First, the study develops needs-supplies fit as a reconceptualized usefulness construct that taps into a wider spectrum of motivations, while parsimoniously combining a number of unidimensional constructs that represent various needs that social media usage may satisfy. While previous usefulness constructs have added considerably to the explanation of IT adoption and use, we hope that Needs-Supplies Fit is a step towards a finer understanding of what actually makes a system be perceived as useful over and above performance/productivity. This may be especially useful in the context of complex systems such as social media, where evidence suggests the co-existence of multiple motivations behind use, and the rather porous boundary between leisure-related and instrumental usage behavior.

Second, by relying on person-environment fit as a theoretical lens, the study develops a model of user-system fit that provides a complementary perspective to current models for an improved understanding of social media use. Specifically, our model concurrently accounts for needs satisfaction, perceived value matching with social media, and perceived value and interest matching with social media connections. In addition, the model goes further than just accounting for overall needs and values by considering some specific needs and values, thus shedding more light on identifiable drivers of social media use. Further, specific (first order) dimensions, whether related to needs or values, may be added or removed from the model, thus adding to the model's robustness by enabling some modification as deemed appropriate for specific study contexts.

Third, by empirically testing the new model of Social media user-system fit, the study contributes to the research efforts aiming for better explanation and predictions of social media use. Since these systems are mainly used on a voluntary basis, their study is important to help understand what contributes to their large adoption and use and that knowledge can be then used to better understand adoption and use of other types of IT. Moreover, the model and measurement instruments developed in this thesis are now available for researchers to use in studies of other types of IT. Specifically, IT types that share some of the characteristics of social media may be candidates for such studies. For example, online discussion forums may be one such technology, as they rely on user-generated content, and groupware systems may also be appropriate candidates, as they are characterized with interaction and collaboration.

Last but not least, the study has operationalized and measured Use as a multidimensional construct, as suggested by DeLone and McLean (2003). In addition to having a dimension representing frequency of use, our measurement instrument taps into what people are doing with social media. By including Leisure and Work dimensions, our measurement instrument provides a wider operationalization of Use reflecting use-related behaviors over quantity and frequency. We believe that such dimensions are becoming important aspects as organizations become users of social media.

The study also offers a number of contributions for practice. The study shows that the vast majority of business students - within months of joining the full-time work force - are active users of social media, and that they use these media for leisure but also for instrumental purposes, whether this means work-related use or

other valued outcomes such as seeking information. This would provide managers who are making efforts towards social media presence with a number of opportunities. First, keeping an active presence on social media would help companies appeal to these prospective employees and maintain an image of being progressive and up-to-date. Second, social-media savvy employees could be natural contributors to their respective organizations' social media presence, effectively communicating and connecting with customers on such applications. Moreover, results from this research remind managers and practitioners that, not only are there multiple motivations behind adoption and use of social media, but also inform them of some of the specific personal motives driving social media adoption and use by individuals and thus actual or potential employees and customers. Gaining this knowledge has three important implications. First, for organizations planning to implement social media technologies, this knowledge will enable them to better communicate these implementations to their employees and to design appropriate means to encourage them to accept and use these new technologies. Second, understanding the drivers of social media adoption and use by individuals will prove invaluable to organizations in developing their social media strategies to connect and communicate with their customers and other stakeholders. Third, for social media websites, they gain a more in depth look at the needs that social media users are keen to satisfy, and the values they believe are important, thus providing insights to both the design of their websites and functionalities, and the development of policies regarding, for example, privacy and about acceptable usage behavior.

FUTURE RESEARCH

While a number of measures were developed for this study, and while most of them had appropriate psychometric properties, more effort still needs to be carried out to improve the measures. This would include developing more items and re-wording others, and subjecting them to another round of card sorting, with the goal of having a more complete set of measures that can be used in further testing of the model's constructs. Validation of measurement instruments is a long process that can only be done over a number of studies with varied samples.

It would be useful for future research to test our model and the new conceptualization of usefulness as Needs-Supplies Fit with different samples. Specifically, it would be of benefit to test the model with a sample of individual organizational users whose organizations have social media presence, or whose jobs entail being engaged in social media Websites. Such a sample would inform us more about how the same user is using social media for both work and leisure related purposes, and may inform companies in their policy-making when it comes, for example, to whether social media access is to be allowed during the workday. It would also be important to test the model using a sample that has more variance with regards to age to see if our results would still hold. If they do hold, then this would suggest that age might not be playing a significant role in influencing social media adoption. If, on the other hand, our results do not hold, then it may be important for research and practice to conduct multi-group comparisons based on age to identify possible differences in the model's relationships.

Future research can also focus on a more micro level regarding social media applications and their related usage behavior. For example, while in this study we

have asked respondents about their extent of use of social media in general, it might be useful to test our model in the context of specific categories, for example social networking or blogging. When focusing on one category, such as blogs, future research may be able to probe deeper for a more detailed understanding. For example, in this study we have found some bloggers having more than 1000 followers, while others having a much smaller number of followers. It would be useful to identify the usage behavior of both groups of followers: whether, for example, they follow "passively" by just reading the blogs without commenting, or whether they are actively commenting and interacting with the blogger and maybe with other followers of the blog. This may help show whether the message being spread about a certain company, for example, is being influenced by a few users, or whether this message is being formulated and communicated via numerous users. If this message was negative, for example, such knowledge may affect the approach that a company would follow to promptly and effectively influence the message content and flow and engage in damage control.

Another aspect that may need to be studied in more detail is information sharing on social media. While we have learned from this study that information gathering and sharing is an important need satisfied by social media use, it would be relevant to examine various types of information and their relative importance to different users. It would be useful for companies to learn, for example, whether social media users who follow those companies' pages or "like" them do so to learn about their products, learn about special offers, or to communicate with other customers and share their experiences with them.

As for gender-oriented future research, researchers may want to examine how differences between genders might influence the social media adoption and use behavior. For example, Bem's Sex Role Inventory (BSRI) (Bem, 1981) indicates that men tend to exhibit more "masculine" traits (e.g., assertiveness) compared to women. It may thus be useful to examine whether men would be more likely to initiate social media connections with strangers (e.g., Facebook friend request) compared to women. This would be of special importance to social media websites themselves, as they strive to understand how users expand their networks on these websites, especially when such expansion is crucial to the overall growth of these websites and to the revenue they make through advertising, for example. Similarly, it would be of value for future studies to examine the possible influence of cultural differences on social media adoption and use. For example, it would be relevant to explore whether individuals from collectivistic culture would behave differently than those from individualistic culture when it comes to using social media to follow corporate pages, to contribute in fund raising campaigns, to complain about products or services, or to engage in dialogue with other users about brands and products. This knowledge may prove invaluable to companies as they develop their communication strategies with their various stakeholders, and most importantly their customers and employees.

CONCLUSION

This research had two objectives. The first objective was to expand the conceptualization of the 'usefulness' construct, as used in IT literature, so that it can represent a richer set of motivations and aspirations so as to allow for a more accurate representation of how users perceive 'usefulness' and improve researchers' ability to predict use. The second objective was to identify - based on the review of the literature and on extensive interviews - the various types of fit between the individual and social media. This objective also entailed developing and testing a model depicting the relationships between these types of fit and the individual's overall perception of fit with social media. Lastly, this objective also comprised testing the relationship between the overall user-social media fit, and social media use. The results of our online survey, conducted using a sample of 643 students at a large Canadian university, provide evidence to the successful fulfillment of these objectives. Specifically, the results provided a preliminary validation for User-System Fit as a third-order construct and for Needs-Supplies Fit and User-Expression Fit as second-order constructs. In addition, the results revealed that User-System Fit explained 32.2% of the variance in Use. The study thus brings in an additional theoretical lens that offers a fresh and insightful perspective on explaining and predicting social media use while accounting for a more comprehensive set of dimensions that influence usage behaviors.

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APPENDIX 1. USEFULNESS CONSTRUCTS IN IT LITERATURE

Construct	Definition	Study(s)	Number of Studies Found
Perceived Usefulness	"*The degree to which a person believes that using a particular system would enhance his or her job performance*" (Davis, 1989, p. 320).	Adams et al., 1992; Agarwal and Karahanna, 2000; Ahn et al, 2007; Amoako-Gyampah and Salam, 2004; Bajaj and Nidumolu, 1998; Bhattacherjee and Premkumar, 2004; Bhattacherjee and Sanford, 2006; Bhattacherjee, 2001; Briggs et al., 1998; Burton-Jones and Hubona, 2006; Castaneda et al, 2007; Cenfetelli et al., 2008; Chau and Hu, 2002; Chau, 1996a; Chin and Todd, 1995; Chin et al, 2003; Cho and Kim, 2001; Cho, 2006; Chung and Tan, 2004; Cyr et al, 2006; Davis, 1989; Deng et al, 2005; Dennis and Reinicke, 2004; Devaraj et al, 2002; Devaraj et al., 2008; Dinev & Hu, 2007; Dishaw and Strong, 1999; Fang et al., 2005; Fedorowicz and Villeneuve, 1999; Fu et al, 2006; Gefen and Straub, 1997; Gefen et al., 2003; Gefen, 2004; Gopal et al., 1992; Grandon and Pearson, 2004; Ha et al, 2007; van der Heijden, 2004; Hasan, 2006; Hendrickson et al., 1993; Hong and Tam, 2006; Hong et al., 2001; Hsu and Lu, 2004; Hsu and Lin, 2008; Hu et al, 2003; Hu et al., 1999; Huang et al, 2008; Hung, 2003; Igbaria and Zviran, 1996; Igbaria et al., 1995; Igbaria et al., 1995; Igbaria et al., 1997; Igbaria, 1996; Im et al, 2008; Jiang and Benbasat, 2007; Kamis and Stohr, 2006; Kamis et al., 2008; Karahanna and Straub, 1999; Kim, 2008; Kotulic and Clark, 2004; Koufaris, 2002; Koufaris and Hampton-Sosa, 2004; Kraemer et al., 1993; Kulkami et al., 2006; Kumar and Benbasat, 2006; Kwahk and Lee, 2008; Lai and Li, 2005; Lee et al, 2005; Lee et al, 2006; Lewis et al., 2003; Liao and Cheung, 2002; Lilien et al, 2004; Lim and Benbasat, 2000; Limayem and Cheung, 2008; Limayem & Hirt, 2003[10]; Lin et al, 2005; Liu and Ma, 2005; Lopez-Nicolas et al, 2008; Lu et al, 2008; Lucas and Spitler, 2000; Mao and Palvia, 2008; Mellarkod et al, 2007; Montazemi et al., 1996; Moon and Kim, 2001; Nah & Benbasat, 2004; Ong et al, 2004; Parthasarathy and Bhattacherjee, 1998; Pavlou and Fygenson, 2006; Plouffe et al, 2001; Rai et al, 2002; Saade and Bahli, 2005; Saeed and Abdinnour-Helm, 2008; Satzinger and Lorne, 1995; Segars and Grover, 1993; Shang et al, 2005; Shih , 2004; Shih, 2004a; Son et al., 2006[11]; Srite and Karahanna, 2006; Staples et al, 2002; Straub et al, 1997; Straub, 1994; Sussman and Siegal, 2003; Szajna, 1994; Taylor and Todd, 1995; Taylor and Todd, 1995a; van der Heijden, 2003; Vandenbosch and Ginzberg, 1996; Venkatesh and Morris, 2000; Venkatesh, 1999; Venkatesh, 2000; Vijayasarathy, 2004; Walczuch et al, 2007; Wang & Benbasat, 2005; Watson and Frolick, 1993; Wixom and Todd, 2005; Wu and Wang, 2005; Yi et al, 2006; Yu et al, 2005; Zain et al, 2005.	118

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[10] The construct studied was Perceived Consequences (PQ), originally by Triandis (1980). However, it was conceptualized, as mentioned by the authors, similar to PU.
[11] The authors measured Perceived Efficiency and Perceived Effectiveness, based on measures of PU.

Usefulness Constructs in IT Research

Construct	Definition	Study(s)	Number of Studies Found
Perceived Job Fit (near-term consequences)	*"The extent to which an individual believes that using a PC can enhance their job performance"* (Thompson et al., 1991, p.129)	Thompson et al., 1991; Chang and Cheung, 2001; Chau, 1996.	3
Performance Expectancy	*"The degree to which an individual believes that using the system will help him or her to attain gains in job performance"* (Venkatesh et al., 2003, p. 447)	Al-Gahtani et al, 2007; Chiu and Wang, 2008; Venkatesh et al., 2003.	3
Relative Advantage	*"The degree to which adopting/using the IT innovation is perceived as being better than using the practice it supersedes"* (Moore and Benbasat, 1991, p. 195).	Agarwal and Prasad, 1998; Compeau et al., 2007; Karahanna et al., 1999; Lai, 1997; Lee and Kozar, 2008; Moore and Benbasat, 1991; Tan & Teo, 2000.	7
Utilitarian Outcomes	*"The extent to which using a PC enhances the effectiveness of household activities"* (Venkatesh and Brown, 2001, p. 74).	Venkatesh and Brown, 2001.	1
Perceived Net Value	*"An attitude, a valenced subjective assessment in response to all the perceived likely consequences of changing from existing technology to the proposed technology"* (Briggs et al., 1998, p. 157).	Briggs et al., 1998.	1
Outcome expectations	*"The perceived likely consequences of using computers"* (Compeau et al., 1999, p. 147).	Compeau and Higgins, 1995; Compeau et al., 1999; Johnson and Marakas, 2000 (did not measure personal outcome expectations); Lin and Huang, 2008; Marakas et al., 2007 (did not measure personal outcome expectations); Yang et al, 2007.	6

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"Perceived Fit between Users and social media (social technologies) Technologies"

Research Objectives

1. Validate and/or improve the conceptual framework depicting the various types of fit and their relationships in the context of using social media technologies.

2. Identify the main needs for using social media, and the main supplies provided by such use, in addition to identifying possible values and goals that may form the `spirit` or expressions` of social media.

Introduction

- Thank subject for participating and for their time, and briefly describe the project.

    o "I am conducting this interview as a part of my thesis project. **The focus of my study is on understanding the adoption and use of social media technologies by individuals."**

    o Explain, in layman terms, what is it that you mean by social media: FaceBook, MySpace, Twitter, Flickr, Blogs, Wikis, LinkedIn.

- You both sign consent form; ask permission to audio record interview. Make clear that only the researcher and committee members will have access to interview data, and that while we may use quote from the interview, we will not reveal the identity.

- Encourage subject to feel totally free to: request ending the interview any time; to say "N/A" or "I don't know" to any question or part of a question, or simply; "I don't want to answer this!"

- Quickly outline the format:

    - Five sections to the interview (approximately one hour).

    - Few standard demographic questions.

General Questions

1. Do you use (or ever used) any of the following (**the table**)? (for each one they use, you put a check mark and for each they don't use, you strikethrough so to remind…)

Technology	Do you use it?
FaceBook	
MySpace	
Twitter	
Flickr	
Blogs	
Wikis	
LinkedIn	
Other (specify): -	

- For each technology, we want to learn more about 'usage'; below are general 'standard' questions to be asked for all technologies, followed by technology-specific examples:

Questions for All Technologies

1. Has your organization adopted social media?

    - Do you use any of the IT mentioned before for work related activities?

    - If yes, to do what? Please provide examples.

    - Are you required to use any of these IT as part of your work?

2. Do you use any of these IT for personal use?

3. What initially brought you to use [IT]? why did you start using it?

Using social media Technologies: Needs and Supplies

1. How does using [IT] make you feel? (paying attention to replace the word using by action verbs used by your interviewee…)

    i. Why do you like/enjoy using [IT]?

2. What do you gain from using [IT]? what does it bring to you?

    i. What do you mainly use [IT] for? Are there other reasons?

    ii. Are there any motives for which you use [IT] that it doesn't completely fulfill?

    iii. Are there things that you would like [IT] to do or provide you with but that it doesn't?

3. How good would you say the fit is between your needs and what this technology provides you with?

    i. To what extent [IT] fits with you as a person? If not perfectly, in what way?

Demands - Abilities Fit

1. What are the skills required to minimally use [IT]? What do you need to know to use [IT]?

2. What do you need to know to fully use [IT] to its fullest potential?

i.   do you feel you have the abilities (knowledge, skills) to effectively use all [IT] functionalities?

ii.   If not, what do you feel you are missing? What skills/abilities/resources would you like to improve?

User - Expressions Fit

1. For [IT], do you see certain values that underlie it… that go beyond mere functionalities?

    i.   Are those values important to you?

    ii.   Why?

2. To what extent do the values embedded in [IT] match with your own personal values?

Person-Group Fit

1. What do you have in common with:

    i.   Your FaceBook contacts and/or groups?

    ii.   The followers of your blog (or the blogger you follow).

    iii.   What do you have in common with the entire [wikis] community?

2. For [IT], do you feel it makes a difference whether you have things in common with community members?

Technology	Since when do you use?	Access location (e.g. home)	Average time per day spent on use	Why Discontinued use?	Which technology was your first to use?
Facebook					
MySpace					
Twitter					
Flickr					
Blogs					
Wikis					
LinkedIn					
Other (specify): -					

FaceBook

1. What do you use Facebook for?

    i.   do you have your own page?

    ii.   Do you search/look at others' pages?

2. How many "friends" and/or "contacts" do you have?

    i.   Who are your contacts, i.e., "real-life friends"? relatives? Complete unknown?

Blogs

1. What do you use blogs for?

    i.   do you have your own?

    ii.   If you have your own, is it private (personal diary) or public?

    iii. If public, what topic(s)?

    iv.   Why do you do that, what motivates you to create and maintain a public blog?

    v.   Do you receive comments from readers of your blog(s)?

    vi.   If yes, do you reply to those comments?

2. Do you "follow" others' blogs?

    i.   If you follow others' blogs, what kind of blogs?

    ii.   What type of information/knowledge do you seek?

Twitter

1. What do you use Twitter for?

    i. Do you restrict delivery of your 'tweets' to those of friends or do you allow open access?

    ii. Why do you do that, what motivates you to create publicly accessible tweets?

2. Do you "follow" others' tweets?

    i. If you follow others' tweets, whose tweets?

    ii. What kind of tweets? What information do you seek?

Wikis

1. What do you use wikis for?

    i. do you add content/contribute to wikis?

    ii. If you add content, what topic(s)?

    iii. Why do you do that, what motivates you to contribute to a wiki?

2. Do you access wikis to acquire information or

    i. If to acquire information, what wikis and what type of information/knowledge do you seek?

MySpace

Same questions as in FaceBook.

LinkedIn

1. What do you use LinkedIn for?

    i. do you have your own profile?

ii.　What industry does your profile belong to?

iii.　Do you search/look at others' profiles?

2. Have you created any 'group'?

3. What groups?

4. How many "contacts" do you have?

5. Have you 'recommended' or been 'recommended' by someone on LinkedIn?

Flickr

1. What do you use Flickr for?

i.　do you post your own photos/videos?

ii.　Do you search/look at others' photos/videos?

2. How many "friends" and/or "contacts" do you have?

Who are your contacts, i.e., "real-life friends"? relatives? Complete unknown?

3. Do you subscribe to a certain group(s)? what group(s)?

Concluding Question

- What would be additional points that we missed and that you think are important in the context of social media?

Demographics

- **Age:**

Under 20	20 to 29	30 to 39	39-45	50 to 59	60 years and older

- **Education:**

High school	Diploma	University degree	Masters	Doctorate	Other

- **Current job title:**

- Do you access through desktop? Laptop? Cell phone? PDA? Blackberry? Other?

- Ask for name and contact of one or two persons/users to interview…(who do not work for the same company so to increase variance in terms of demographics and usage…)

Dimensions	Quotes
Connection	You know Facebook has instant messaging, so if you click on [your friends'] name and you write them a message, they'll answer you immediately….it's better than picking up the phone (RA) I think it makes being away from somebody much easier. And you really don't feel, there is no more something called immigration, there is nothing like that anymore (MN) I've moved around a lot and so this is the connection I have with people, it's a lot easier to be in touch with people. So I use it definitely to connect with my friends (JMC) Facebook is a really good tool for me to relate with my friends, friends that I haven't seen for many years but I found them, I know where they are, what they are doing…I found them through Facebook (KV) I established friendships with people that I hadn't seen in 25/30 years, so it was a good way to reconnect….I wanted to reconnect with friends so it was a very interesting way to quickly find people (KM)

Dimensions	Quotes
Information	An experience that Iranians have right now, [Facebook] is mainly a political information conveying tool….. it is something that is very important to me (KV) I really like when there are certain people on there who post really interesting articles or really interesting links that I wouldn't have discovered otherwise ….. I definitely get access to things that I maybe wouldn't have stumbled upon (JMC) I would follow all these other people who I thought had interesting…. [information]. So then I realized that I was getting a lot of my information from Twitter (JMC) On Twitter [I follow] …Zappos…because they are just interesting, they use social media in a very interesting way, it's interesting to see how they use it. [I follow] United Airlines because they actually advertise special fares (JMC) We can follow the news in Facebook and Twitter a lot better than any other websites. Because people ….if they find anything interesting, political news, they will share it with you, it's good. So if I check my Facebook it's like I'm checking 100 websites (EP)

Dimensions	Quotes
Acceptance	You cannot not have a Facebook profile, it is a peer pressure, they force you to do it, even if you don't want….. I have a friend, she disabled her profile, she deleted all her friends, she just simply wiped out herself from Facebook and it took like 2-3 months and then she was back, added all the friends again (KV) Facebook came out and it seemed like I had to do it because everybody else was doing it (UM)
Professional Networking	You meet this guy once, you have his business card and that's it. Rarely would you ever meet him again. Linkedin provides the continuity (AY) Editors [of groups I join on Facebook] are …product managers [at companies in my industry]…we started forming relationships…I think it could make it easier for me to have access to [jobs at their companies in the future] (OA)

Dimensions	Quotes
Benevolence	For me, the purpose of [social media] is that it's a means to an end…..I refer to it when I need something and if somebody writes me something and I can help them reconnect to other people, Linkedin especially does that very well (KM) What drives me [to contribute posts to Facebook groups] is that I may have knowledge that other people may not know…I have a chance to benefit them, why not? (AA) Whatever I see in Wikipedia was contributed by others and valuable to me so I feel a bit of a social responsibility to contribute back when I know something and I'm not pressed for time (CW)
Safety	You hear stories.. that this kid…getting abducted …so I figured, you know what, let me check so I go into their profile and see who they are talking to or what they're saying. I go back the whole history or sometimes, I'll even tell them, what did you say, you're not supposed to be saying that, and they don't get upset with me because they've accepted me as a friend right (RA) Well you know because they're kids so you sort of have to keep track of what they're doing. I mean that's the only reason I am on Facebook really, because I have them linked as a friend so I can see their updates …that's the main purpose (RA)

Dimensions	Quotes
Sincerity	"If a friend, I have not seen him for 2/3 years, you will not have the same intimacy anymore and I don't want to allow Facebook to create this intimacy for me, you see….. That's why I say it's artificial" (DLB) "I find it's almost fake, that's not the real you" (UF)
Freedom	It is a media platform you can use to communicate opinions that you are not able to express otherwise, you can express it through FaceBook or blogs (HS) [On Facebook] I write what I want and publish it….nobody will tell me [don't do it] (RI) Wikipedia….enables the users to avoid censorship that is ongoing from political sides or media (KV)
Privacy	People post all of their info and I think it's a little too open for my taste, we have very little privacy anymore (KM) This is the only way I communicate with my friends, by sending them a message, not by posting on their walls. This is a private communication between me and my friend, why I need others to see it? (DLB) I think there's something's that should remain personal that become public and I think a lot of us have a hard time differentiating, especially the generation that's always grown up with being connected, you don't know how to disconnect and you don't know where the boundary is between what should be shared and what shouldn't be shared (JMC)

Dimensions	Quotes
Demands-Abilities	Another, also negative point that I had on Facebook which is I was really having a hard time to know how to change settings and even one time, I just wanted to deactivate it, I don't know why, I regretted opening it and I wanted to deactivate it and I couldn't (DLB) But I used to have some trouble, maybe 2 years ago when I first started. There were certain features that were new so it took me awhile to be able to completely use the applications (KV)
User-Group Fit	I've discovered a couple of groups related to my research that have groups on Linkedin, so I signed up for those groups on Linkedin (SMC) [Web 2.0 is] about niche communities and that's the great thing, it offers a lot more opportunity for niche group and a way to connect with people who share similar interests and goals and values (AM) There must be things that are common between you and your friends or otherwise you are not friends (HG)

APPENDIX 4. MEASUREMENT INSTRUMENTS FOUND IN THE LITERATURE[12]

Constructs	Source(s)	Items	Factor Loadings	Reliabilities
User-Expression Fit (person-organization fit)	Cable and Judge (1996) Responses were anchored on a 5-point scale ranging from 1= *not at all* to 5 = *completely*	To what degree do you feel your values 'match' or fit this organization and the current employees in this organization? My values match those of current employees in organization Do you think the values and personality' of this organization reflect your own values and personality?	N/A	.87
	Cable and DeRue (2002) 7-point scale (ranging from 1 = *none* to 7 = *all*)	The things that I value in life are very similar to the things that my organization values My personal values match my organization's values and culture My organization's values and culture provide a good fit with the things that I value in life	Please see note below table[a].	.91 and .92 (2 samples)
Needs-Supplies Fit	Cable and DeRue (2002) 7-point scale (ranging from 1 = *none* to 7 = *all*)	There is a good fit between what my job offers me and what I am looking for in a job The attributes that I look for in a job are fulfilled very well by my present job The job that I currently hold gives me just about everything that I want from a job	Please see note below table[a].	.89 and .93 (2 samples)
Demands-Abilities Fit	Saks and Ashforth (1997) Participants responded to a 5-point Likert-type scale with anchors, 1 = To *a very little extent,* and 5 = To *a very large extent.*	to what extent do your knowledge, skills, and abilities match the requirements of the job?	The loadings averaged .74 (average factor loading for P-J fit)[b]	.89[b]
	Cable and DeRue (2002) 7-point scale (ranging from 1 = *none* to 7 = *all*)	The match is very good between the demands of my job and my personal skills My abilities and training are a good fit with the requirements of my job My personal abilities and education provide a good match with the demands that my job places on me	Please see note below table[a].	.89 and .84 (2 samples)

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[12] These are the unmodified items from their original sources. They were be later modified/refined as necessary.

	Hobman et al. (2003) Items were measured on a scale from 1 (strongly disagree) to 5 (strongly agree).	I feel my work values and/or motivations are dissimilar to other group members In terms of principles that guide my work (e.g., detail-oriented, re ward-driven) I think I am different from other group members	.80 . 92	.87
User-Group Fit	Kristof et al. (2002) Low, Medium, and High Person–Group (PG)	**Low P-G Fit Cues** Version A: You don't have much in common with your coworkers, and their work ethic is very different from your own. Version B: Your coworkers tend to be somewhat rude and unfriendly. They are competitive and often talk behind each other's backs. **Medium P-G Fit Cues** Version A: You have a good working relationship with your coworkers, but don't socialize with them outside of work. Although they are about your age, you don't have many common interests. Version B: Generally, you and your coworkers work well together to accomplish tasks. However, they can be unfriendly and competitive at times. **High P-G Fit Cues** Version A: Your coworkers are all about your age and have similar interests. You also have a good working relationship with your coworkers, often socializing together outside of work. Version B: You and your coworkers all work together to achieve common goals. You structure your tasks to make the best use of each group member's strengths and abilities.		

[a] For Cable and DeRue (2002), the model that hypothesized that all survey items loaded on three factors (P-O fit, N-S fit, and D-A fit) provided a better fit across all of the fit indices (more than .90) than any of the alternative models.

[b] These numbers have to be taken with caution, because there is possible confounding between P-J and D-A fit here.

APPENDIX 5. RESULTS OF THE CARD SORTING EXERCISE*

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
A. Communication			**21**	**19**	**90**
Social media help me communicate with my friends as I need	C1	7			100
Social media meet my needs to communicate with my family or relatives	C2	7			100
Social media help me communicate with my colleagues as I require	C3	5			71
B. Information			**91**	**50**	**55**
Social media fit my need to keep current about different topics	I1	4			57
I use social media to follow the news as I need	I2	6			86
Social media fit my need to follow people	I3	0			0
I use social media to get basic knowledge about topics of interest as I need	I4	4			57
Using social media fit my need to access real time information	I5	7			100
Using social media meets my need to benefit from special offers from companies	I6	2			29

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
I use social media to keep informed about interesting topics as I need	I7	4			57
Using social media meet my need to be informed about fields outside of my specialization	I8	3			43
Using social media fit my need to keep on top of my field	I9	0			0
Using social media are good tools for me to stay informed as I need	I10	5			71
Social media meet my need for reliability of information	I11	6			86
Social media meet my need for unbiased information	I12	5			71
I use social media to get information that help me in my work or my studies as needed	I13	4			57
C. Enjoyment	███		**21**	**21**	**100**
Using social media fulfills my need to enjoy myself	E1	7			100
Using social media fits my need to relax	E2	7			100
Social media help me satisfy my need to have fun	E3	7			100
D. Connection	███		**49**	**31**	**63**
Social media fit my need to get to know my friends or colleagues better	T1	3			42

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
Social media meet my need to improve the quality of relationships with my family,	T2	4			57
Social media help me stay connected with my family, friends, or colleagues as I need	T3	7			100
I use social media because they fit my need of increased interactions with people	T4	3			42
Social media fit my need to keep in touch with family, friends, or colleagues	T5	6			86
Social media fit my need to reconnect with people that I have not seen in a long time	T6	7			100
Social media make it easier for me to manage my relationships as I need	T7	1			14
E. Belonging	███	███	35	26	74
I use social media because they fit my need to be like my friends	B2	6			86
I use social media because they meet my need not to feel left out	B3	7			100
Using social media fulfills my need to conform to my friends wishes for me to join social media	B4	6			86

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
Using social media fits my need to look up to date in front of my friends	B5	0			0
I use social media because I want to fit in with my friends	B6	7			100
F. Achievement/Self Esteem	■■■		42	28	67
I comment on social media websites because it fits my need to feel smart	A1	7			100
Commenting on social media websites fits my need to get people's feedback	A2	0			0
I use social media to get feedback on my ideas when I need it	A3	0			0
Posting on social media websites meets my need for personal fulfillment	A5	7			100
Sharing my thoughts on social media fits my need for increased confidence	A6	7			100
Posting on social media fits my need for achievement	A7	7			100
G. Professional/Productivity	■■■		21	9	43
Being on social media fits my need to be more marketable	P1	1			14
I use social media to connect with my customers as needed	P2	1			14
Using social media meets my productivity needs	P3	7			100

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Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
H. Professional Networking Advantages/Gains			**28**	**19**	**68**
Using social media enables me to leverage my social network as needed to obtain professional benefits	N1	5			71
I use social media to maintain good relations with people I may need in the future	N2	3			43
Using social media fits my need to build new professional relations	N3	6			86
Using social media fits my need to establish continuity in professional relationships	N4	5			71
I. Reputation Building			**35**	**18**	**51**
Using social media fits my need to build an online reputation	R1	6			86
Posting interesting information on social media websites meets my need to demonstrate my knowledge about my field	R2	3			43
Using social media fits my need to build my professional reputation	R3	3			43
I try to post interesting information on social media websites because I need to increase my followers	R4	2			29
Social media fits my need to show off about things I am doing, or things I have done	R5	4			57

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
J. Curiosity/Exploration			**21**	**12**	**57**
Using social media meets my need to know more about these technologies	O2	3			43
I use social media because it fits my need to know more about people	O3	2			29
Using social media helps me satisfy my curiosity about things I want to explore	O4	7			100
K. Altruism			**28**	**23**	**82**
Using social media provides me with opportunities to help people as I need	U1	6			86
Using social media fits my need to help people	U2	6			86
Contributing to social media websites meets my need to be socially responsible	U5	6			86
Using social media fits my need to promote good causes	U6	5			71
L. Safety/Security			**21**	**19**	**90**
Being on social media websites allows me to keep an eye on my children's online activity as I require	S1	6			86
Having a profile on social media website(s) meets my need to keep my children safe	S2	7			100

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Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
Using social media meets my need to help keep young or vulnerable people safe	S4	6			86
M. Privacy			28	24	86
I find there is a match between my care for privacy and social media websites care for it	VP1	6			86
I believe there is too much private information being posted on social media	VP6	6			86
I think there are too many cases of privacy breaches on social media	VP9	6			86
I feel that social media websites do not share the importance I attach to privacy	VP12	6			86
N. Originality/Sincerity (vs. artificiality)			21	20	95
I believe that social media websites value authenticity in human relationships as much as I do	VS3	6			85
'Friendship' on social media doesn't feel genuine to me	VS4	7			100
I believe that relationships on social media are rather artificial	VS5	7			100
O. Freedom			28	20	71
I feel that social media websites share my freedom of expression values	VF1	6			

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
I believe that social media websites value 'being able to speak one's mind' as much as I do	VF2	5			
I believe that social media shares my value of detesting suppression	VF3	3			
I feel that social media websites share my freedom of speech values	VF4	6			
P. Professionalism			21	3	14
I find there is a match between my care for a clear boundary between my personal and professional identities, and social media websites care for it	VU1	2			
I believe that social media websites share my value of being a hard worker	VU3	0			
I believe that social media websites share my value of making good use of my time	VU4	1			
Q. Morality			42	39	93
I believe that social media's ethical values match mine	VM1	7			
I feel social media websites share my values of opposing obscenity	VM2	7			

Constructs/Dimensions	Item #	Total/7	Total Number of possible placements per construct or dimension	Correct	%
I feel there is too much content on social media that runs against my values	VM3	7			
The things that I value in life are very similar to the things that my social media websites value	VM4	6			
My personal values match social media users` values and culture	VM5	6			
The content on social media websites provide a good fit with the things that I value in life	VM6	6			
Total per coder of "correct" placement		381	**553**	**379**	**69**
% of concordance per coder		68.8969 2586			

* A separate exercise was conducted for the second-order dimensions was performed with the contribution of seven PhD students. The inter-coder agreement was 89.9% for NSF, 94% for UEF, 94.6% for UGF, and 95% for DAF.

APPENDIX 6. CONSTRUCTS, DIMENSIONS, AND THEIR RESPECTIVE ITEMS

Construct/ Dimension	Item ID	Item
Needs-Supplies Fit (12 dimensions)		**Needs-Supplies Total Items = 43 items**
Achievement	A1	I comment on social media websites because it fits my need to feel smart
	A5	Posting on social media meets my need for personal fulfillment
	A6	Sharing my thoughts on social media fits my need for increased confidence
	A7	Posting on social media fits my need for achievement
Altruism	U1	Social media provide me with opportunities to help people as I need
	U2	Social media fit my need to help people
	U5	Contributing to social media websites meets my need to be socially responsible
	U6	Social media fit my need to promote good causes
Belonging	B2	Social media fit my need to be like my friends
	B3	I believe that social media meet my need not to feel left out
	B4	Social media fulfills my need to conform to my friends wishes for me to join social media

Construct/ Dimension	Item ID	Item
	B6	Social media meet my need to fit in with my friends
Communication	C1	Social media help me have a chat with my friends as I need
	C2	Social media meet my needs to communicate with my family or relatives
	C3	Social media help me correspond with my colleagues as I require
Connection	T3	Social media help me stay connected with my family, friends, or colleagues as I need
	T5	Social media fit my need to keep in touch with family, friends, or colleagues
	T6	Social media fit my need to reconnect with people that I have not seen in a long time
Curiosity	O2	Social media meet my desire to know more about advanced technologies
	O3	Social media satisfy my eagerness to know what other people are up to
	O4	Social media help me satisfy my curiosity about things I wonder about
Enjoyment	E1	Social media fulfill my need to enjoy myself
	E2	Social media satisfy my need to relax
	E3	Social media help me satisfy my need to have fun
Information	I2	Social media help me follow the news as I need
	I5	Social media fit my need to access real time information

Construct/ Dimension	Item ID	Item
	I10	Social media are good tools for me to stay informed as I need
	I11	Social media meet my need for reliability of information
	I12	Social media meet my need for unbiased information
Professional Networking	N1	Social media enable me to leverage my social network as needed to obtain professional benefits
	N3	Social media fit my need to build new professional relations
	N4	Social media fit my need to establish continuity in professional relationships
Productivity	P3	Social media meet my productivity needs
	P4	Social media websites fit my need to make good use of my time
	P5	Social media fit my need to get help in my study or work-related tasks
	P6	Social media satisfy my need to carry out my work or my studies efficiently
Reputation	R1	Social media fit my need to build my reputation
	R5	Social media fits my need to be recognized for things I am doing, or things I have done
	R6	Social media fit my need to look up to date
	R7	Social media satisfy my desire to receive better appreciation from people

Safety	S1	If I were a parent, being on social media websites would allow me to keep an eye on my children's online activity as I require
	S2	If I were a parent, having a profile on social media website(s) would meet my need to keep my children out of harm's way
	S4	Social media meet my need to help keep young or vulnerable people safe
User-Expression Fit (4 dimensions)		**User-Expression Total Items = 14 items**
Freedom	VF2	I believe that social media websites value 'being able to speak one's mind' as much as I do
	VF3	I believe that social media share my views with regards to oppression
	VF4	I feel that social media websites share my freedom of speech values
Morality	VM1	I believe that social media's ethical values match mine
	VM2	I feel social media websites share my values regarding obscenity
	VM3	I feel there is too much content on social media that runs against my values
	VM6	The content on social media websites provide a good fit with the things that I value in life
Privacy/ Security	VP1	I find there is a match between my care for privacy and social media websites care for it
	VP12	I feel that social media websites do not share the importance I attach to privacy
	VP6	I believe there is too much personal information being posted on social media
	VP9	I think there are too many cases of security breaches on social media

Construct/ Dimension	Item ID	Item
Sincerity	VS3	I believe that social media websites value authenticity in human relationships as much as I do
	VS4	'Friendship' on social media doesn't feel genuine to me.
	VS5	I believe that relationships on social media are rather artificial
User-Group Fit (2 dimensions)		**User-Group Total Items = 7 items**
Group-Values	GV1	My contacts on social media have similar values to mine
	GV2	Social media groups that I join share my values
	GV4	My values are dissimilar to members of the groups I join on social media
	GV5	I share the same culture with members of the groups I join on social media
Group-Interests	GI2	I share a common interest with social media groups that I join
	GI4	My contacts on social media are all about my age
	GI5	Most of my contacts on social media have interests that match mine
Demands-Abilities Fit		**Demands-Abilities Total Items = 6 items**
	DA1	The match is very good between my personal skills and those required to use social media
	DA2	My abilities are a good fit with the requirements of using social media

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Construct/ Dimension	Item ID	Item
	DA3	My personal knowledge provides a good match with the demands of using social media
	DA7	There is a good fit between the time I have available and the time needed to use social media
	DA8	My Internet connection speed is too slow for my social media use needs
	DA9	My computer processing speed is too slow for my social media use needs

Social Media Survey

This survey is a part of the data collection process for the thesis research project being conducted by Moataz Soliman, PhD candidate in the Department of Decision Sciences & MIS of Concordia University (Tel.: 514.569.9677, email: m_solim@jmsb.concordia.ca) under the supervision of Dr. Anne Beaudry of the Department of Decision Sciences & MIS of Concordia University (Tel.: 514.848.2424 ext 2986, email: a.beaudry@jmsb.concordia.ca).

The main objective of this study is to understand what motivates individuals to adopt and use web 2.0 technologies, including social networking websites, blogs, and wikis. The average expected time needed to complete the questionnaire is 20 minutes.

If at any time you have questions about the survey, please contact Moataz Soliman or Dr. Anne Beaudry.

If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor, Concordia University, Dr. Brigitte Des Rosiers, at (514) 848-2424 x7481 or by email at bdesrosi@alcor.concordia.ca.

Please rank your use of each of the following social media categories by choosing the right option from the drop down menus:

Social Media Categories	Please choose the option that best describes your use of this specific social media category
Social networking (e.g., FaceBook and Linkedin)	Please Choose an Option
Microblogging (e.g., Twitter)	Please Choose an Option
Blogging (e.g., Blogger.com)	Please Choose an Option
Wikis (e.g., Wikipedia)	Please Choose an Option
Video and photo sharing (e.g., Youtube and Flickr)	Please Choose an Option
Social news websites (e.g., Digg.com)	Please Choose an Option

When did you first start using social media?	Please Choose an Option
On average, how often do you **access** social media? [Frequency of access]	Please Choose an Option
Typically, how often do you **post to** social media? [Frequency of access]	Please Choose an Option
Overall, how much time do you spend on social media each time you log on? [Duration of use]	Please Choose an Option
How many friends, followers, or connections do you have on social media?	[_____]
Have created **your own blog(s)** on social media?	Yes ☐ No ☐
If yes, how many?	[_____]
And how often do you post to **your own blog**?	Please Choose an Option
Do you **follow or join** group pages in social media?	Yes ☐ No ☐
If you answered yes, how many groups?	[_____]
Do you **post on** group pages in social media?	Yes ☐ No ☐
If you answered yes, how many groups?	[_____]
Have **created your own group(s)** on social media?	Yes ☐ No ☐
If yes, how many?	[_____]
And how often do you post to **your own group(s)**?	Please Choose an Option

Do you follow companies, subscribe to their pages, or become a fan of their pages on social media (e.g., 'Like' a company's page in FaceBook)?	Yes ☐ No ☐
If you answered yes, how many?	

And, in what industries? Please check all that apply.	Financial (e.g., banks, insurance)	☐
	Automotive (e.g., Toyota, Honda)	☐
	Retail (e.g., Walmart, Starbucks)	☐
	Sports (e.g., NHL, NFL)	☐
	Telecomm (e.g., Fido, Bell)	☐
	Manufacturing (e.g., Pratt & Whitney, Boeing)	☐
	News Media (e.g., C.B.C, The Gazette)	☐
	Transportation (e.g., Air Canada, Via Rail)	☐
	Information Technology (e.g., CGI, IBM, Apple)	☐

Do you **post on** companies pages	Yes ☐ No ☐

I use social media mostly for:

Items	Strongly disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree
Work	☐	☐	☐	☐	☐	☐	☐
Pleasure or leisure	☐	☐	☐	☐	☐	☐	☐
Staying in touch with friends or relatives	☐	☐	☐	☐	☐	☐	☐
Study	☐	☐	☐	☐	☐	☐	☐
Receiving or disseminating information	☐	☐	☐	☐	☐	☐	☐
Supporting causes	☐	☐	☐	☐	☐	☐	☐

Please indicate the extent to which you agree or disagree with each statement:

Items	Strongly disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree
I believe there is too much personal information being posted on social media	☐	☐	☐	☐	☐	☐	☐
I believe that social media websites value authenticity in human relationships as much as I do	☐	☐	☐	☐	☐	☐	☐
I believe that relationships on social media are rather artificial	☐	☐	☐	☐	☐	☐	☐

I believe that social media websites value 'being able to speak one's mind' as much as I do	☐	☐	☐	☐	☐	☐	☐
I believe that social media share my views with regards to oppression	☐	☐	☐	☐	☐	☐	☐
I believe that social media's ethical values match mine	☐	☐	☐	☐	☐	☐	☐
I share the same culture with members of the groups I join on social media	☐	☐	☐	☐	☐	☐	☐
I feel that social media websites do not share the importance I attach to privacy	☐	☐	☐	☐	☐	☐	☐
I feel that social media websites share my freedom of speech values	☐	☐	☐	☐	☐	☐	☐
I feel social media websites share my values regarding obscenity	☐	☐	☐	☐	☐	☐	☐
I feel there is too much content on social media that runs against my values	☐	☐	☐	☐	☐	☐	☐
My values are dissimilar to members of the groups I join on social media	☐	☐	☐	☐	☐	☐	☐
Social media help me have a chat with my friends as I need	☐	☐	☐	☐	☐	☐	☐

Social media meet my needs to communicate with my family or relatives	☐	☐	☐	☐	☐	☐	☐
Social media help me correspond with my colleagues as I require	☐	☐	☐	☐	☐	☐	☐
Social media help me satisfy my need to have fun	☐	☐	☐	☐	☐	☐	☐
Social media help me stay connected with my family, friends, or colleagues as I need	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to keep in touch with family, friends, or colleagues	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to reconnect with people that I have not seen in a long time	☐	☐	☐	☐	☐	☐	☐
Social media meet my need for reliability of information	☐	☐	☐	☐	☐	☐	☐
Social media meet my need for unbiased information	☐	☐	☐	☐	☐	☐	☐
Social media fits my need to be recognized for things I am doing, or things I have done	☐	☐	☐	☐	☐	☐	☐
Social media groups that I join share my values	☐	☐	☐	☐	☐	☐	☐
I use social media to follow the news as I need	☐	☐	☐	☐	☐	☐	☐

Social media fit my need to be like my friends	☐	☐	☐	☐	☐	☐	☐
I believe that social media meet my need not to feel left out	☐	☐	☐	☐	☐	☐	☐
Social media meet my need to fit in with my friends	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to get help in my study or work-related tasks	☐	☐	☐	☐	☐	☐	☐
Social media satisfy my eagerness to know what other people are up to	☐	☐	☐	☐	☐	☐	☐
Social media fulfill my need to enjoy myself	☐	☐	☐	☐	☐	☐	☐
Social media satisfy my need to relax	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to access real time information	☐	☐	☐	☐	☐	☐	☐
Social media are good tools for me to stay informed as I need	☐	☐	☐	☐	☐	☐	☐
Social media fulfills my need to conform to my friends wishes for me to join social media	☐	☐	☐	☐	☐	☐	☐
Social media meet my productivity needs	☐	☐	☐	☐	☐	☐	☐

Social media websites fit my need to make good use of my time	☐	☐	☐	☐	☐	☐	☐
Social media satisfy my need to carry out my work or my studies efficiently	☐	☐	☐	☐	☐	☐	☐
Social media enable me to leverage my social network as needed to obtain professional benefits	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to build new professional relations	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to establish continuity in professional relationships	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to build my reputation	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to look up to date	☐	☐	☐	☐	☐	☐	☐
Social media satisfy my desire to receive better appreciation from people	☐	☐	☐	☐	☐	☐	☐
Social media meet my desire to know more about advanced technologies	☐	☐	☐	☐	☐	☐	☐
Social media help me satisfy my curiosity about things I wonder about	☐	☐	☐	☐	☐	☐	☐
Social media provide me with opportunities to help people as I need	☐	☐	☐	☐	☐	☐	☐

Social media fit my need to help people	☐	☐	☐	☐	☐	☐	☐
Social media fit my need to promote good causes	☐	☐	☐	☐	☐	☐	☐
Social media meet my need to help keep young or vulnerable people safe	☐	☐	☐	☐	☐	☐	☐
Posting on social media meets my need for personal fulfillment	☐	☐	☐	☐	☐	☐	☐
Posting on social media fits my need for achievement	☐	☐	☐	☐	☐	☐	☐
I find there is a match between my care for privacy and social media websites care for it	☐	☐	☐	☐	☐	☐	☐
I think there are too many cases of security breaches on social media	☐	☐	☐	☐	☐	☐	☐
'Friendship' on social media doesn't feel genuine to me.	☐	☐	☐	☐	☐	☐	☐
The content on social media websites provide a good fit with the things that I value in life	☐	☐	☐	☐	☐	☐	☐
I comment on social media websites because it fits my need to feel smart	☐	☐	☐	☐	☐	☐	☐
Sharing my thoughts on social media fits my need for increased confidence	☐	☐	☐	☐	☐	☐	☐

Contributing to social media websites meets my need to be socially responsible	☐	☐	☐	☐	☐	☐	☐
If I were a parent, being on social media websites would allow me to keep an eye on my children's online activity as I require	☐	☐	☐	☐	☐	☐	☐
If I were a parent, having a profile on social media website(s) meets my need to keep my children out of harm's way	☐	☐	☐	☐	☐	☐	☐
The match is very good between my personal skills and those required to use social media	☐	☐	☐	☐	☐	☐	☐
My abilities are a good fit with the requirements of using social media	☐	☐	☐	☐	☐	☐	☐
My personal knowledge provides a good match with the demands of using social media	☐	☐	☐	☐	☐	☐	☐
There is a good fit between the time I have available and the time needed to use social media	☐	☐	☐	☐	☐	☐	☐
My Internet connection speed is too slow for my social media use needs	☐	☐	☐	☐	☐	☐	☐
My computer processing speed is too slow for my social media use needs	☐	☐	☐	☐	☐	☐	☐
I share a common interest with social media groups that I join	☐	☐	☐	☐	☐	☐	☐
My contacts on social media are all about my age	☐	☐	☐	☐	☐	☐	☐
Most of my contacts on social media have interests that match mine	☐	☐	☐	☐	☐	☐	☐

My contacts on social media have similar values to mine	☐	☐	☐	☐	☐	☐	☐
If I heard about a new information technology, I would look for ways to experiment with it	☐	☐	☐	☐	☐	☐	☐
Among my peers, I am usually the first to try out new information technologies	☐	☐	☐	☐	☐	☐	☐
In general, I am hesitant to try out new information technologies	☐	☐	☐	☐	☐	☐	☐
I like to experiment with new information technologies	☐	☐	☐	☐	☐	☐	☐

For these last questions, please select answers that best correspond to you.

Gender	Male ☐ Female ☐		
Age	Please Choose an Option		
What is the Geographical region you originally come from (whether or not you were born in Canada)	Please Choose an Option		
Where you born in Canada?	Yes ☐ No ☐		
If `no`, how many years have you been in Canada?	Please Choose an Option		
Education	Please Choose an Option		
Major field of study (please choose one)	Accountancy		☐
	Economics		☐
	Finance		☐
	Human Resource Management		☐
	International Business		☐
	Management		☐
	Management Information Systems		☐
	Marketing		☐
	Supply Chain Operations Management		☐

	Other (please specify)	
Are you currently working?	Full time	☐
	Part time	☐
	Not working	☐
How do you typically access? social media	Laptop	☐
	Cell phone/Smart phone (e.g., iPhone, Blackberry)	☐
	PDA/Handheld (e.g., Palm, iPod)	☐
	Desktop	☐
	Other (please specify)	

Thank you for taking the time to complete the survey!

APPENDIX 8. MESSAGE SENT TO INSTRUCTORS (TO INVITE STUDENTS TO PARTICIPATE IN THE SURVEY)

Dear COMM 226 Faculty,

The main objective of my research project is to understand what motivates individuals to adopt and use social media (web 2.0) technologies, including social networking websites, blogs, and wikis. To achieve this research objective, I have carried out a number of personal interviews with social media users. This helped me identify drivers of social media use, and patterns of that use. Interviews have also helped me refine my theoretical model. The current survey is crucial for empirically testing that theoretical model.

I request that you kindly ask the students to seriously answer the survey questions any time during the period from September 19 to September 25. Kindly also inform them that, if seriously answered, the survey will take approximately 15-20 minutes of their time, and will earn them a bonus point! You may also want to assure them that information they provide will only be used for research purposes and that their answers will not be made available to their instructor. On the last page of the survey, I will ask the students to provide their class sections and their student IDs. I will then provide you with a list of the students in your respective sections who seriously completed the survey.

The survey is hosted on JMSB server, but I have provided a less cumbersome link pointing to the survey's original location: bit.ly/moatazsocialmedia

Finally, you might also like to share with the students that you will be able to provide them with a summary of the main survey results (which I will supply you with); that would be interesting maybe to discuss/present when covering chapter 8.

Thank you again, and please feel free to contact me if you have any questions.