6-30-2017

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Recommended Citation

Brooks, S., Longstreet, P., & Califf, C. (2017). Social Media Induced Technostress and its Impact on Internet Addiction: A Distraction-conflict Theory Perspective. *AIS Transactions on Human-Computer Interaction*, 9(2), 99-122. Retrieved from <https://aisel.aisnet.org/thci/vol9/iss2/2>
DOI:

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Social Media Induced Technostress and its Impact on Internet Addiction: A Distraction-conflict Theory Perspective

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Abstract:

Using social media is the most common activity on the Internet, and much research has examined the phenomenon. While the current literature focuses on the positives of using social media, there is a comparative lack of research on its negative effects, especially in the context of the workplace. Research has identified one critical negative impact of contemporary technology as technostress, which refers to stress induced by information and communication technologies. In this paper, we apply distraction-conflict theory (DCT) to the literature on social media, technostress, and addiction to theorize that one can view social media in the workplace as a distraction conflict, which, in turn, can induce technostress and, subsequently, Internet addiction. To test this theoretical model, we conducted a survey on 1731 participants recruited from Mechanical Turk. The survey examined the similarities and differences between two popular social media platforms: Facebook and YouTube. Overall, the results provide support for positive associations between the distraction felt from social media and social media-induced technostress and between social media-induced technostress and Internet addiction. While Facebook and YouTube have similarities, we found notable differences as well. This study contributes to the IS field by using DCT as a novel and valuable lens through which researchers and practitioners can think about the negative effects of using social media at work. The paper also offers insight into implications for research, practice, and future research areas.

Keywords: Technostress, Distraction Conflict Theory, Social Media, Dark Side of IT, Negative Consequences, PLS.

The manuscript was received 10/09/2014 and was with the authors 10 months for 3 revisions.

1 Introduction

Technology has permeated many aspects of our daily lives—from the business environment to personal relationships. Thus, users can connect to the Internet through a host of devices, such as desktop computers and laptops, mobile phones, tablets, and wearable technologies. This ubiquity of end user computing has led users to experience technostress (Brillhart, 2004; Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008; Salanova, Llorens, & Ventura, 2014). Defined as stress engendered by information and communication technologies, technostress is a commonly occurring negative state in today's digital world (Ayyagari, Grover, & Purvis, 2011; Brod, 1984). Notably, research on technostress suggests that it is associated with negative effects, such as decreased job satisfaction (Ragu-Nathan et al., 2008), a reduction in job performance (Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2007, 2011), and physical issues such as memory problems and sleep difficulties (Brillhart, 2004).

Recently, research has studied technostress in the context of social media and the workplace (Bucher, Fieseler, & Suphan, 2013; Maier, Laumer, Weinert, & Weitzel, 2015). Such research has empirically validated that social media-induced technostress indeed exists and that the presence of social media-induced technostress is critical in the context of work (Bucher et al., 2013). However, several gaps remain in this budding research stream: for example, it neither identifies nor compares the different types of social media (e.g., Facebook, YouTube) nor what specific components of technostress, such as techno-overload or techno-complexity, might be associated with these platforms. While research has focused on outcomes of social media-induced technostress, such as terminating the use of Facebook (Maier et al., 2015), this stream has overlooked an important psychological consequence of stress; namely, addiction (Tice, Bratslavsky, & Baumeister, 2001). Research has linked addiction not only to technostress (Tarafdar, Pullins, & Ragu-Nathan, 2015) but also to elevated turnover intentions and reduced organizational commitment (Turel, Serenko, & Bontis, 2011).

In this paper, we investigate how the use of two types of social media in the workplace, Facebook and YouTube, impact technostress and, subsequently, Internet addiction. Moreover, we investigate how the five components of technostress (i.e., techno-overload, techno-complexity, techno-uncertainty, techno-invasion, and techno-insecurity) affect Internet addiction. To frame this complicated relationship between social media-induced technostress and Internet addiction, we ground our investigation in distraction-conflict theory (DCT) (Baron, 1986). DCT has appeared in the psychological and physiological stress literature for decades (Cohen, Glass, & Singer, 1973; Kalsbeek, 1964). However, to our knowledge, no one has yet used DCT in the context of technostress. We extend DCT into the technostress and Internet addiction literature by positioning the use of social media at work as a distraction, which, in the context of work, may be associated with an attentional conflict, which may lead to technostress and, ultimately, Internet addiction. Further, we test this association in terms of the popular social media Facebook and YouTube.

The paper proceeds as follows: in Section 2, we provide background on social media usage, technostress, and distraction-conflict theory. In Section 3, we discuss the development of our hypotheses and research model. In Section 4, we review the methodology of the two studies we conducted and present their results. Finally, in Section 5, we discuss the findings, the research's contributions and limitations, and directions for future scholars.

2 Literature Review

2.1 Social Media Usage

We define social media usage as interactions between an individual and a social media platform (e.g., Facebook). Using social media has become the most popular activity on the Internet. Research suggests that individuals devote 27 percent of the time they spend online to social media—more than entertainment, email, and news activities combined (Tatham, 2013). This substantial use of social media is not limited to just personal time; it also bleeds into the workplace and has drastically altered the way employees work (Ott, 2010). In a sample of over a thousand business professionals, employees admitted to routinely checking their Facebook, LinkedIn, and Twitter “inboxes” throughout the workday (Ott, 2010). Such routine checking of social media at work has been found to have negative effects. In fact, a survey of more than 168,000 respondents worldwide conducted by KellyOCG found that 43 percent of respondents believed the use of social media in the workplace had a negative impact on their productivity (Kelly Services, 2012).

We do not understand social media usage in the workplace well (Treem & Leonardi, 2012) (see Appendix A for a sample of social media studies). While using social media may have some benefits, such as staying in contact with friends and family on Facebook (Qualman, 2012), sharing multimedia via Flickr and YouTube, and increasing learning and knowledge through wider access to information on Wikipedia (Moorhead et al., 2013), it has negative effects as well (Charoensukmongkol, 2014). For example, recent research has found that the more friends a user has on Facebook, the greater stress they feel (Marder, 2012). While this research stream is not new, research on the negative effects of social media at work is sparse (Treem & Leonardi, 2012).

2.2 Organizational Stress and Techno-stress

Organizational stress typically comprises individuals' perceptions of the demands placed on them by challenging stimuli, known as "stressors", and their psychological responses to such demands, known as "strain" (Ayyagari et al., 2011; Cooper, Dewe, & O'Driscoll, 2001; McGrath, 1976). Stressors represent "events, demands, stimuli, or conditions encountered by individuals in the work/organizational environment as factors that create stress", and strain refers to "the behavioral, psychological, and physiological outcomes of stress that are observed in individuals" (Ragu-Nathan et al., 2008, p. 419). Examples of stressors in the workplace may include role ambiguity, conflict, and work overload, and examples of strain may include job satisfaction, organizational commitment, and turnover intention (Spector & Jex, 1998).

The information systems (IS) field has long embraced the stressor-strain relationship. For example, early IS research on stress investigated such workplace stressors as rapid technological changes, time pressure, and workload and overload (Ivancevich, Napier, & Wetherbe, 1983; Weiss, 1983) and their impact on workplace strain (Baroudi, 1985; Bartol, 1983; Ivancevich et al., 1983; Weiss, 1983). Recently, the IS field has adopted a more technology-centric approach to stress research, an approach that has been termed *technostress*.

Researchers have defined technostress as a contemporary disease of adaptation caused by an inability to cope with new technologies (Brod, 1984) or, more specifically, negative attitudes, thoughts, behaviors, or physiology caused directly or indirectly by technology (Weil & Rosen, 1997). Symptoms of technostress include an inability to concentrate, irritability, and a feeling of loss of control (Ibrahim, Bakar, & Nor, 2007). It may also inhibit learning or one's ability to use computer and information technology (Wang, Shu, & Tu, 2008). This literature stream has also embraced the concept of stress in terms of stressors and strain (Ayyagari et al., 2011; Maier et al., 2015; Ragu-Nathan et al., 2008; Tarafdar et al., 2007; Tarafdar, Tu, & Ragu-Nathan, 2010). Strain refers to the *outcome* of technostress, and includes variables such as job satisfaction, organizational commitment, continuance commitment, exhaustion, and discontinuous usage intention (Maier et al., 2015; Ragu-Nathan et al., 2008). The stressors refer to the source of technostress and include five primary components: techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty (Ragu-Nathan et al., 2008). Since these sources of technostress are especially relevant to this study, below we define each of them per Ragu-Nathan et al. (2008):

- Techno-overload describes situations where information and communication technologies (ICTs) force users to work faster and longer.
- Techno-invasion describes the invasive effect of ICTs in creating situations where users may potentially be reached anytime, where users feel a constant need to be "connected", and where a blurring between work-related and personal states occurs.
- Techno-complexity describes situations where the intricacies of ICTs make users feel inadequate in terms of skills or forced to spend time and effort learning and understanding various aspects of new technology.
- Techno-insecurity describes situations where users feel threatened about losing their jobs to those with a greater knowledge of the ICT.
- Techno-uncertainty describes contexts where continuous changes in an ICT unsettle users who feel they must continuously master any new changes in the ICT.

Though these primary components of technostress have produced a robust literature stream, an apparent gap in the literature relates to context-specific phenomena (e.g., the effects social media in the context of work). To address how technostress as a whole and in component form relates to social media, we draw on a well-known theory in psychological research, distraction-conflict theory, which suggests distractions from a task can lead to an attentional conflict and, subsequently, increase levels of stress (Baron, 1986).

Below, we expand on this idea that one can use distraction-conflict theory to explain how the sources of technostress can be associated with distractions in the context of social media and how the five sources of technostress can influence Internet addiction.

2.3 Distraction-conflict Theory

While most of the technostress literature has adopted the person-environment fit lens to study stressors and strains (Ayyagari et al., 2011), we chose another promising lens: distraction-conflict theory (DCT) (Baron, 1986). DCT suggests that, in the workplace, individuals are subject to distractions caused by secondary tasks that disrupt their ability to cognitively process the information required to complete a primary task (Baron, 1986). In turn, the distraction leads to “attentional conflict” during which the individual decides how to respond. This decision has been linked to elevated stress levels (Baron, 1986). The individual then has an outcome associated with the stress, such as the susceptibility to addiction. According to DCT, distractions constitute any stimuli irrelevant to the task at hand (Sanders, Baron, & Moore, 1978). These distractions can produce attentional conflict between the primary task and the distractor, especially when the distraction is interesting and/or hard to ignore (Baron, 1986). This type of conflict may also lead to cognitive overload, which can elevate stress in the individual.

Research on stress and distractions has mainly focused on a concept called *distraction stress* (Cohen et al., 1973; Kalsbeek, 1964), which positions that the stressor as environmental stimuli distracts the subject from the task at hand. For example, Kalsbeek (1964) conducted lab experiments that measured subjects' performance on a primary task while investigators distracted them with a secondary task. Similarly, Cohen et al. (1973) positioned nearby traffic as a distractor in order to study how noise affects children's reading scores. They found that children who lived closer to traffic noise had lower reading scores than children further removed from the noise.

In the current study, we investigate technostress induced by social media in the workplace through the lens of DCT. In essence, we argue that, for individuals engaged in completing primary tasks, social media represents a distraction from a work task (in other words, it represents a stressor that could result in attentional conflict). We position the five sources of technostress as the technological components of social media that may serve to distract workers from their primary tasks and lead to an attentional conflict and, subsequently, technostress. When Facebook distracts a worker, for example, the worker may forget the information needed to process the worker's primary tasks and cues may be lost or never enter working memory (Speier, Valacich, & Vessey, 1999). This cognitive difficulty is sometimes associated with a time lag in regaining the mental state held before the distraction, and, as a result, actual productive time lost due to distraction may be greater than originally assumed (Trafton, Altmann, Brock, & Mintz, 2003). We argue that checking a social media platform such as Facebook in the midst of a work task could lead one to process multiple inputs, elevating the stress induced by social media.

2.4 Stress and Addiction

Research has long argued addiction as an unfortunate effect of stress (Sinha, 2008). Several studies in the medical literature have confirmed this relationship. Sinha (2001) found that individuals under stress are more vulnerable to drug abuse. While not generally discussed in the medical literature, several explanations have arisen in the psychology literature that may explain this finding. One study suggests that, when in distress, individuals may fail to self-regulate their destructive tendencies, which gives rise to a lack of self-control. Another study posits that emotional regulation is inhibited during distress (Tice et al., 2001). Such theories have one premise in common; that is, that “an individual's ability to control his or her impulses deteriorate when he or she is distressed” and that “failures in impulse control have been linked to a broad spectrum of personal and social problems, including addiction” (Tice et al., 2001, p. 53).

While one may argue that addiction symptoms may be unrelated to the Internet or technology, evidence suggests otherwise. Addiction to social media may comprise some of the factors that underlie substance-related addictions (Kuss & Griffiths, 2011). Another study found that the brain scans of 17 subjects addicted to the Internet resembled those of cocaine addicts (Lin et al., 2012). In fact, Tarafdar et al. (2015) surveyed 3,100 organizational employees and found that, of the employees who reported feeling stressed by technology at work, 46 percent exhibited medium to high addictive symptoms to the same technology that “stresses them out”.

Under the lens of DCT and based on this aforementioned previous research, we position Internet addiction as a probable outcome of stress induced by a distraction conflict (Baron, 1986). Following this research, we

argue that employees who experience technostress are likely to exhibit symptoms associated with Internet addiction.

2.5 Social Media, Technostress, DCT, and Addiction

To summarize, we argue that, in the context of the workplace, social media represents a distraction from a task. Following the lens of DCT, a social media-induced distraction may be associated with attentional conflict and, subsequently, stress induced by social media. Further, we argue that the technology-centric distractions include the five sources of technostress (i.e., the stressors in the stressor-strain relationship). Following this line of reasoning, the strain, or the outcome of stress, is the susceptibility to Internet addiction. Thus, individuals who experience social media-induced technostress are likely to have addiction-like symptoms (Tarafdar et al., 2015).

3 Hypothesis Development

We use distraction-conflict theory and previous research on social media, technostress, and addiction to develop our hypotheses. With these hypotheses, we discuss social media solely in terms of social networks and content communities (Kaplan & Haenlein, 2010)—specifically, Facebook (a social network) and YouTube (a content community) given that they are the most popular social media websites (Statista, 2016). In the United States, Statista reports that Facebook comprises 43.2 percent of social media use, and YouTube comprises 22.7 percent. Moreover, a recent Pew Research Center study reports that Facebook is by far the most commonly used social media platform (Greenwood, Perrin, & Duggan, 2016)¹. In considering these hypotheses, one should note that each platform affords its own benefits to users (Majchrzak, Faraj, Kane, & Azad, 2013; Treem & Leonardi, 2012), and, as such, we have contextualized the examples provided specifically to the affordances that each platform provides.

To investigate social media-induced technostress and its impact on Internet addiction from a DCT perspective, we used both second- and first-order perspectives of technostress. The second-order perspective offers insights into technostress as a whole, while the first-order perspective sheds light on the five variables that comprise technostress. Below, we begin with hypotheses associated with the second-order model (Figure 1) and then turn to those associated with the first-order model (Figure 2).

3.1 Second-order Research Model

3.1.1 Distraction and Technostress

Research has viewed social media as a distraction in the workplace. According to a study conducted by Harmon.ie, the email software provider, about 60 percent of workplace distractions are related to technology, and about 9 percent of those involve social networks (Harmon.ie, 2014). These distractions may occur for several reasons. That is, a quick glance at Facebook may reassure employees that they are connected to friends and family and up to date with information. Others may watch videos on YouTube as a form of stress relief. However, according to DCT, any distraction from a task could lead to an attentional conflict, which may elevate stress levels (Baron, 1986). It follows that, if social media constitutes a distraction in the workplace, users are more likely to experience an attentional conflict between their primary task and the secondary task of checking social media. Facebook, the world's largest social network, appears to induce greater stress than other social networking websites (Benzinga, 2013), and the more Facebook friends individuals have, the more likely they will feel stressed out by using social media itself (The Telegraph, 2011). Therefore, we hypothesize:

H1: Higher levels of perceived distraction of social media are positively associated with social media-induced technostress.

3.1.2 Technostress and Internet Addiction

Previous research has implied a strong link between stress and addiction. Lee, Chang, Lin, and Cheng (2014) found that technostress is strongly related to compulsive behaviors, which other research has shown to be strongly related to addiction (Tice et al., 2001). While scarce in the IS field, extensive research in the medical community has confirmed this relationship as well. For example, Goeders (2003) found empirical

¹ The Pew Research Center study does not include YouTube in its sample.

evidence for an association between stress and drug addiction that may exhibit the same underlying symptoms as Internet or social networking service (SNS) addiction. As Kuss and Griffiths (2011, p. 3530) note: “SNS addiction incorporates the experience of the ‘classic’ addiction symptoms, namely mood modification, salience, tolerance, withdrawal symptoms, conflict, and relapse”. Under DCT, addiction represents the response to the arousal (stress) that the attentional conflict induces (Baron, 1986). Based on this research, we hypothesize:

H2: Higher levels of social media-induced technostress are positively associated with Internet addiction.

Figure 1. Second-order Research Model

3.2 First-order Research Model: Distraction, Technostress Creators, and Addiction

While we hypothesized that using social media in the workplace represents a distraction, we also argue that it may be associated with all five sources of technostress (i.e., techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty) (Ragu-Nathan et al., 2008). Below we develop the first-order model hypotheses.

3.2.1 Overload

According to DCT, “an indecision or uncertainty about what attentional response to make might stress the organism” and that “the overload of attempting to attend to and process multiple inputs could elevate stress” (Baron, 1986, p. 5). In the context of the workplace, an employee is likely to experience stress when deciding how to respond to distractions from social media and experience cognitive overload when processing multiple streams of information (e.g., news, posts, and pictures). Coupled with recalling the information necessary to complete primary work tasks, a deluge of information may cause the employee to experience some degree of information overload (Fisher & Wesolkowski, 1999). In fact, research has cited information overload as one of the primary behaviors that psychologists look for in assessing Internet addiction (Widyanto & Griffiths, 2006). Tarafdar et al. (2015) found that overload may be highly related to Internet addiction. Thus, such overload is likely to be associated with social media as a distraction, to increase stress levels, and, therefore, to influence addiction. Based on this research, we hypothesize:

H3a: Higher levels of perceiving social media as a distraction positively influence techno-overload.

H4a: Higher levels of techno-overload are associated with higher levels of Internet addiction.

3.2.2 Invasion

Research suggests that increased usage and dependence on technology, such as social media, may blur the line between work and home life (Ayyagari et al., 2011; Gant & Kiesler, 2002; Perrons, 2003; Tarafdar et al., 2007). In the context of social media, this blurring may occur because social media affords users the ability to routinely inquire about what their friends and family are doing. In this sense, features of social media such as Facebook have the potential to distract employees from their primary tasks, and, according to DCT, this distraction is likely to subsequently elevate arousal and stress levels (Ayyagari et al., 2011; Baron, 1986). Research has found certain features associated with social media to be related to an increase in Internet addiction. Kubey, Lavin, and Barrows (2001) found that, for college students, keeping in touch with family and friends via the Internet was particularly important, especially for so-called “lonely students”, and that such students were likely to exhibit Internet dependency. Because research has cited the workplace as a potentially lonely place (Ozcelik & Barsade, 2011), it follows that employees who experience social media as a distraction are susceptible to the stress associated with features of social media that blur the line between work and home life, and, subsequently, that they become susceptible to Internet addiction. Therefore, we hypothesize:

H3b: Higher levels of perceiving social media as a distraction positively influence techno-invasion.

H4b: Higher levels of techno-invasion are associated with higher levels of Internet addiction.

3.2.3 Complexity

Research has found techno-complexity to be a core component of technostress as induced by social media (Bucher et al., 2013). Users who interact with technology such as social media often switch communication patterns from one social medium to another while simultaneously managing work tasks (Ayyagari et al., 2011; Moore & Benbasat, 1991), which, we argue, is a fundamental reason why social media represents the type of distraction conflict embedded in DCT that engenders stress and, subsequently, Internet addiction. Adapting to the complexity driven by continuous changes in mental processing and media may be extremely stressful for an employee (Ragu-Nathan et al., 2008), which, in turn, may be associated with addiction (Kuss & Griffiths, 2011; Tice et al., 2001). As such, we hypothesize:

H3c: Higher levels of perceiving social media as a distraction positively influence techno-complexity.

H4c: Higher levels of techno-complexity are associated with higher levels of Internet addiction.

3.2.4 Insecurity

D'Arcy, Gupta, Tarafdar, and Turel (2014, p. 110) describe techno-insecurity as “feelings of insecurity in the face of unfamiliar IT”. In the context of social media, Bucher et al. (2013, p. 1647) describe insecurity as a decrease in one’s “sense of job security due to new technologies”, and Maier, Laumer, Eckhardt, and Weitzel (2012) argue that it exists when employees describe their job as insecure, and fear losing their job to employees with more sound technology skills. While the individuals in our study did not use social media for work-related tasks, they could still feel insecure about their skills in browsing social media at work. Such insecurity has the potential to coexist in the workplace (Tarafdar et al., 2007) and, according to DCT, may be intensified due to the conflict incurred by the distraction due to social media usage. As an example, during a Facebook browsing session, a worker may have trouble posting a link or uploading a picture and, in turn, feel insecure about their technology skills. The user experiences stress induced by Facebook in terms of the user’s techno-insecurity, which, in turn, is associated with heightened stress levels that inhibit impulse control and create the potential of addictive behaviors (Tice et al., 2001). Thus, we hypothesize:

H3d: Higher levels of perceiving social media as a distraction positively influence techno-insecurity.

H4d: Higher levels of techno-insecurity are associated with higher levels of Internet addiction.

3.2.5 Uncertainty

Research has empirically found that techno-uncertainty exists in the realm of social media (Bucher et al., 2013); that is, “unlike real-life dialogue, the social media dialogue happens on many platforms simultaneously and includes myriads of participants.... This constantly changing communicating situation...causes a great deal of uncertainty” (Bucher et al., 2013, p. 1656). We argue that uncertainty related to the continuously changing nature of social media may likely exist when users are distracted by social media in the workplace, itself laden with constant change and uncertainty, which have both been linked to stress (Pollard, 2001). Combined with the distraction from a primary task caused by interacting with social media at work, such uncertainty may be induced by social media itself. Given elevated technostress levels due to techno-uncertainty, users may also experience the symptoms of Internet addiction (Tice et al., 2001). As such, we hypothesize:

H3e: Higher levels of perceiving social media as a distraction positively influence techno-uncertainty.

H4e: Higher levels of techno-uncertainty are associated with higher levels of Internet addiction.

Figure 2 provides the first-order research model.

Figure 2. First-Order Research Model

4 Methodology

To test the hypotheses, we employed an online survey to gather the data needed to test our models. Much research has used the survey method selected as its primary means to collect perceived cognitive measures such as those we employ here.

4.1 Subjects

We solicited subjects through Amazon's Mechanical Turk (MTurk). Previous studies have found that MTurk participants are more diverse than the standard Internet samples and significantly more diverse than college student samples (Buhrmester, Kwang, & Gosling, 2011). The Human Intelligence Task listing on MTurk specified that participants must be social media users, working professionals, and at least 18 years' old. We compensated participants for completing the survey. A total of 2,667 participants agreed to complete the survey.

Since we collected data via a survey, we rigorously cleaned it to verify its legitimacy. We removed individual responses if the participant did not identify as a social media user, failed to answer the attention-checking question correctly, or indicated they were unemployed. Additionally, we removed responses with more than 25 percent of values missing or more than 90 percent repeated values (e.g., answering strongly disagree to almost all questions) from the dataset. Using Qualtrics for our survey tool, we could check IP addresses and time stamps to insure that surveys were submitted at different times and from different computers. This stringent purge reduced the sample for analysis to 1731. Table 1 provides descriptive statistics about the sample.

Table 1. Demographic Details

	Mean	SD	Range
Age	32.40	9.55	18-81
Social media hours/week	22.55	21.11	1-40

% of social media usage on Facebook	67.3%	22.61	0-100
% of social media usage on YouTube	32.7%	22.60	0-100
Gender	47.5% male		
Self-defined Internet addicts	47.4%		

4.2 Social Media

As we note above, we discuss the hypotheses solely in terms of the features of social networks (e.g., Facebook) and content communities (e.g., YouTube) because they are the most popular types of social media (Statista, 2016). These two types of social media have similarities and differences that make comparing them interesting. Both allow users to provide and consume user-generated content. Both allow for a medium level of media richness in that individuals can use multimedia. One key difference between a social network and a content community is in the amount of self-presentation/self-disclosure (Kaplan & Haenlein, 2010). Facebook allows a high level of self-presentation: it strongly encourages users to provide content to their network and update their connections about recent events and life status. Social networks encourage a balance between providing and consuming content. YouTube does not have this similar balance. Content communities provide a low level of self-presentation. Users are generally not required to create an account, provide personal details, or create a network of like-minded users. Many YouTube users remain anonymous and do not ever provide content to the community, so the level of consumption can be much higher than that of generation. This difference in usage and participation should provide both similar and differing results.

To determine usage of the two platforms, we screened each participant for how much time they spent on Facebook and/or YouTube in percentage (e.g., 70% Facebook & 30% YouTube).

4.3 Measures

We measured Internet addiction with the 20-item Internet addiction test (IAT) as presented by Young (1998) and validated in Widyanto and McMurrin (2004). The 20-item IAT evaluates the degree of preoccupation with the Internet, its compulsive use, behavioral problems, emotional changes linked to Internet use, and the impact of Internet use on human functioning. The 20 items provide a composite score for Internet addiction.

We measured social media-induced technostress using items from Tarafdar et al. (2007). We adapted items from the original instrument (specifically the techno-overload, techno-invasion, techno-uncertainty, techno-insecurity, and techno-complexity aspects) for the social media-based nature of this study. As we examined models of both Facebook and YouTube, we presented participants with social media-induced technostress items for the social media that they reported using. Appendix A2 shows these items.

We measured distraction from social media with eight items created for this study due to a lack of established validated scales in DCT literature. We conducted a pilot study to validate the instrument. We provided a survey that asked about the distraction posed by social media to 150 social media-using college students. We measured items on a five-point Likert scale anchored with “not distracting” to “very distracting.” An EFA conducted for the pilot study data found a single factor with an eigenvalue greater than 1.0 that explained 67.4 percent of the variance. Cronbach’s alpha for the scale was .892. Sample items included “How distracting is social media to you at work?” and “How distracting is the urge to use social media when you should be working?”. All items loaded acceptably at 0.6 or above (Hair, Hult, Ringle, & Sarstedt, 2013). Once the instrument demonstrated adequate reliability, we included it in the main study.

Other measures in the statistical model included gender, age, and a marker variable, idea shopping (Arnold & Reynolds, 2003). Idea shopping is part of hedonic shopping motivations and should have no theoretical relationship with the constructs of this study, which satisfies the criteria for a marker variable.

4.4 Analysis

We used SmartPLS 3.0 to analyze the data for both statistical models (Ringle, Wende, & Becker, 2014). PLS is an appropriate statistical technique used to investigate the existence of relationships rather than to test or improve model fit. We analyzed four different path models: the second-order model for both Facebook and YouTube, and the first-order model for Facebook and YouTube. Of the 1731 responses, 1716 confirmed they use Facebook, and 1248 confirmed they used YouTube. Thus, we analyzed the response relevant to

the social media-induced technostress items for the two social media.

Before analyzing the structural models, we conducted bootstrapping analysis with 5000 resamples (Hair et al., 2013) and ran the PLS algorithm to detect any convergent and discriminate validity issues. These analyses found no convergent or discriminate validity issues because all items loaded primarily to their respective constructs and both the second-order and first-order models for both Facebook (Tables 2 & 3) and YouTube (Tables 4 & 5) met the Fornell-Larcker criterion (Hair et al., 2013).

Table 2. Composite Reliability and Correlation of Constructs, Second-order Model: Facebook
Square Root of AVE in Diagonal (All Correlations $p < .05$)

	CR	1	2	3	4	5
1. Age	1	1				
2. Distraction	1	-.220	1			
3. Gender	1	.023	-.026	1		
4. Internet addiction	1	-.141	.507	-.152	1	
5. Technostress	.95	-.086	.442	-.158	.648	.71

Table 3. Composite Reliability and Correlation of Constructs, First-order Model: Facebook
Square Root of AVE in Diagonal (All Correlations $p < .05$)

	CR	1	2	3	4	5	6	7	8	9
1. Age	1	1								
2. Distraction	1	-.220	1							
3. Gender	1	.023	-.026	1						
4. Internet addiction	1	-.141	.507	-.152	1					
5. Techno-complexity	.92	-.001	.315	-.151	.530	.832				
6. Techno-insecurity	.94	-.061	.358	-.165	.580	.810	.869			
7. Techno-invasion	.88	-.112	.479	-.104	.636	.643	.700	.806		
8. Techno-overload	.95	-.094	.404	-.151	.573	.682	.741	.751	.906	
9. Techno-uncertainty	.91	-.100	.258	-.042	.282	.314	.371	.368	.384	.846

Table 4. Composite Reliability and Correlation of Constructs, Second-order Model: YouTube
Square Root of AVE in Diagonal (All Correlations $p < .05$)

	CR	1	2	3	4	5
1. Age	1	1				
2. Distraction	1	-.22	1			
3. Gender	1	.023	-.026	1		
4. Internet addiction	1	-.141	.507	-.152	1	
5. Technostress	.95	-.051	.330	-.114	.488	.71

Table 5. Composite Reliability and Correlation of Constructs, First-order Model: YouTube
Square Root of AVE in Diagonal (All Correlations $p < .05$)

	CR	1	2	3	4	5	6	7	8	9
1. Age	1	1								
2. Distraction	1	-.220	1							
3. Gender	1	.023	-.026	1						
4. Internet addiction	1	-.141	.507	-.152	1					

5. Techno-complexity	.91	.021	.200	-.111	.361	.814				
6. Techno-insecurity	.93	-.022	.250	-.118	.408	.763	.853			
7. Techno-invasion	.88	-.071	.375	-.092	.496	.548	.652	.808		
8. Techno-overload	.96	-.070	.292	-.091	.429	.588	.682	.724	.906	
9. Techno-uncertainty	.91	-.058	.177	-.014	.192	.250	.363	.363	.381	.848

Common method bias did not appear to be an issue in this sample. Harman's single factor test showed that a single factor would only account for 39 percent of the variance in the model. Additionally, the marker variable did not have any significant relationships with the constructs of interest ($p > .10$) (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). After we completed the initial analysis, we tested our hypotheses. We then used SmartPLS 3.0 to examine the model and test the hypothesized relationships. We estimated missing data with the mean replacement algorithm. To establish a relationship between distraction, technostress, and Internet addiction, we analyzed the second-order technostress construct for both Facebook and YouTube. Once we found relationships, we analyzed first-order models for both social media data sets.

4.5 Results

Hypothesis 1 states that higher levels of distraction are associated with higher perceived social media-induced technostress. We found that the distraction that social media poses had significant positive relationships with social media-induced technostress, which supports H1 for both Facebook and YouTube ($\beta = .44$, $p < .001$; $\beta = .33$, $p < .001$, respectively). Following this, Hypothesis 2 claims that higher levels of technostress are associated with higher levels of Internet addiction. We found that perceived social media-induced technostress had significant positive relationships with Internet addiction, which supports H2 for both Facebook and YouTube ($\beta = .44$, $p < .001$; $\beta = .33$, $p < .001$, respectively). Finally, both control variables, age ($\beta = -.09$, $p < .001$; $\beta = -.12$, $p < .001$, respectively) and gender ($\beta = -.05$, $p < .01$; $\beta = -.10$, $p < .001$, respectively), had significant relationships with Internet addiction for both Facebook and YouTube. Figure 3 shows the statistical model.

Figure 3. Second-order Statistical Model

Once we found significant relationships for the second-order technostress construct, we analyzed the five first-order technostress aspects in the measurement model. Hypotheses 3a-3e posit that the distraction caused by social media has a positive relationship with the five technostress aspects. For Facebook, the distraction from social media had a significant positive relationship with each of the five technostress aspects, which supports H3a to H3e ($\beta = .32$, $p < .001$; $\beta = .36$, $p < .001$; $\beta = .48$, $p < .001$; $\beta = .40$, $p < .001$; $\beta = .26$, $p < .001$, respectively). For YouTube, the distraction from social media had a significant positive relationship with each of the five technostress aspects, which supports H3a to H3e ($\beta = .20$, $p < .001$; $\beta = .25$, $p < .001$; $\beta = .38$, $p < .001$; $\beta = .29$, $p < .001$; $\beta = .18$, $p < .001$, respectively). Hypotheses 4a to 4e posit that higher levels of each of the five technostress aspects have positive relationships with Internet addiction. For Facebook, the data supports H4a to H4d but not H4e ($\beta = .08$, $p < .05$; $\beta = .16$, $p < .001$; $\beta = .39$, $p < .001$; $\beta = .09$, $p < .01$; $\beta = .01$, $p > .10$, respectively). For YouTube, the data supports H4a, H4c, and H4d but not H4b or H4e ($\beta = .07$, $p < .05$; $\beta = .07$, $p < .10$; $\beta = .34$, $p < .001$; $\beta = .08$, $p < .05$; $\beta = -.01$, $p > .10$, respectively). Figure 4 shows the statistical model.

Facebook (top) and YouTube (bottom).

*: $p < .05$; **: $p < .01$; ***: $p < .001$; ns: non-significant

Figure 4. First-order Statistical Model

5 Discussion

In this study, we use DCT to argue that social media use at work is associated with a distraction and attentional conflict, which induces stress associated with social media, an outcome of which is Internet addiction. Specifically, we theorize that two different types of social media, Facebook and YouTube, are associated with technostress in general, along with several components of it, and that such stress can generate Internet addiction-like symptoms. Using DCT as our primary lens, we developed and tested a research model to corroborate this relationship. The results show that, when employees view Facebook or YouTube as a distraction from work, social media-induced technostress may arise from an attentional-conflict, which can also increase their susceptibility to Internet addiction. The results provide support for most of our hypotheses for both the first- and second-order models. Moreover, we found more similarities than differences in our model when investigating Facebook and YouTube. Overall, this study extends current literature on DCT and underscores the importance of studying the potential hazards or “dark side” of social media. Table 6 summarizes our results.

5.1 Implications for Research

This study has several implications for research. First, the current study introduces distraction-conflict theory into the technostress literature. Psychological and physiological stress studies have long used distraction-conflict theory (e.g., Baron, 1986), but it remains underused in the IS field in the context of stress and technology. Introducing DCT into technostress research supplies IS researchers with a novel lens through which to interpret technostress and its role in the workplace. In this vein, the introduction and application of a new theoretical lens can challenge researchers to depart from traditional ways of thinking about stress in the context of technology (Riedl, 2012), such as relying on widely used theoretical concepts embedded in person-environment fit theory (Ayyagari et al., 2011).

Table 6. Summary of Hypotheses

Hypothesis	Facebook	YouTube
H1: Distraction (+) → technostress (+)	Supported	Supported
H2: Technostress (+) → Internet addiction (+)	Supported	Supported
H3a: Distraction (+) → techno-overload (+)	Supported	Supported
H3b: Distraction (+) → techno-invasion (+)	Supported	Supported
H3c: Distraction (+) → techno-complexity (+)	Supported	Supported
H3d: Distraction (+) → techno-insecurity (+)	Supported	Supported
H3e: Distraction (+) → techno-uncertainty (+)	Supported	Supported
H4a: Techno-overload (+) → Internet addiction (+)	Supported	Supported
H4b: Techno-invasion (+) → Internet addiction (+)	Supported	Supported
H4c: Techno-complexity (+) → Internet addiction (+)	Supported	Supported
H4d: Techno-insecurity (+) → Internet addiction (+)	Supported	Not supported
H4e: Techno-uncertainty (+) → Internet addiction (+)	Not supported	Not supported

This study also melds the research streams of technostress and Internet addiction by theorizing and examining the relationship among social media, technostress, and Internet addiction. Although the IS community often places these research streams into an overall category of research regarding technology's "dark side" (Lee et al., 2014; Tarafdar et al., 2015), to our knowledge, no research has linked them in one model. Guided by DCT, our results underscore the importance of these variables' being viewed under one theory and examined in a single model. Specifically, we uncover that social media use at work is strongly related to technostress as a whole and that several of the technostress creators are associated with Internet addiction. This finding adds to recent findings that suggest stress-like symptoms exhibited by end users may be engendered by technology, and that this stress may lead to addictive symptoms in some end users (Tarafdar et al., 2015). This finding may also confirm certain psychological theories of stress that discuss a feedback loop from stress to addiction and back again (Chartered Management Institute, 2016). In other words, the more addicted we become to technology, the more stress it generates and vice versa.

This study also builds on the foundational research stream of technostress (e.g., Ragu-Nathan et al., 2008; Tarafdar et al., 2007, 2015; Tarafdar, Tu, & Ragu-Nathan, 2010), and provides more support for the novel stream on technostress in the context of social media (e.g., Maier et al., 2015). Rather than only examining technostress in a broad technological context, we empirically examine the five sources of technostress in the context of Facebook and YouTube specifically in order to identify, more specifically, several mechanisms of technostress associated with these platforms and how these platforms are related to Internet addiction.

The results of the study also suggest that technology not designed by an end user's organization may be associated with an increase of stressful feelings due to the inherent distracting nature of technology. More often than not, research assumes that individuals use the technology in the research on technostress for work purposes (Maier et al., 2015) or was designed by an end-user's organization. However, we found that employees may view Facebook and YouTube (which were not designed by any specific organization associated with our study) as both a distraction and stressful, which underscores that technologies that were not designed for explicit work tasks can also be associated with stress in the context of work.

Finally, our results provide additional support for understanding the "dark side" of technology (D'Arcy et al., 2014). Using technologies thought to be fun and entertaining does not always lead to the expected positive outcomes as much research assumes. In this sense, one needs to remember that, when using a technology, both positive and negative consequences may occur.

5.2 Implications for Practice

The results of the current study also have implications for practice. The results show that employees who consider social media (e.g., Facebook or YouTube) a distraction are extremely likely to develop technology-related stress and that stress is highly likely to be associated with Internet addiction. More specifically, the results indicate that the relationships among these variables are, for the most part, highly similar across

Facebook and YouTube. For example, regardless of the platform, employees viewed Facebook and YouTube as a significant distraction and viewed such distractions from Facebook and YouTube as highly related to each of the five components of technostress, which implies that social media platforms as a whole may have similar negative effects on employees' stress levels. In this sense, when making social media policies for the workplace, managers may consider adopting an all-inclusive approach and not simply focusing on regulating or curbing one or two platforms, or a few features, at a time.

While there are overall similarities between Facebook and YouTube, the results underscore a notable and important difference. Specifically, the results illuminate a significant relationship between techno-insecurity and Internet addiction in the context of Facebook but not YouTube. This finding means that employees associate Facebook more with stress related to insecurity with technology and social media skills and that such stress is more likely to be related to addiction-like symptoms. In this sense, employees who use Facebook during work are more likely to feel threatened about losing their job to employees with better technical skills, and such usage may have detrimental impacts on their mental health and wellbeing. Moreover, this result shows that such insecurity with technical skills may stem from technology not used specifically for work purposes. It is possible that this difference results from the interactivity and collaboration differences between the platforms. Unlike YouTube, where the vast majority of users simply consume the content, Facebook users contribute and consume. It is possible that the need to contribute could place increased stress on the Facebook users. Managers should recognize this stress potential of Facebook to induce such insecurity and the other components of technostress and develop and open dialogue about the consequences of using this platform at work.

5.3 Limitations

One limitation of these studies is our using self-reported measures of social media and IS usage at a specific point in time (i.e., cross-sectional snapshot). These types of measures have several inherent issues, including social desirability and simple memory failure. A better way to gather data would be through actual measures of social media usage. However, such measures are not without issues. To gather actual measures of usage, researchers would need some form of recording or logging software placed on subjects' computers or in their networks, which generates two major concerns. First, there are both ethical and legal issues involved in monitoring someone's Internet usage, especially if deception is involved. Second, even without deception, data collection could suffer from several biases that stem from subjects' knowing they are being watched.

Another limitation is that, although previous work has used distraction-conflict theory, it has not been tested in instrument form. For this study, we generated and tested an instrument that we summed to provide an adequate measure of distraction. Future studies will first want to validate this scale in other environments before treating the instrument as a robust measure. Further, it may be beneficial to use the non-summed values to determine if these more fully explain any observed variance in distraction.

Another limitation was our using Mechanical Turk to identify employed respondents. Although we employed precautions to verify the applicability of respondents, it is possible that some unemployed respondents could have provided data. A future study should directly target employed respondents through face-to-face or specific communications in order to confirm the sample characteristics.

5.4 Future Research

Based on our findings, we feel that three research questions would be particularly fruitful to focus on when conducting future research. The first question is: "Is it beneficial to limit exposure to social media in the work environment, or does social media deprivation induce even more stress?". While the current study offers insight into the stress potential of Facebook and YouTube, a fundamental assumption of the work is that the employees in our sample are free to use these platforms during work hours. Moreover, the study did not measure any levels of social media-induced stress (e.g., low or high stress levels). Researchers could use our novel framework of social media associated with a distraction conflict, which leads to technostress and Internet addiction, to study a sample of employees who are prohibited from using social media at work. We feel that the absence of technology in certain contexts could also result in technology-induced stress and that technostress could indeed have varying low, medium, or high levels, all of which could be linked to productive or detrimental consequences (McGrath, 1976).

A second question we feel should be addressed in future research is: "What specific elements of social media influence technostress, and do they influence technostress differently in different media?". Much

current IS research has called on researchers to uncover the “black box” of technology in order to recognize the features and influence of specific aspects of technology on employees (Fayard & Weeks, 2014; Leonardi, 2011). In this way, researchers can understand a user’s relationship with technology from the perspective of the individual, not as an aggregate of survey responses. We feel it would be beneficial for IS researchers to use the concepts we theorize about in this paper (i.e., social media as a distraction conflict coupled with novel research methods and theoretical concepts) in order to recognize the elements of social media that influence technostress and how technostress differs across social media platforms. For example, IS researchers could combine our theorizing efforts with current work on social media and affordances (Majchrzak et al., 2013) and interpretive research methods (Walsham, 2006) to uncover a more subjective meaning of technostress across various social media platforms.

The last question we feel is important for future research is: “What is it about social media effects that are similar and different from general IS usage?”. While our study focuses on the effects of social media as a distraction in context of social media, it would be beneficial to understand how the effects of using social media at work differ from using other technological platforms at work that are not social media. It is likely that some aspects or features of other work-specific technologies are distractions as well and could, therefore, lead to technostress and addiction-like symptoms. In this sense, researchers should consider incorporating our model into a technological context other than social media at work.

5.5 Conclusion

As the use of technology continues to grow, so will technostress. While people around the world have embraced social media as the dominant form of communication and information dispersion, we do not yet adequately understand its negative effects. In our study, we found support for how the distraction induced by social media may form a demonstrated relationship with technostress, which, in turn, is associated with Internet addiction. In essence, this finding suggests that, as social media becomes more distracting, technostress will also increase, which will correspond with an increase in Internet addiction. This finding is in line with the practitioner arguments for the negative effects of social media usage. However, when interpreting these results, one must consider not only the usage of social media but also the type of social media because they have distinct differences due to their affordances. As such, a blanket statement for social media in the workplace may not be appropriate; instead, social media’s differences may lend credence to the argument for a case-by-case analysis of the influence of social media in the workplace.

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Appendix A. Additional Details

Table A1. Sampling of Social Media Research.

Citation	Academic or practitioner	Topic	Premise/findings
Culnan, McHugh, & Zubillaga (2010)	Academic	Adoption	Describes how organizations should be using popular social media platforms for customer interaction
Persaud, Spence, & Rahman (2012)	Academic	Adoption	Looked at five key factors inhibiting success in implementation in small service firms
DiMicco, Millen, Geyer, & Dugan (2008)	Academic	Social media usage	Authors investigated users' motivations for using a social platform. Found that users were motivated by sharing with colleagues, career advancement, and support for ideas
Gallaughier & Ransbotham (2010)	Academic	Social media usage	Explains how the modern customer is incorporating social media into their everyday lives through a 3-M framework
Koch, Gonzalez, & Leidner (2012)	Academic	Social media usage	Found that social networking sites create positive emotions for employees using the system by blurring the distinction between work and personal life
Brooks (2015)	Academic	Negative impacts of social media	Found that social media usage during classroom activities is associated with lower happiness and increased technostress
The Huffington Post (2013)	Practitioner	Negative impacts of social media	Social media usage noted as a large percent of time spent online. Also notes that this usage is related to negative emotions and gives suggestions for helping to avoid these emotions
LaRose, Kim, & Peng (2010)	Academic	Negative impacts of social media	Evaluates competing explanations Problematic Internet Use or Socio-cognitive model of unregulated media use of media usage problem, and integrates them into social cognitive theory. Found that social networking services appear to be as addictive as alternative media outlets
Turel & Serenko (2012)	Academic	Negative impacts of social media	Investigates effect of IT artifact usage. Results support link facilitating maladaptive psychological dependence on IT artifact
Benzinga (2013)	Practitioner	Social media usage & stress	Study found that Facebook was the largest stressor for mobile users and that over 45% of users also don't want to be "checked-in" at locations.
Arazy & Gellatly (2012)	Academic	Social media usage	Investigated the use of Wikis within a corporate culture. Found that wikis can trigger risk-avoidance behavior that will cause users to avoid engaging with the platform.
Majchrzak (2009)	Academic	Social media usage	Commentary outlining how usage of Wikis could be developed to be beneficial in the IS field, and that the field may benefit from more fully embracing Web 2.0 technologies.
Majchrzak et al. (2013)	Academic	Social media typology and usage	Four affordances of social media are introduced: metavoicing, triggered attending, network-informed associating, and generative role-taking. These affordances in general result in positive effects that encourage conversation, but may also have adverse consequences for organizations at times
Treem & Leonardi (2012)	Academic	Social media typology and usage	Social media enables visibility, persistence, editability, and association among its users, termed affordances by the authors. Authors further illustrate how this could be beneficial in organizations

Table A2. Instruments: Technostress Statistics (Facebook; YouTube)

	Mean	Standard deviation
Technostress: complexity. Composite reliability: .89; .87		
I do not know enough about Social Media to handle my job satisfactorily.	1.85; 1.66	1.02; .87
I need a long time to understand and use new social media.	1.93; 1.77	1.08; .96
I do not find enough time to study and upgrade my social media skills.	2.07; 1.91	1.12; 1.04
I find new recruits to my organization know more about social media than I do.	2.32; 2.19	1.22; 1.18
I often find it too complex for me to understand and use new social media.	1.92; 1.76	1.06; .92
Technostress: insecurity. Composite reliability: .92; .91		
I feel constant threat to my job security due to social media.	1.85; 1.67	1.07; .93
I have to constantly update my social media skills to avoid being replaced.	2.01; 1.83	1.14; 1.05
I am threatened by coworkers with newer social media skills.	1.86; 1.69	1.05; .92
I do not share my social media knowledge with my coworkers for fear of being replaced.	1.87; 1.73	1.03; .97
I feel there is less sharing of social media knowledge among coworkers for fear of being replaced.	1.99; 1.83	1.11; 1.00
Technostress: invasion. Composite reliability: .82; .82		
I spend less time with my family due to social media.	2.36; 2.22	1.23; 1.19
I have to be in touch with my work even during my vacation due to social media.	2.27; 2.08	1.23; 1.17
I have to sacrifice my vacation and weekend time to keep current on new social media.	2.03; 1.87	1.14; 1.04
I feel my personal life is being invaded by social media.	2.59; 2.43	1.26; 1.26
Technostress: overload. Composite reliability: .94; .95		
I am forced by Social Media to work much faster.	2.14; 1.97	1.11; 1.05
I am forced by Social Media to do more work than I can handle.	2.04; 1.88	1.06; .99
I am forced by Social Media to work with very tight time schedules.	2.10; 1.90	1.13; 1.00
I am forced to change my work habits to adapt to new social media.	2.20; 2.03	1.18; 1.12
I have a higher workload because of increased social media complexity.	2.09; 1.93	1.13; 1.05
Technostress: uncertainty. Composite reliability: .87; .87		
There are always new developments in how we use social media in our organization.	3.06; 2.82	1.22; 1.28
There are constant changes in the social media we use in our organization.	2.94; 2.75	1.23; 1.25
There are frequent upgrades in social media.	3.53; 3.39	1.11; 1.20
There are constant changes in the devices we utilize for social media in our organization.	2.98; 2.80	1.25; 1.28
SM distraction. Items summed for analysis. Composite reliability: 1; 1.		
How distracting is social media to you at work?	2.41	1.152
How distracting is the urge to use social media when you should be working?	2.52	1.205
How distracting are the sounds caused by social media while you are at work?	2.03	1.212
How distracting are the visual cues caused by social media while you are at work?	2.20	1.200
How distracting is social media to you in general?	2.75	1.161
How distracting is the urge to use social media in general?	2.66	1.191
How distracting are the sounds caused by social media in general?	2.22	1.231

How distracting are the visual cues caused by social media in general?	2.38	1.194
Internet addiction (Young, 1998) Items summed for analysis. Composite reliability: 1; 1.		
Do you find that you stay online longer than you intended?	3.71	1.009
Do you neglect household chores to spend more time online?	2.97	1.232
Do you prefer excitement of the Internet to intimacy with your partner?	2.18	1.165
Do you form new relationships with fellow online users?	2.95	1.252
Do others in your life complain to you about the amount of time you spend online?	2.41	1.207
Does your work suffer (e.g., postponing things, not meeting deadlines, etc.) because of the amount of time you spend online?	2.22	1.165
Do you check your E-mail before something else that you need to do?	3.29	1.165
Does your job performance or productivity suffer because of the Internet?	2.31	1.167
Do you become defensive or secretive when anyone asks you what you do online?	2.25	1.186
Do you block disturbing thoughts about your life with soothing thoughts of the Internet?	2.44	1.269
Do you find yourself anticipating when you go online again?	2.58	1.253
Do you fear that life without the Internet would be boring, empty and joyless?	2.82	1.325
Do you snap, yell, or act annoyed if someone bothers you while you are online?	2.21	1.186
Do you lose sleep due to late night log-ins?	2.63	1.369
Do you feel preoccupied with the Internet when off-line or fantasize about being online?	2.16	1.170
Do you find yourself saying "Just a few more minutes" when online?	3.08	1.293
Do you try to cut down the amount of time you spend online and fail?	2.60	1.199
Do you try to hide how long you've been online?	2.10	1.185
Do you choose to spend more time online over going out with others?	2.51	1.301
Do you feel depressed, moody, or nervous when you are offline, which goes away once you are back online?	2.06	1.148

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