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The Relationship Between Cyberloafing and Task Performance and an Examination of the Theory of Planned Behavior as a Model of Cyberloafing

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The Relationship Between Cyberloafing and Task Performance and an Examination of

the Theory of Planned Behavior as a Model of Cyberloafing

by

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DEDICATION

This dissertation is dedicated to my parents and grandma.

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Abstract

Counterproductive work behaviors have been studied extensively, but much less work has been done on cyberloafing – the personal use of the internet at work. The purpose of this investigation was threefold: a) replicate a previous finding and test the Theory of Planned Behavior as a model of the antecedents of cyberloafing, b) investigate the influence of cyberloafing on task performance in actual organizations, and c) examine the relationship between cyberloafing and job satisfaction in actual organizations. Four hundred forty seven subordinates and 147 supervisors from various organizations participated in the current investigation. Results suggest that a) the Theory of Planned Behavior is an appropriate model of the antecedents of cyberloafing, b) cyberloafing might not have a strong influence on task performance, except when done frequently and in long durations, and c) job satisfaction is unrelated to cyberloafing on a desktop but is related to cyberloafing on a cellphone. Implications and future directions are discussed.

Introduction

Computers and other electronic devices have improved the means of production by automating certain activities and by assisting employees in their daily tasks. Although the presence of computers in organizations has led to increased productivity overall, it has also allowed new ways in which an employee can slack off at work. The implications of this slacking-off behavior are unclear, but many organizations are concerned that it is leading to the benefits of a connected workplace not being fully realized (Business Wire, 2002). The concern has led to a recent explosion of research on the topic and organizational researchers are quickly trying to grasp the causes, consequences, and nature of the phenomenon of slacking off at work through a computer (Zoghbi-Manrique-de-Lara, 2011).

This investigation is aimed at contributing to our understanding of the potential causes and consequences of personal computer use at work. The goal here is to build off of what has been done and conduct the next logical studies. By addressing gaps in the literature, the present study brings the field one step closer to a thorough understanding of the phenomenon. Eventually, a solid understanding of cyberloafing should lead to practical implications and guidelines that can be given to organizational decision makers.

On the one hand, cyberloafing – as the phenomenon of slacking off at work is known by – is a new phenomenon (Lim, 2002). After all, computers have been ubiquitous in organizations for only a little over a decade. On the other hand, cyberloafing can be considered one instance of a broader construct, counterproductive

work behavior – an umbrella term for volitional behaviors that harm or have the potential to harm the organization or its members (Spector, Fox, Penney, Bruursema, Goh, & Kessler, 2006). The extent to which cyberloafing is a typical counterproductive work behavior is an open question, and one of the reasons why the counterproductive work behavior literature is reviewed.

The organization of this paper is as follows. First, I explicate what the cyberloafing construct is and how it is defined in this study. Second, the counterproductive work behavior literature is reviewed for potential "leads" on understanding cyberloafing. After this, the cyberloafing literature is reviewed, with an eye focused on identifying gaps in the literature for further study. The review of the counterproductive and cyberloafing literatures results in a series of research questions. These research questions are then addressed in an empirical study. Finally, the results and implications of the findings are discussed. The overarching approach taken in this investigation is inductive – to build an understanding of the phenomenon by answering the questions, even if those questions are covering different aspects of the phenomenon.

Definition of Cyberloafing

Although cyberloafing is used in this paper to refer exclusively to minor, time-wasting behaviors done through a computer, it is important to note that not all researchers share this definition (Weatherbee, 2009). Some researchers use the term cyberloafing to refer to more serious behaviors as well (e.g., Blanchard & Henle, 2008), such as hacking and spreading viruses. Although these extreme behaviors are interesting and worthy of study, they are likely caused by different antecedents and have different consequences to the organization and individuals, and therefore constitute a different phenomenon that is

better studied separately. In this paper, the focus is solely on time-wasting behaviors such as watching YouTube, going on Facebook, and browsing the web.

For similar reasons, personal computer use involving telecommuters will be excluded from the definition of cyberloafing used in this study. It is possible, and even likely that, that some of the drivers of personal computer use in home work environments are the same the drivers of personal computer use in traditional brick-and-mortar work environments. However, if telecommuters are included in the definition of cyberloafing at this point, researchers would run the risk of mixing phenomena. It is more systematic to start with what is expected to be a pure phenomenon, build an understanding of that, and then move on to moderators/boundary conditions, than it is to try to combine everything before we really understand what is going on. Excluding telecommuters also avoids the difficult issue of operationally defining cyberloafing in an environment with no set working hours.

Three more aspects of the domain of cyberloafing need to be mentioned. First, cyberloafing as it is understood in this investigation can occur through any type of computer – including cellphones and tablets. Although there is a risk here of mixing phenomena, separating the mediums is operationally easy if necessary: an analogous scale for cyberloafing through different media can be created by simply changing the instructions of existing cyberloafing scales. An implication of including other devices in the definition of cyberloafing is that phone calls and text messaging now fall in the domain of cyberloafing. This I believe is desirable as they are most likely motivated by similar things as other slacking-off-through-electronic-device behaviors. Second, what constitutes cyberloafing here is (theoretically) determined by the immediate supervisor.

The immediate supervisor is the best person to judge what constitutes a non-work related activity because the supervisor presumably a) has at least basic knowledge of the subordinate's job area, and b) is less likely to be biased than the subordinate or his or her coworkers in judging what constitutes cyberloafing. This second aspect clarifies how borderline behaviors such as programmer reading a programming blog at work would be classified.

Finally, cyberloafing is defined independent from the company policy. An employee who watches cat videos at a company whose company policy is unrestricted personal computer use is nonetheless cyberloafing. This provision of independence from company policy is counterintuitive to most organizational researchers, but it serves an important function: to ensure that true relationships among cyberloafing and its correlates are preserved across companies. If short breaks of personal internet use increases task performance (as some researchers hypothesize) then we want to be able to detect that influence in every situation where it is present. If cyberloafing is defined based on company policy, than it would be almost impossible to observe this influence in companies that have liberal internet usage policies – even though the influence of the break is still there. Making the definition of cyberloafing independent of company policy preserves this relationship.

These theoretical issues involving the setting of boundaries on the cyberloafing construct are important for clarity and for guiding the literature review. To encapsulate the above description of the cyberloafing construct, I offer the following definition of cyberloafing which is used in this investigation: *Cyberloafing occurs when a non-telecommuting employee uses any type of computer (e.g., desktop, cell-phone, tablet) at*

work for non-destructive activities that his/her primary supervisor would not consider

job-related.

Counterproductive Work Behavior

Having a definition of cyberloafing, I now move onto the literature reviews to

identify a set of research questions to help better understand cyberloafing. The first

literature review is mostly conceptual in order to place cyberloafing within a larger body

of research and perhaps gain perspective on the nature of cyberloafing itself. I start with

the broad perspectives of counterproductive work behavior (CWB) and then move on to

the dimensionality of CWB. Cyberloafing is then placed within this dimensionality

classification and implications are discussed. The review here is concise – just enough to

provide an overview for the purpose of better understanding cyberloafing.

CWB Perspectives

Research on CWB has led researchers to adopt differing perspectives on what

these behaviors are and why they occur (Bennett & Robinson, 2003). One perspective is

that CWBs are a type of behavioral strain caused by stressors in the work environment,

such as interpersonal conflict, organizational injustice, or organizational constraints (Fox,

Spector, & Miles, 2001). From this perspective, work environment factors cause

negative emotions in the employee such as anger, guilt, or boredom, and these negative

emotions in turn lead to CWB. The relationships between the stressors, emotions, and

CWBs are influenced by personality characteristics and situational factors which

facilitate or inhibit the likelihood of feeling a negative emotion or engaging in a CWB

(Spector & Fox, 2005).

A similar perspective focuses on organizational injustice as the cause of CWB. In this view, CWBs are motivated by an attempt to get even with the company for perceived unfairness (Greenberg, 1990). An employee who feels her pay raise was inadequate might steal office supplies in retaliation, for example. This perspective is heavily rooted in Equity Theory – which states that people are motivated to maintain equality in their relationships (Adams, 1965). Applied to the workplace, this suggests people are motivated to maintain equity in their relationship with the organization. This perspective has been used as the basis for a number of successful interventions aimed at reducing theft (Greenberg, 1990).

Dimensionality of CWB

CWB can be conceptualized as consisting of five dimensions (Spector et al., 2006): abuse, production deviance, sabotage, theft and withdrawal. These different types, or dimensions, of CWB are believed to be motivated by different things; hence the need to distinguish between the different kinds of behavior. Abuse is defined as behaviors that harm or have the potential to harm people in the organization (Spector et al., 2006). Abuse is believed to be motivated by interpersonal conflict and hostility, and its occurrence is believed to be facilitated or inhibited by factors present in the work environment. Two related dimensions of CWB are production deviance and sabotage. These dimensions are similar to abuse in that they involve a form of aggression but they differ in their target of the aggression: whereas abusive behaviors are directed towards people, production deviance and sabotage are directed towards inanimate objects or the organization itself (Spector et al., 2006). Production deviance is the purposeful, shirking of work or intentionally doing work at a lower quality; whereas sabotage involves the

active destruction of company property. Theft is a fourth type of CWB, which involves the stealing of company property or information. Theft is believed to be motivated by economic need or a desire to get even with the company (Mustaine & Tewksbury, 2002).

Withdrawal is the fifth type of CWB and consists of behaviors that restrict the amount of time an employee works to less than what the organization expects of him or her (Spector et al., 2006). Examples of withdrawal include arriving at work late, unsanctioned absences, and taking extended breaks. Withdrawal differs from the other dimensions of CWB in that it is motivated by a desire to escape or avoid an aversive situation, rather than do harm to the organization or its members (Spector et al., 2006). Research has found that the best predictors of withdrawal behaviors are company policies (Dalton & Mesch, 1991) and social norms (Bamberger & Biron, 2006). Other factors have also been linked to withdrawal, such as job boredom (Bruursema, 2007), attitudes (Breaugh, 1981), job dissatisfaction (Hackett, 1989), and to lesser extents, being female and/or younger (Mathieu & Kohler, 1990).

Cyberloafing as a Withdrawal Behavior

Based on the CWB literature reviewed above, two questions relevant to the current study arise: Where does cyberloafing fit into these conceptualizations of CWB? And what perspective or approach is useful for understanding cyberloafing? Some of the perspectives have already been taken in one form or another in the cyberloafing literature. Lim (2002), for example, took a justice perspective and argued that cyberloafing was a consequence of perceived unfairness; Everton, Mastrangelo, and Jolton (2005) argued for personality variables such as impulsiveness as one of the causes. However, these perspectives have had only mixed success, finding modest relationships between

antecedents and cyberloafing and the results have not always replicated (de Lara, 2007; Henle, Kohut, & Booth, 2009). Spector et al.'s (2006) results were impressive in the fidelity achieved by breaking CWB down into its separate dimensions, and so their taxonomy serves as a promising way to connect cyberloafing to the broader CWB literature.

Withdrawal is defined as behaviors that restrict the amount of time the employee is working to less than what the organizations expect (Spector et al., 2006). Cyberloafing takes time away from work and would therefore be considered a type of withdrawal behavior, like absenteeism, lateness, and taking extended breaks. If cyberloafing is a typical withdrawal behavior, then we should observe the same patterns of relationships in both the withdrawal and cyberloafing literatures. Specifically, cyberloafing should correlate strongly with social norms and company policy, and there should also be relationships with job boredom, withdrawal attitudes, job dissatisfaction, and to lesser extents, being female and/or younger.

That is not exactly what is observed. On the one hand, some of the connections are found in the cyberloafing literature. Norms are a very strong and robust predictor of cyberloafing (e.g., Carmeli, Sternberg, & Elizur, 2008; Galluch & Thatcher, 2007; Restubog, Garcia, Toledano, Amarnani, Tolentino, & Tang, 2011) just like they are for absences (Bamberger & Biron, 2006) and lateness (Elicker, Foust, Malley, & Levy, 2008). Attitudes towards the behavior and intentions to engage in the behavior also predict cyberloafing (Askew, 2010b; Lim & Chen, 2009; Liberman, Seidman, McKenna, & Buffardi, 2011) just like other withdrawal behaviors (Brouwer et al., 2009). However, other observations are either slightly different from what would be expected or are

entirely inconsistent. Job boredom correlates with cyberloafing as would be expected if cyberloafing was a typical withdrawal behavior (Askew, 2010b), but the correlation is typically weaker than other withdrawal behaviors (Bruuresema, 2007; Spector et al., 2006). Company policy is one of the best predictors of withdrawal behaviors (Dalton & Mesch, 1991) but studies have found near-zero correlations with cyberloafing (Mastrangelo, Everton, & Jolton, 2006). And gender has the opposite relationship with cyberloafing as it does with other withdrawal behaviors, with men engaging in more cyberloafing on average (de Lara, 2007; Garrett & Danziger, 2008).

The bivariate correlations suggest that cyberloafing is not a typical type of withdrawal behavior and that it may be motivated by different things entirely. Whereas most withdrawal behaviors are motivated by a desire to escape or avoid an unpleasant situation, cyberloafing might be motivated by an approach desire. Consistent with this possibility, people report they engage in cyberloafing because they find it enjoyable (Askew, 2010b). The approach perspective could also explain why *the ability to hide cyberloafing activity* – one's perception of how easy it is to cyberloaf without one's coworkers "catching them" – is such a strong predictor of cyberloafing (Askew, 2010b; Askew, Coovert, Vandello, Taing, & Bauer, 2011); people want to cyberloaf, and they do so (in part) to the extent they can get away with it.

There is another set of findings, however, that is more consistent with the idea that cyberloafing operates like a typical withdrawal behavior. The theory that has been used successfully to model withdrawal behaviors such as sickness absences (Brouwer et al., 2009) and turnover (van Breukelen, van der Vlist, & Steensma, 2004), has also been successfully applied to social networking use in young people (Pelling & White, 2009)

and cyberloafing in the general workforce (Askew, 2010b). That theory, the Theory of Planned Behavior, states that people form intentions before they behave, and that these intentions are influenced by people's attitudes towards the behavior, social norms, and people's perceived behavioral control (Ajzen, 1991). The fact that cyberloafing can be modeled using the same theory as other withdrawal behaviors suggests that cyberloafing does operate like a typical withdrawal behavior.

However, a closer examination of the results of the two studies that have tested the Theory of Planned Behavior as a model of cyberloafing shows that the theory is not perfectly represented. In Askew's (2010b) study, the third antecedent in the model was not perceived behavioral control – it was the ability to hide cyberloafing. Whereas the typical third antecedent in a Theory of Planned Behavior model measures the degree to which one believes the behavior is under his or her control, the third antecedent in Askew's model measures how well one believes he or she can do the behavior without getting caught by his or her supervisor. Interestingly, a closer examination of Pelling and White's (2009) results show that perceived behavioral control was not a significant predictor of social networking use in teenagers. These discrepancies point again to an interpretation of cyberloafing as an approach behavior that people engage in to the extent to which they can get away with it.

Before any conclusions are drawn, it is necessary to establish if the observed findings are robust. Askew's (2010b) findings were based on inductive and exploratory analyses, and therefore are susceptible to all the pitfalls of post hoc theorizing and data mining. Of particular interest is whether the ability to hide cyberloafing is an appropriate substitute for the variable perceived behavioral control. Also of interest is examining

whether the perceived behavioral control itself would work as the third antecedent. Although Pelling and White (2009) did not find it to predict cyberloafing incremental to attitudes and social norms, they measured it in a generic way that was not specific to the how perceived behavioral control is likely manifested in regards to cyberloafing. In actual organizational contexts, whether or not one can navigate to desired websites is much less a function of physical ability, but rather, whether or not the company has blocked that website and/or whether one can circumvent those behavioral controls. Thus, operationalizing perceived behavioral control in a more specific way (e.g., "*My favorite websites are blocked at work*") might reveal support for a traditional Theory of Planned Behavior model.

Establishing a model of cyberloafing is something that many researchers have called for (e.g., Blanchard & Henle, 2008; Weatherbee, 2009). Recent research has identified a possible model and so the next step is to test the plausibility of this model in both its potential variations. Having a model of cyberloafing's antecedents would not only provide a framework for cyberloafing researchers, it would help us understand the nature of cyberloafing – what motivates cyberloafing and how it relates to other CWB constructs. Thus, the first set of questions in this investigation involves testing the Theory of Planned Behavior as a model of the antecedents of cyberloafing.

Table 1: Research Questions

Research Questions
Is the Theory of Planned Behavior an Appropriate Model of Cyberloafing?
1. Do Askew et al.'s findings replicate?
2. Which variation of the TPB model is more appropriate?
???
3.
4.
5.
6.
7.
???
8.
9.
10.

Cyberloafing Literature Review

The review of the perspectives on the CWB literature along with some empirical findings in the cyberloafing literature has led to the first set of questions. The next step is to review the more specific cyberloafing literature for addition questions. Again, the approach here is inductive: I am trying to build an understanding of cyberloafing by systematically identifying and answering research questions. I start with a discussion of how cyberloafing is conceptualized in the literature, how it relates to other cyber-constructs, and its prevalence and dimensionality. I then move on to describe the research on the antecedents of cyberloafing and perspectives on the consequences of cyberloafing. As will be seen, despite the explosion of research on cyberloafing in the past couple years, a number of basic questions still need to be addressed.

Definition and Relations to Other Constructs

In this investigation, great care was taken to provide a working definition of cyberloafing that was precise with explicit boundaries: *Cyberloafing occurs when a non-telecommuting employee uses any type of computer (e.g., desktop, cell-phone, tablet) at work for non-destructive activities that his/her primary supervisor would not consider job-related.* Typically, cyberloafing researchers have been much more lax in defining the boundaries of cyberloafing. The imprecision of working definitions in the literature might be due to the fact the cyberloafing as a phenomenon is intuitive, and therefore definitions only need to point to the construct that people already have in their heads. But the lack of precision is not desirable because some important decisions should be based on the definition of cyberloafing: what items to include in a scale and what participants should be included and excluded, for example. Although there is no evidence that this has harmed or stymied cyberloafing research, it has been a conceptual shortcoming of the literature.

In contrast to the lack of clarity on the definition of cyberloafing, organizational researchers have spent considerable time trying to explicate how cyberloafing relates to other internet-mediated constructs, such cyber-bullying and cyber-aggression. Many cyberloafing researchers have tried to adapt Robinson and Bennett's (1995) Workplace Deviance Model – a typology of CWBs, which distinguishes CWBs along two dimensions: severity of the behavior and target (individuals vs. the organization). Consistent with Robinson and Bennett's (1995) distinction between minor and serious behaviors, at least three teams of researchers have tested and found support for a two factor model consisting of a cyberloafing factor and a serious computer-mediated factor (Askew, 2010a; Blanchard & Henle, 2008; Mastrangelo, Everton, & Jolton, 2006).

Weatherbee's (2009) also used Robinson and Bennett's Workplace Deviance Model as the basis for explication of the relationships among cyberloafing and related constructs. Similar to the Robinson and Bennett model, Weatherbee's typology distinguishes behaviors along the severity and target (individual vs. organization) dimensions, creating four categories of behaviors. Weatherbee classified cyberloafing as a production-deviance behavior, a minor cyber-deviant behavior directed towards the organization, which is closely related to other constructs such as "surfing". Although Weatherbee's typology has not been empirically tested, it is consistent with empirical research in the cyberloafing literature (e.g., Askew, 2010a; Blanchard & Henle, 2008; Mastrangelo et al., 2006) and has a strong theoretical backing in the CWB literature (Robinson & Bennett, 1995). As such it is probably the best framework to date that relates cyberloafing to the other types of internet-mediated behaviors.

Prevalence and Dimensionality

Cyberloafing is common in organization (Taylor, 2007). Estimates for the amount of cyberloafing are usually given as a percentage of work time or in hours per week or day. The estimates vary widely depending on the source of the study and population sampled. Some estimates are as low as three hours per week (Greenfield & Davis, 2002), other estimates are as high as two and half hours per *day* (Mills, Hu, Beldona, & Clay, 2001). The higher estimates tend to be found by firms selling internet monitoring software (e.g., Surfwatch software, Naughton, Raymond, & Shulman, 1999). Regardless of the exact prevalence rate of cyberloafing, the implication is that cyberloafing is prevalent enough to be a major concern to organizations if it does in fact harm productivity (Malachowski, 2005).

To better understand cyberloafing, many researchers have examined the dimensionality of cyberloafing. Three of the prominent taxonomies of cyberloafing that have been developed are Lim's (2002) taxonomy (email & web-browsing), Blau, Yang, and Ward-Cook's (2004) taxonomy (email, web-browsing, & interactive), and Mahatanankoon and his colleagues' (2004) taxonomy (e-commerce, personal research, communication). Although these taxonomies have been supported by factor analyses, the usefulness of the distinctions has not been supported by criterion-related validity evidence in either the primary studies themselves[1] (Blau et al., 2004; Lim, 2002; Mahatanankoon, Anandarajan, & Igbaria, 2004) or subsequent studies done by other researchers (Askew, 2010a). In other words, the different types of cyberloafing outlined in these models have not been shown to correlate differentially with non-demographic external variables.

Related to the topics of taxonomies and types of cyberloafing, Lim and Chen (2009) proposed that social cyberloafing behaviors are more likely to be detrimental to productivity than other types of cyberloafing behaviors. They reasoned that maintaining social relationships requires a greater amount of investment and energy than simply viewing a webpage, and that this expenditure of internal resources would make switching back to work more difficult than switching back from non-social cyberloafing activities. Lim and Chen (2009) found some support for their position: employees reported that email activities were more harmful to their productivity than other types of behaviors. However, Lim and Chen measured only perceptions and not actual task performance in

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[1] In some cases, researchers have claimed to find differential relationships among factors in their taxonomy. The evidence for this has been based on the fact that one factor correlate significantly with an external variable and another factor did not. This is not appropriate evidence for such a conclusion: the correlations need to be tested to see if they are significantly different from each other.

their study, so more research is needed to see if the social-cyberloafing hypothesis is correct.

Perspectives and Antecedents

The most common perspective on cyberloafing is that it is a type of break, one done using a computer (e.g., Blanchard & Henle, 2008; Blau et al., 2004; Lim & Teo, 2005). From this break analogy, researchers have drawn different conclusions regarding the implications. Some researchers have cited prevalence rates and concluded that cyberloafing is reducing productivity (e.g., Malachowski, 2005; Stewart, 2000). Other researchers have concluded that cyberloafing can provide a respite, boosting productivity and employee satisfaction (Belanger & Van Slyke, 2002; Block, 2001). Researchers typically haven't tested these predictions, instead focusing on descriptive issues like the prevalence, dimensionality, and antecedents of cyberloafing (Weatherbee, 2009).

One exception to this is Wagner and his colleagues, who recently tested whether the Ego Depletion Model of self-regulation could be used to explain cyberloafing behavior (Wagner, Barnes, Lim, & Ferris, in press). The Ego Depletion Model states that self-regulation is like a muscle. Engaging in an effortful task makes it harder to engage in other effortful tasks because all self-regulatory tasks draw from a common resource that needs time to recover, in the same way a muscle fatigues and needs time to recover after lifting weights (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Wagner and his colleagues (in press) hypothesized that when people are sleep deprived they are more likely to cyberloaf because they did not get the self-control restoring benefits of a full night's sleep. They found evidence to support their theory: an archival study found that more entertainment searches occurred on daylight savings days and, in a lab study, sleep-

deprived participants were more likely than well-rested participants to cyberloaf. In general, the view that cyberloafing occurs as a lapse of self-control is rising among cyberloafing researchers (Lim & Teo, 2005; Prasad, Lim, & Chen, 2010; Wagner et al., in press).

Other researchers have hypothesized various other causes of cyberloafing, sometimes based on theory in other areas (e.g., Equity Theory), other times based on conceptual similarities between the antecedent and cyberloafing (e.g., conscientiousness; Krishnan, Lim & Teo, 2010). The splattering of theories here and there has led to a number of identified correlates of cyberloafing.

The variables that have shown the most robust and meaningful correlations with cyberloafing have been social norms (Carmeli et al., 2008; Galluch & Thatcher, 2007; Restubog et al., 2011), attitudes towards cyberloafing (Askew, 2010b; Lim & Chen, 2009; Liberman et al., 2011), the ability to hide cyberloafing (Askew, 2010b, Askew et al., 2011), and intentions to cyberloaf (Askew, 2010b; Askew, Coovert, Taing, Ilie, & Bauer, 2012). Collectively, these findings suggest the Theory of Planned Behavior as an appropriate model of cyberloafing (as discussed). The robustness of the ability to hide cyberloafing again points to an approach explanation of cyberloafing – people want to cyberloaf and do so to the extent they can get away with it.

Two other variables that have been shown to have strong relationships with cyberloafing are conscientiousness (Everton et al., 2005; Wagner et al., in press) and organizational justice (Lim, 2002; Restubog et al., 2011). Interestingly, the influence of these constructs seems to vary considerably across situations: in some studies these constructs show some of the strongest correlations with cyberloafing in the literature; in

other studies, they have shown non-significant or weak correlations with cyberloafing (de Lara, 2007; Henle, Kohut, & Booth, 2009). One possible explanation for the inconsistent findings in the organizational justice-cyberloafing relationship could be that injustice is a strong determinate of cyberloafing when it occurs, but that blatant unfairness is not widespread in many organizations – at least not enough to be a major factor in the general population.   The strong correlation found in some studies between cyberloafing and conscientiousness supports a self-control point of view of cyberloafing as advocated by Wagner and others (Wagner et al., in press). The inconsistent correlation between conscientiousness and cyberloafing could be due to differences in workload across samples – when less needs to get done, self-control and conscientiousness become less important.

Although less important than the variables mentioned already, some other correlates of cyberloafing are worth noting. In regards to personality, impulsivity (Davis, Flett, & Besser, 2002), extraversion (Jia, 2008), positive affect (Lim & Chen, 2009), agreeableness (Krishnan et al., 2010), and locus of control (Blanchard & Henle, 2008) have been examined as antecedents of cyberloafing. The individual characteristic of having high computer skill has also been shown to predict cyberloafing (Garrett & Danziger, 2008). Many situational variables related to being reprimanded for cyberloafing have been implicated, including company monitoring (Henle et al., 2009), sanctions (Henle & Blanchard, 2008), internet policy (Jia, 2008) and having an assigned computer (Mastrangelo et al., 2006). Gender and age have often been found to relate to cyberloafing with males engaging in more cyberloafing than females, and younger

employees engaging in more cyberloafing than older employees (de Lara, 2007; Garrett & Danziger, 2008; Henle & Blanchard, 2008).

Cyberloafing and Task Performance

Although the antecedents of cyberloafing have been studied frequently, much less research has been conducted on the consequences of cyberloafing. This is surprising since the consequences of cyberloafing are an important reason to study cyberloafing. The construct of task performance is a particular concern here, since cyberloafing could potentially have very negative effects on productivity. Even though there has been a dearth of empirical research on how cyberloafing influences task performance, there has been much speculation in the literature, and this has led to four competing perspectives.

The first perspective is that cyberloafing results in lower task performance through lost work time (Barlaw, Bean, & Hott, 2003; Foster, 2001). In this perspective, time spent cyberloafing is time that would have been spent working and any loss of work time is expected to translate into lost productivity (Barlaw et al., 2003; Foster, 2001). If this perspective is correct, one should expect a negative relationship between cyberloafing and task performance.

A second, related perspective is that certain types of cyberloafing behaviors are either harmful or more harmful than other cyberloafing behaviors to productivity. Lim and Chen (2009) have taken the perspective that social behaviors are more harmful to productivity because the relationship-building nature of these activities requires more energy, time, and cognitive resources. Lim and Chen (2009) argue that these demands make it harder for an employee to switch back to work-related tasks compared to non-social behaviors such as browsing the web. Blau and his colleagues (2004) made a

similar argument for interactive behaviors, which includes social behaviors and online games. If these perspectives are true, we should observe interactive and social behaviors to have negative associations with task performance. Moreover, these behaviors should more strongly relate to lower task performance than behaviors such as web-browsing.

A third perspective is much more positive in regards to the influence of cyberloafing. A third perspective is that cyberloafing can provide a respite from work, boosting productivity once the employee returns from work (Belanger & Van Slyke, 2002, Block, 2001). The boost is assumed to be substantial enough to overcome any loss in productivity incurred during the cyberloafing session itself (Mirchandani & Motwani, 2003). The mechanism for this effect is one of recovery: cognitive resources are drained during work-related tasks and engaging in cyberloafing recovers these resources allowing the employee to become more productive. Researchers who take this perspective (Belanger & Van Slyke, 2002, Block, 2001) rely on the break literature and Baumeister's Ego Depletion Model to support their predictions. If this perspective is correct, there should be a positive relationship between cyberloafing and task performance. Moreover, the amount of cyberloafing one does in short breaks should be associated with increases in productivity.

A fourth perspective of cyberloafing is that it does not influence task performance, or it only influences task performance in extreme cases (Blanchard & Henle, 2008). According to this perspective, people have a certain amount of work to get done and they cyberloaf when they have the time. This view does not suggest that everyone is equally productive; it suggests that each employee has a certain standard of work they aspire to, and they put enough work in to obtain that standard and cyberloaf with some of the

leftover time. If this perspective is correct, then there should be no relationship or a small relationship between cyberloafing and task performance. Moreover, if it is also the case that cyberloafing is only harmful if done in excess, then frequent long durations of cyberloafing should negatively predict task performance.

Which of the four perspectives does the literature support? The most support can be found for the respite perspective. In a laboratory study done at the University of Copenhagen, two groups of participants were made to perform a simple task: watch a video with people passing a ball and count the number of passes (Surowiecki, 2011). Before the task, one of the groups was told that a funny video was available and was allowed to click and watch the 10 minute video; the other group was told that a funny video was available but was not allowed to click and watch the video. Consistent with Baumeister's idea of ego depletion (Baumeister et al., 1998), the group that watched the funny video – and therefore did not have to inhibit the desire to watch the video – had significantly better performance than the group that did have to inhibit watching the funny video. Lim and her colleagues found similar results with another laboratory study (Lim et al., in press).

The laboratory studies conducted by Lim and others are interesting and provide some evidence for the respite perspective. However, whether or not this effect found in the lab is present and dominant in organizations is an open question. What are missing from the literature at the moment are studies looking at the relationship between cyberloafing and task performance in actual organizations. A descriptive analysis of how cyberloafing relates to task performance in organizations would allow researchers to determine which one of the four perspectives best describes how cyberloafing operates in

the real world. It would also help answer the question of what are implications of the cyberloafing being widespread.

The new research questions shown in Table 2 are derived from the different perspectives of how cyberloafing influences task performance. Each perspective should give a different pattern of answers to these questions. If the first perspective is correct, then there should be a negative bivariate relationship between cyberloafing and task performance (Question 3), negative relationships between social- and interactive-cyberloafing and task performance but no differential relationships with task performance between social/interactive items and web-browsing (Questions 4 & 5), and short and long break frequencies should both be significant predictors of task performance (Questions 6 & 7). By examining the answers to the research questions using data from actual organizations, we can see which perspective is the most plausible. This will be a significant step towards understanding how cyberloafing influences task performance in actual organizations.

Table 2: Research Questions

Research Questions
Is the Theory of Planned Behavior an Appropriate Model of Cyberloafing?
1. Do Askew et al.'s findings replicate?
2. Which variation of the TPB model is more appropriate?
How Does Cyberloafing Relate to Task Performance?
3. What is the bivariate relationship?
4. Do social cyberloafing behaviors negatively relate to task performance?
5. Do interactive cyberloafing behaviors negatively relate to task performance?
6. Are short cyberloafing breaks associated with increased productivity?
7. Are long cyberloafing breaks associated with decreased productivity?
???
8.
9.
10.

Cyberloafing and Job Satisfaction

The last set of questions in this investigation is exploratory in nature. To provide a more complete picture of the outcomes of cyberloafing, this investigation also examines how cyberloafing relates to job satisfaction. The few studies that have examined the simple bivariate correlation between cyberloafing and job satisfaction have found a near-zero correlation (Everton et al., 2005; Mastrangelo et al., 2006). However, the simple bivariate correlation between a composite of many cyberloafing behaviors and job satisfaction might hide some interesting effects of cyberloafing. For example, research done on breaks has shown that the activities one engages in during the break influences performance on a subsequent task – with preferred, non-resource taxing activities providing the biggest boost (Plemmons & Weiss, 2011). Perhaps a similar effect occurs in regards to job satisfaction with certain cyberloafing behaviors (e.g., playing games)

providing more of a boost to job satisfaction than other cyberloafing behaviors (e.g., emailing).

Understanding the relationship between cyberloafing and task performance and job satisfaction will allow the company decision makers to make informed decisions on the tradeoffs of different company policies. Or perhaps, it will inform us of a few company policies that make sense. For example, suppose it is found that time-consuming activities such as playing online video games led to lower task performance, while no such effect is found for shorter, less committed activities such as sending personal emails. This pattern of findings suggest that organizations should consider adopting policies that are task specific: in this case, policies that restrict online gaming yet are lenient in regards to personal communication. On the other hand, if all types of activities were found to lead to lower task performance, it would imply that a general restrictive policy is appropriate.

The review of the CWB and cyberloafing literatures has led to a number of open research questions. These research questions are addressed in this investigation, allowing us to advance our knowledge of cyberloafing. The research questions are summarized in the table below.

Table 3: Research Questions

Research Questions
Is the Theory of Planned Behavior an Appropriate Model of Cyberloafing?
1. Do Askew et al.'s findings replicate?
2. Which variation of the TPB model is more appropriate?
How Does Cyberloafing Relate to Task Performance?
3. What is the bivariate relationship?
4. Do social cyberloafing behaviors negatively relate to task performance?
5. Do interactive cyberloafing behaviors negatively relate to task performance?
6. Are short cyberloafing breaks associated with increased productivity?
7. Are long cyberloafing breaks associated with decreased productivity?
How Does Cyberloafing Relate to Job Satisfaction?
8. What is the bivariate relationship?
9. How do cyberloafing breaks relate to job satisfaction?
10. Do cyberloafing behaviors differentially relate to job satisfaction?

Method

Participants

Participants were 447 employees and 159 supervisors from various companies. Twelve "supervisors" were dropped from the study because they admitted on the supervisor survey that they were not actually the supervisor, resulting in a final sample of 147 supervisors. Employees were recruited in two ways: through SONA (an experiment management system that connects students and researchers) or by the principal investigator going into psychology classrooms. In all cases, employees were offered extra credit for their participation. The employee sample was mostly female (75.6%) with an average age of 23.75 years old.

Materials

Cyberloafing

Cyberloafing was measured using an extended version of Lim's (2002) cyberloafing scale (Jia, 2008). The scale has participants rate the frequency of 19 cyberloafing behaviors on a six-point scale (1 = Never, 4 = Once a Day, 6 = Constantly). An example of an item is "Visit non-job related websites". Coefficient alpha for the scale was .92. The social items were used to create a social-cyberloafing variable (α = .88) and the non-social interactive items were used to create an interactive-cyberloafing variable (α = .75). Lim's cyberloafing scale and all other scales can be seen in Appendices D and E.

Attitudes & Intentions

Attitudes towards cyberloafing and intentions to cyberloaf were measured using the cyberloafing attitudes and intention scales developed by Askew (2010b). The scales were developed using the procedure outlined by Ajzen for creating attitudes and intention scales for specific behaviors (Ajzen, 2002). Both scales required the participant to place an X in one of seven spaces on multiple bipolar continuums. For example, one attitude item had participants place an X in one of seven spaces in between the end-point anchors "Harmful" and "Beneficial". An X in a space closer to the "Beneficial" endpoint indicates that the person perceives cyberloafing as more beneficial than harmful. Coefficient alphas were .87 and .79 for the attitudes and intentions scales, respectively.

Descriptive Norms

Descriptive norms were measured using a modified version of Blanchard and Henle's (2008) social norms scale. Blanchard and Henle's original items were worded in a way that captures prescriptive norms – what others say is appropriate behavior. A

previous study has used a modified version of the Blanchard and Henle's scale to capture

descriptive norms (Askew, 2010b). Instructions ask participants to estimate the

frequency their coworkers' and supervisors' engage in various cyberloafing behaviors on

a six-point scale (1 = Never, 3 = A few times per day, 6 = Constantly). An example item

is "Visit non-job related websites". Coefficient alpha in the present study was .85.

Ability to Hide Cyberloafing

The ability to clandestinely cyberloaf was measured using Askew et al.'s (2011)

Ability to Hide Cyberloafing Scale (see Appendix C). The scale asks participants to rate

their agreement with three statements on a seven-point scale. An example item is "I

COULD hide my computer activity if I wanted to". Validity evidence for Askew et al.'s

scale comes from a pilot study which looked at the factorial structure of the items in

conjuncture with other variables (Askew, 2010a) and other studies which have found the

scale to have high reliability and strong criterion-validity (Askew, 2010b; Askew et al.,

2012). Coefficient alpha was .91 in the current study.

Perceived Behavioral Control

Perceived behavioral control was measured using three items regarding the

employees' perceived ability to access desired websites. Participants were instructed to

rate their agreement to each item on a six-point Likert scale (1 = Disagree Very Much; 6

= Agree Very Much). An example item is "My favorite websites are blocked at work".

Coefficient alpha in the present study was .86.

Break Frequency Items

        A break frequency scale was created for this study. The stem for the scale was "On a typical work day, how frequently do you…" This stem was followed with four break items:

1. take a <u>quick</u> break using a <u>computer</u>.

2. take a <u>quick</u> break using a <u>cellphone</u>.

3. take a <u>long</u> break using a <u>computer</u>.

4. take a <u>long</u> break using a <u>cellphone</u>.

        Participants rated the frequency of each type of break using a five-point scale (1 = Never do this; 5 = Five or more times a day). A quick-break variable was created using the first two items; a long-break variable was created using the last two items. Coefficient alphas for both break variables were low ($\alpha_{short} = .54$, $\alpha_{long} = .69$). The low coefficient alphas are not surprising given that each scale consisted of only two items and that each variable is essentially representing a formative construct; some people might choose one medium over another and so we shouldn't expect the two items for each scale to correlate extremely highly. However, the low correlations within the two scales raises the question of whether these four items should be treated as four separate variables. To ensure that the appropriate analyses were conducted, all hypotheses involving break frequencies were run both ways: treating the break items as separate variables and combining the items into short and long duration variables. Results suggested that it was more appropriate to combine the items into two short- and long-frequency variables, as originally planned. For presentation sake, only the two-variable analyses are presented in the results section.

Task Performance

Task performance was measured using William and Anderson's (1991) task performance scale. This was the only non-exploratory variable to be measured using supervisors as the source. Supervisors rated the performance of their subordinate on a five-point scale (1 = A lot less than others, 5 = A lot more than others). An example of an item is "Adequately completes assigned duties". The scale showed sufficient variability as shown below.
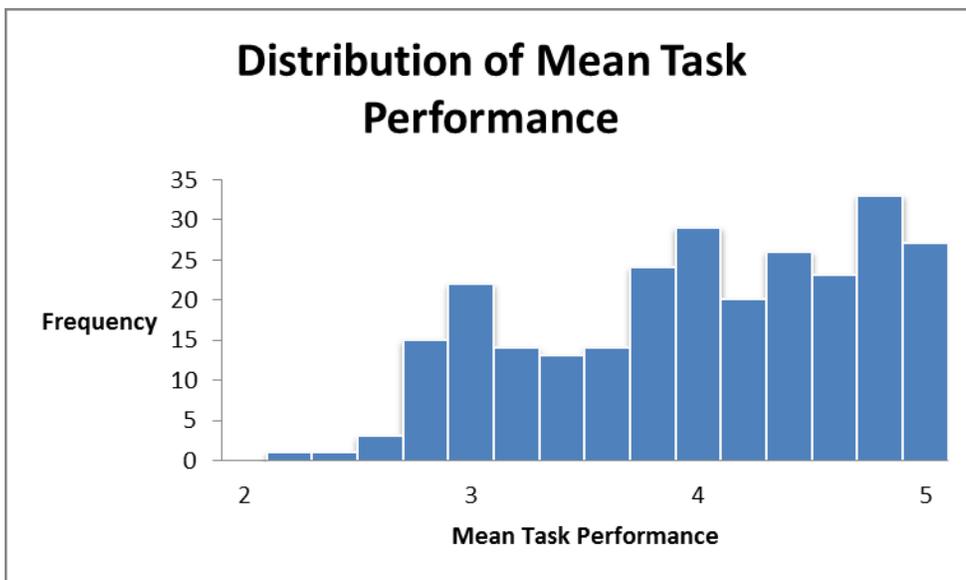
Figure 1: Distribution of Mean Task Performance

Coefficient alpha was .89 in the present study.

Job Satisfaction

Overall job satisfaction was measured using three subscales of Spector's Job Satisfaction Survey (Spector, 1985). The subscales were chosen to represent key facets of job satisfaction that might be important to cyberloafing. The supervisor subscale was chosen based on the findings in the literature that supervisors have a disproportionate influence on their employees' attitudes (the "supervisor effect") (Eisenberger,

Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Coworker and nature of work subscales were chosen based on the reasoning that if these facets of job satisfaction are low, an employee might be more likely to withdrawal from work or the social environment and cyberloaf. An example item from the nature of work subscale is "My job is enjoyable". Participants rated their agreement to statements like this on a six-point Likert scale (1 = Disagree very much, 6 = Agree very much). Coefficient alpha for the entire scale was .88.

Exploratory Variables

A number of exploratory variables were also included. On the employee survey, exploratory variables were cyberloafing on a cellphone, conscientiousness, withdrawal behaviors, job boredom, company monitoring, and perceived prescriptive norms. On the supervisor survey, the exploratory variables were supervisor cyberloafing (self-rated) and supervisor prescriptive norms (self-rated). The supervisor variables can be considered *actual* descriptive supervisor norms and *actual* prescriptive supervisor norms – since the supervisor directly reported his or her actual cyberloafing behavior (descriptive norm) and their approval or disapproval of various cyberloafing behaviors (prescriptive norm).

Demographics

Six demographic items measuring age, gender, race, hours worked per week, position in the organization, and type of industry were also included on the employee survey.

Procedure

Recruitment was done mostly through in-class recruitment. The principal investigator went into 10 psychology classes and gave a five minute presentation in each

class. The exact procedure varied slightly across classes to accommodate the preferences of the course instructors. In the typical recruitment procedure, the principal investigator gave a five minute speech in class to introduce the study. Students then emailed the principal investigator, who would email the students the link to the employee survey, a unique survey code, and the supervisor instructions. Students would then give the supervisor instructions to his or her supervisor, who would complete the supervisor survey online. The employee and supervisor surveys were linked later using the survey codes.

About 10% of student participants were recruited through the SONA system. Students were able to sign up for the study if they were employed and had access to the internet at work. Despite the study being online, students were required to come into the lab to complete the employee part. This decision was made so that the research assistant could help the students in emailing their supervisors. Upon entering the lab, students were greeted and given the informed consent procedure. Students then completed the employee survey online using the survey code provided by the research assistant. The survey took most participants about 20 minutes to complete. After completing the employee survey, students were given the option to email their supervisors. To make things easier on the participant, a canned email response was provided to each student which could be modified in any way they saw fit. The session ended with the research assistant thanking the student for participating.

Regardless of the recruitment method used, great care was taken to ensure the quality of the data – even at the expense of a slightly smaller supervisor sample size. In particular, I made sure that students understood that they would receive credit regardless

of whether their supervisors complete their part. This was to ensure that students had no motivation to fake the supervisor data. In addition, both the employee and supervisor surveys had questions at the end asking about the honesty of the responses, and letting the survey taker know that credit would be given regardless. These questions were successful in identifying 12 supervisor fakers and five employees who responded randomly.

Results

Descriptive statistics are shown in Appendix A. In general, scales showed good reliability as measured by coefficient alpha. The scales that didn't have high coefficient alphas were withdrawal, short and long break frequencies, and the coworker subscale of the job satisfaction scale. The withdrawal scale is a four item scale of a formative construct, and therefore the low coefficient alpha is not surprisingly. The low coefficient alpha for the coworker subscale of the job satisfaction scale is consistent with previous studies (Spector, 1985). Overall job satisfaction show high reliability ($\alpha = .88$).

Consistent with past studies, the strongest predictors of cyberloafing were ability to hide cyberloafing ($r = .40$), cyberloafing attitudes ($r = .41$), perceived descriptive norms ($r = .36$), cyberloafing intentions ($r = .53$) and supervisor cyberloafing ($r = .43$). Other bivariate correlations were also consistent with past studies, including studies using non-student populations – suggesting results in student samples could generalize to the non-student population.

Q1: Do Askew et al.'s findings replicate?

Askew (2010b) found evidence that the Theory of Planned Behavior is an appropriate model of cyberloafing. His findings have yet to be replicated outside of the

population that he sampled from – the general working public in downtown Tampa, Florida. This analysis is an attempt to replicate Askew's results in a mostly student sample at the University of South Florida. To attempt to replicate Askew's findings, cyberloafing was regressed on attitudes, social norms, and the ability to hide cyberloafing, and the significance of the beta weights were examined. All three beta weights were significant at the .001 level, suggesting that all three variables incrementally predict cyberloafing above and beyond the other two variables. In total, the three variables accounted for a respectable 32% of the variance in cyberloafing. An examination of the size of the beta weights showed that each of the variables contributed about equally to the prediction of cyberloafing ($B_{attitudes}$ = .28, B_{dnorms} = .24, B_{AtHC} = .28). The findings replicate Askew's original findings and support the Theory of Planned Behavior as a model of cyberloafing.

Q2: Which variation of the Theory of Planned Behavior model is more appropriate?

The ability to hide cyberloafing is not a typical variable in a Theory of Planned Behavior model. A more typical variable is perceived behavioral control, which refers to one's self-efficacy in regards to the behavior. This set of analyses is aimed at examining whether the more traditional perceived behavioral control variable is appropriate. The first step was to examine whether perceived behavioral control predicted cyberloafing above and beyond attitudes and social norms. Another linear regression was conducted, regressing cyberloafing on perceived behavioral control and the other two predictors. The perceived behavioral control variable was not significant at the .05 level ($B_{behav\ control}$ = .07). This suggests that a traditional Theory of Planned Behavior model of cyberloafing is not appropriate, as perceived behavioral control did not predict

cyberloafing incremental to the other two predictors. Instead, it appears that a slightly non-traditional variant of the Theory of Planned Behavior – one with the ability to hide cyberloafing as a variable – is more appropriate in regards to modeling the antecedents of cyberloafing.

Q3: What is the bivariate relationship between cyberloafing and task performance?

To examine the relationship between cyberloafing and task performance, the data were first plotted on a scatter plot. This allowed me to see a visual representation of the relationship as well as choose the appropriate statistic to quantify the relationship. The scatter plot is shown below.
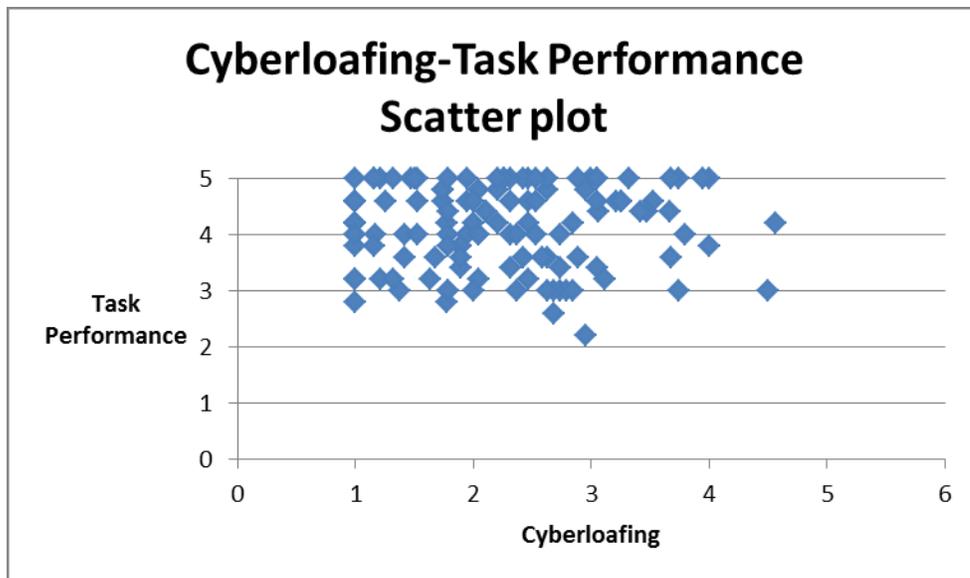
Figure 2: Cyberloafing – Task Performance Scatter Plot

No obvious relationship was present, so I choose a traditional Pearson product moment correlation to quantify the relationship. The correlation was small and not significant, $r(124) = .02$, $p > .05$; and so in short, no bivariate relationship was found between overall cyberloafing and task performance.

Q4: Do social-cyberloafing behaviors negatively relate to task performance?

Lim and Chen (2009) hypothesized that social cyberloafing behaviors would have a more negative influence on task performance than non-social cyberloafing behaviors. This hypothesis was examined using the same method used above. A scatter diagram was created and the bivariate correlation between social cyberloafing and task performance was examined.
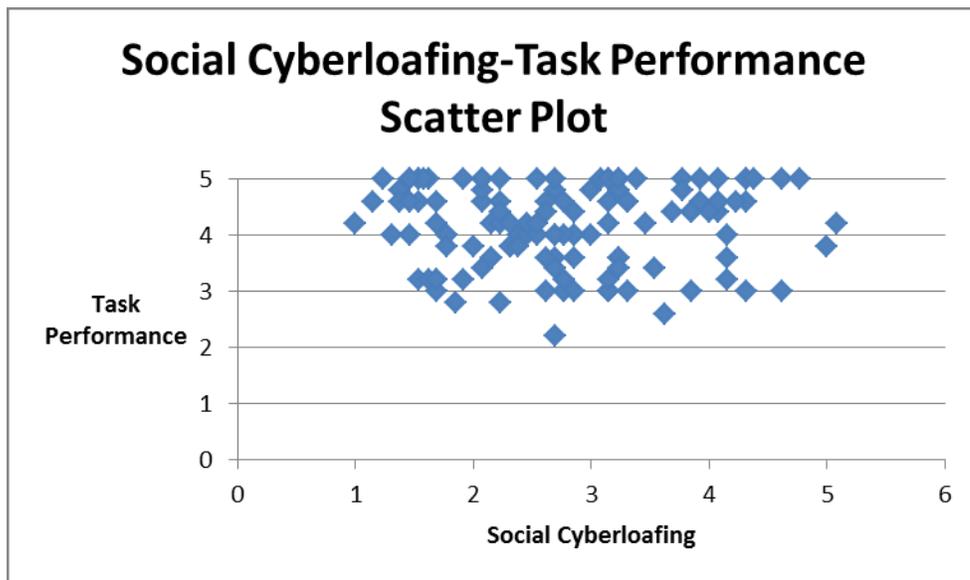
Figure 3: Social Cyberloafing – Task Performance Scatter Plot

Contrary to the social cyberloafing hypothesis, the correlation was not significant, $r(124) = .02$, $p > .05$. To test the social hypothesis more thoroughly, the correlations between the social items and task performance were compared to the correlation between the web-browsing item and task performance. If the social cyberloafing hypothesis is correct, all or some of the social items should correlate more negatively with task performance than the web-browsing item. None of the correlations between the social cyberloafing items and task performance were significantly different than the web-

browsing-task performance correlation ($r_{\text{web browsing}}$ = .03). In summary, no support for the social cyberloafing hypothesis was found.

Q5: Do interactive-cyberloafing behaviors negatively relate to task performance?

Blau and his colleagues (2004) hypothesized that interactive-cyberloafing behaviors (e.g., playing electronic games) would have a more negative influence on task performance than non-interactive behaviors. This hypothesis was examined using the same three step approach used to examine Lim and Chen's social hypothesis. First, a scatter plot was created to plot the relationship between the two variables and to aid in choosing the correct correlation procedure.
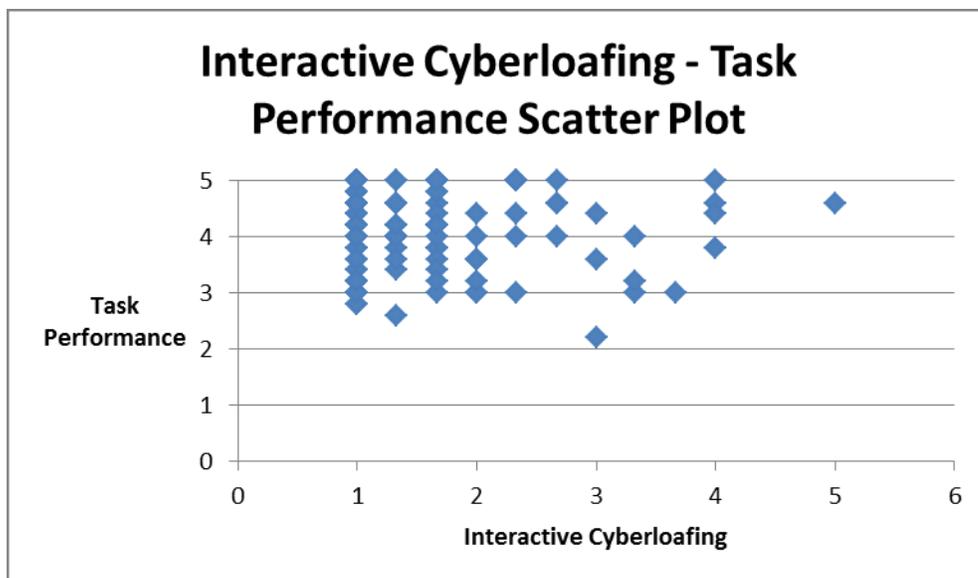
Figure 4: Interactive Cyberloafing – Task Performance Scatter Plot

No obvious relationship was present and so a traditional Pearson product moment correlation was selected. Second, the relationship was quantified using the Pearson product moment correlation.   The correlation between overall interactive cyberloafing and task performance was small and not significant, $r(124) = -.05$, $p > .05$. Finally,

bivariate correlations between interactive cyberloafing items and task performance were compared to the .03 correlation between web-browsing and task performance. None of the interactive-task performance correlations were significantly different from web-browsing-task performance correlation, as would be expected if the interactive cyberloafing hypothesis is correct. In short, no evidence for the interactive cyberloafing hypothesis was found.

Q6 & Q7: How do cyberloafing breaks relate to task performance?

Many cyberloafing researchers have suggested that cyberloafing in short breaks could improve task performance by allowing the employee to recoup cognitive resources that have been drained by work. On the other hand, many researchers have warned that cyberloafing could be detrimental to performance if it is done in long durations. To test these hypotheses, a hierarchical regression was run with age as a control variable in the first step, and quick- and long-breaks as additional variables in the second step. Long breaks were significantly negatively related to task performance, B_{long} (114) = -.27, p <.05; while short breaks were unrelated to task performance, B_{short} (114) = .148, p > .05. These results suggest that cyberloafing in short durations does not provide a boost to productivity, or at least not a boost that is sizable enough to have a detectable impact on employees' overall task performance; and that cyberloafing in long durations could be harmful to overall productivity.

Q8: What is the bivariate relationship between cyberloafing and job satisfaction?

The influence of cyberloafing on job satisfaction has received much less discussion in the cyberloafing literature and the research questions here are primarily exploratory. To explore the relationship between these two variables, a number of steps

were taken. First, I examined the bivariate relationship between overall job satisfaction and cyberloafing. The scatter plot, which can be seen below, showed no relationship between the two variables.

Figure 5: Cyberloafing – Job Satisfaction Scatter Plot

A correlation analysis confirmed that the relationship was small and non-significant, $r(431) = -.01$, $p > .05$. Next, I examined the relationships at the facet level of job satisfaction. None of the three facets (supervisor, coworker, nature of work) were significantly related to cyberloafing. Third, I examined the bivariate relationship between overall job satisfaction and cyberloafing on a cellphone. Interestingly, the relationship was job satisfaction and cyberloafing on a cellphone was significant and negative, $r(431) = -15$, $p < .05$. I then examined the relationship at the facet level, and found that the satisfaction with supervisor and satisfaction with the nature of work facets were also significantly related to cyberloafing-cellphone, $r(431) = -.12$ and $-.17$, respectively. [Satisfaction with one's coworker was not significantly related to

cyberloafing on a cellphone, $r(431) = -.06$, $p > .05$.] The results were unexpected and suggest that cyberloafing might operate differently on different media.

Q9: How do cyberloafing breaks relate to job satisfaction?

Cyberloafing in short breaks has been hypothesized to provide a respite that can boost productivity once an employee returns to work. Although the effect of respites on task performance was not detected, it is possible that such an effect could be detected on job satisfaction. To examine how cyberloafing breaks relate to job satisfaction, a hierarchical regression was run with age in the first step, and short- and long-breaks added in the second step. No significant effect was found for either short breaks, B_{short} $(397) = -.06$, $p > .05$; or long breaks, B_{long} $(397) = .02$, $p > .05$; and similar results were also obtained when job satisfaction facets were used as the criterion. The results suggest that the frequency of cyberloafing breaks were not related to job satisfaction.

Q10: Do cyberloafing behaviors differentially relate to job satisfaction?

The break literature has shown that certain types of behaviors provide more of a respite than other types of behaviors. Certain types of cyberloafing behaviors might be more influential in increasing job satisfaction than others. The correlations among job satisfaction variables and cyberloafing items were examined and tested for significance. A condensed correlation matrix is shown in Appendix B. Four out of the 76 possible job satisfaction-cyberloafing on a desktop correlations were significant with three of the correlations being positive. The items corresponding to the significant correlations did not appear to have any communality in terms of content, nor did the significant correlations involve the same job satisfaction variables. The lack of clear patterns

suggests that the four correlations could be due to sampling error, and that the type of cyberloafing behavior does not influence job satisfaction or its facets.

The job satisfaction-cyberloafing on a cell-phone correlations, however, showed a different pattern of results. All seven of the cyberloafing-cellphone items had at least one significant correlation with a job satisfaction variable, and half of all possible correlations were significant (14/28). Interestingly, the job satisfaction variables seemed to differentially correlate with the cyberloafing items (not significantly); however, there was no clear pattern for the relationships based on the item content. The only consistent pattern was that the supervisor and coworker facets correlated more consistently with cyberloafing items than the coworker facet did (likely due to the lower reliability of the coworker scale). Taken as a whole, the results suggest that certain cyberloafing behaviors are not more likely to influence job dissatisfaction than others.

Discussion

The results paint an interesting picture of cyberloafing. On the antecedent side, the results suggest that the Theory of Planned Behavior is an appropriate model of cyberloafing. Thus, cyberloafing might be caused by intentions to cyberloaf, which might be caused by cyberloafing attitudes, social norms, and the ability to hide cyberloafing. More research is needed to assert causation, but the initial results are promising. On the consequences side, results support the fourth view of the relationship between cyberloafing and task performance. Cyberloafing appears to have no strong relationship to task performance; people have work to get done, and they cyberloaf when they have the time. The only time cyberloafing appears to be harmful is when done in excess (i.e., long breaks).

In regards to job satisfaction, an interesting pattern of results emerged. Cyberloafing on a desktop was not related to job satisfaction, but cyberloafing on a cellphone was related (negatively) to job satisfaction. The negative relation is probably not due to cyberloafing increasing job dissatisfaction; cyberloafing is a voluntary behavior and it seems unlikely that people would keep engaging in something that is not enjoyable. Rather, the direction of causality is likely the reverse of what was hypothesized: job (dis)satisfaction is probably leading to increased smartphone use as people use it to escape their uninteresting job. This suggests that cyberloafing on a cellphone might act more like a typical withdrawal behavior than cyberloafing on a desktop.

The goal of this investigation was to address the next couple of questions about cyberloafing. These questions centered on the antecedents and consequences of cyberloafing. However, the results appear to inform our understanding of the cyberloafing construct itself. First, the lack of differential results for the interactive and social behaviors, as well as the lack of differential relationships among cyberloafing items and other constructs, suggests that the type of cyberloafing behavior does not matter. These findings are consistent with other studies which have failed to find differential relationships between types of cyberloafing and other variables (e.g., Blanchard & Henle, 2008; Blau et al., 2004). What appears to be important is the amount of time spent cyberloafing, not the type of cyberloafing activity itself. Second, the findings suggest that cyberloafing might operate differently across media. Cyberloafing-cellphone was negatively related to job satisfaction, whereas cyberloafing-desktop was not. As mentioned earlier, one possible explanation for this is that people use their

cellphones to escape the tediousness of an unpleasant job – possibly because cellphones are quick and easy to access. More research is needed to see if cyberloafing on a desktop operates differently than cyberloafing on a cellphone. But if differential relationships are established between the two mediums and external variables, it would suggest that cyberloafing taxonomies should be based on media, not the types of cyberloafing behaviors (as has been the case in past taxonomies).

Limitations

A number of limitations need to be acknowledged. First, a self-report method was used to collect all data. An assumption implicit with the use of this method is that people are able to respond accurately. It is possible that people are not able to accurately remember the amount of cyberloafing to a high degree of precision, which could affect the responses. However, given that the focus of the research questions were on the relationships among variables – and not the mean levels of each variable – this assumption can be somewhat violated without impacting the results. As long as the rank order of participants was generally maintained, this limitation should not change the conclusions of the study.

A second limitation is that the data were all collected at the same time. Collecting the data at different time points would allow a better understanding of the temporal relationships among the variables and would increase one's ability to make causal attributions. However, the cross-sectional data collected here were sufficient for addressing the research questions. The pattern of data were also useful in ruling out causal explanations that were not consistent with the results, such as the widely cited idea that cyberloafing is detrimental to task performance.

A third limitation was that a student sample was used and therefore the results might not generalize to the general working population. However, the bivariate correlations in the student sample were extremely similar to bivariate correlations found in samples from the general population, providing evidence that the results here are likely to generalize. In addition, the Theory of Planned Behavior was found to appropriately model cyberloafing and its antecedents – just like what has been found in studies with non-student samples.

A fourth limitation is that this investigation did not examine extreme cyber behaviors such as hacking or spreading viruses at work. Although such behaviors are interesting, they are likely driven by different internal motivations and are best studied separately. Finally, another limitation is that supervisor participation was solicited by the employee. This could have led to a bias in the supervisor respondents, with only supervisors of higher performing employees being solicited. Although some bias probably did occur, sufficient variability on task performance was observed for testing hypotheses.

Future Directions

The findings of this study suggest some promising areas of future research. First, researchers should examine the plausibility of the Theory of Planned Behavior using a longitudinal design. This could establish the temporal precedence of the assumed antecedents, and would provide strong evidence of the Theory of Planned Behavior as an appropriate cyberloafing model. Ideally, cyberloafing in the confirmatory study would be measured directly, so that a true confirmatory test can be conducted. If a Theory of Planned Behavior is supported in future studies with stronger designs, researchers should

then focus their attention on explaining how other correlates of cyberloafing fit into the model.

Second, researchers should investigate how cyberloafing is different on a cellphone and other mediums like tablet computers. Here, the focus should be on finding differential relationships between cyberloafing on different mediums and cyberloafing's correlates. The findings that emerge have the potential to shed light on the different motivations that lead to cyberloafing on different media. These findings could also be useful in developing a taxonomy of cyberloafing.

Third, researchers should try to replicate the finding that long breaks are associated with decreased task performance. If this finding is replicated, researchers should try to quantify what exactly constitutes a "long break". The results could have significant implications for those setting company internet usage policies. Finally, researchers should examine the relationships among cyberloafing on different media and different facets of job satisfaction. Due to space limitations, only three facets of job satisfaction were examined; including more facets in a future study could illuminate the states that drive cyberloafing on different mediums.

Summary and Conclusion

The results of this investigation provide an interesting view of cyberloafing. Cyberloafing appears to be influenced by the ability to hide cyberloafing, attitudes, and descriptive norms, suggesting that the Theory of Planned Behavior is an appropriate model of its antecedents. Cyberloafing does not seem to have a dominate influence on task performance, and may only be influential when done frequently and in long durations. Only cyberloafing on a cellphone – but not on a desktop – appears to be

related to job dissatisfaction.   The findings of the current study are note-worthy for three reasons: first, because they provide support for a model of cyberloafing (something researchers have called for); second, they help clarify the relationship between cyberloafing and task performance; and third, they suggest that cyberloafing behaviors should be classified by the medium, not by the nature of the cyberloafing activity.

In short, the filling in of some of the gaps in the cyberloafing literature (and by extension, CWB literature) has led to a number of interesting findings and a better overall picture of cyberloafing. The next step is to follow up on some of the early results here: such as the findings on the "effect" of taking long breaks, the importance of the cyberloafing device, and the Theory of Planned Behavior results. Confirmation of these results would give organizational decision makers a better understanding on which to base organizational policies.

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Appendices

Appendix A

Correlations Among Study Variables

Appendix A: Correlations Among Study Variables

	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Cyberloafing	.92																								
2. Cyberloafing-Cell	.83	.52**																							
3. Cyberloafing-Social	.88	.92**	.74**																						
4. Cyberloafing-Interactive	.75	.55**	.54**	.56**																					
5. Attitudes	.87	.41**	.31**	.40**	.26**																				
6. Descriptive Norms	.85	.36**	.47**	.45**	.27**	.26**																			
7. Ability to Hide CL	.91	.40**	.27**	.39**	.30**	.25**	.23**																		
8. Perceived Behav. Control	.86	.17**	.09	.17**	.12*	.16**	.15*	.31**																	
9. Intentions	.79	.53**	.61**	.61**	.35**	.51**	.44**	.29**	.19**																
10. Short Break Frequency	.54	.54**	.51**	.59**	.36**	.37**	.35**	.32**	.05	.44**															
11. Long Break Frequency	.69	.50**	.46**	.53**	.40**	.30**	.28**	.33**	.05	.33**	.67**														
12. Task Performance	.89	.02	-.05	.02	-.05	-.13	.02	-.05	-.01	-.15	-.04	-.15													
13. Job Satisfaction-Overall	.88	-.01	-.15**	-.04	-.07	-.04	-.16**	-.03	.07	-.07	-.05	-.02	.17												
14. Job Satisfaction-Supervisor	.84	-.05	-.12*	-.07	-.08	-.07	-.14**	-.06	.09	-.04	-.06	-.04	.25**	.83**											
15. Job Satisfaction-Coworkers	.69	.06	-.06	.06	-.04	.06	-.13*	-.04	.01	.00	.05	.03	.02	.81**	.57**										
16. Job Satisfaction-Work	.87	-.03	-.17**	-.07	-.06	-.06	-.12*	.02	.06	-.13**	-.09	-.03	.10	.80**	.45**	.46**									
17. Age	-	-.02	-.16**	-.10	-.07	.04	-.04	-.06	-.19**	-.07	-.01	-.06	-.01	.00	-.08	-.05	.12*								
18. Gender	-	-.08	.01	-.06	.02	-.01	-.06	-.07	-.01	.00	-.04	-.04	.03	.01	.04	.03	-.05	-.12*							
19. Organizational Level	-	-.01	-.06	-.03	.01	.01	-.03	.10*	.08	-.06	.01	-.06	.06	.01	-.01	.00	.02	.18**	-.06						
20. Hours Worked Per Week	-	.07	.10*	.08	-.03	.03	.15**	-.01	-.17**	.04	.07	.02	.09	-.11*	-.13**	-.21**	.05	.40**	-.12*	.19**					
21. Boredom	.83	.16**	.26**	.22**	.11*	.11*	.24**	.06	-.06	.22**	.15**	.16**	.00	-.48**	-.24**	-.27**	-.63**	-.20**	.07	-.06	-.04				
22. Withdrawal	.65	.28**	.20**	.28**	.13*	.14**	.17**	.12*	-.05	.21**	.26**	.27**	-.03	-.21**	-.14**	-.21**	-.17**	.05	-.11*	-.04	.11*	.23**			
23. Conscientiousness	.80	-.02	-.06	-.02	-.03	-.06	.00	.01	.01	-.05	.00	-.10*	.16	.09	.07	.07	.08	.04	.03	.07	.03	.01	-.29**		
24. Supervisor P. Norms	.84	.31**	.15	.29**	.09	.20*	.15	.21*	.32**	.17	.25**	.30**	.02	.25**	.16	.15	.27**	.03	.04	-.02	.08	-.12	.20*	-.11	
25. Supervisor Cyberloafing	.91	.43**	.29**	.45**	.31**	.14	.31**	.28**	.29**	.21*	.26**	.33**	-.02	.16	.08	.14	.17*	.00	.02	.04	.13	-.06	.11	-.02	.54**

Notes. Supervisor P. Norms is the supervisor's self-reported approval or disapproval of subordinate cyberloafing (i.e., actual prescriptive supervisor norm). Supervisor Cyberloafing is the supervisor's self-rated cyberloafing (i.e., actual descriptive supervisor norm). Gender was coded: male =1, female = 2. * indicates correlation is significant at the .05 level, two-tailed. ** indicateds correlation is significant at the .01 level, two-tailed.

Appendix B

Correlations Among Cyberloafing Items and Job Satisfaction Variables

Appendix B: Correlations Among Cyberloafing Items and Job Sat.Variables

	Overall	Supervisor	Coworker	Nature of Work
Job Satisfaction - Overall	1			
Job Satisfaction - Supervisor	.83**	1		
Job Satisfaction - Coworker	.81**	.57**	1	
Job Satisfaction - Work	.80**	.45**	.46**	1
CL_1	.04	.01	.09	.
CL_2	.01	-.04	.03	.02
CL_3	.05	.02	.12*	-.01
CL_4	-.04	-.02	-.03	-.04
CL_5	.00	-.01	.03	-.02
CL_6	-.07	-.07	-.04	-.06
CL_7	-.08	-.10*	.00	-.09
CL_8	-.08	-.09	-.04	-.05
CL_9	-.04	-.05	-.01	-.03
CL_10	-.02	-.06	-.03	.03
CL_11	-.05	-.04	-.04	-.03
CL_12	.05	.00	.08	.04
CL_13	.03	.02	.13**	-.05
CL_14	-.07	-.10*	-.05	-.01
CL_15	-.01	-.04	.07	-.04
CL_16	-.03	-.08	.07	-.05
CL_17	.01	-.04	.10*	-.02
CL_18	.01	-.02	.00	.03
CL_19	.00	.00	-.01	.02
CL_Cell_1	-.11*	-.13**	-.07	-.07
CL_Cell_2	-.16**	-.11*	-.07	-.20**
CL_Cell_3	-.05	.01	.03	-.15**
CL_Cell_4	-.11*	-.09	-.10*	-.08
CL_Cell_5	-.12*	-.15**	-.03	-.09
CL_Cell_6	-.07	-.06	.02	-.12*
CL_Cell_7	-.13**	-.11*	-.09	-.11*

Appendix C

The Ability to Hide Cyberloafing Scale

The Ability to Hide Cyberloafing (AtHC) refers to how well an employee can hide his or her computer activity from coworkers and supervisors. Below is the AtHC scale developed by Askew and his colleagues (Askew, Coovert, Vandello, Ilie, & Tang, 2010). The scale has shown good reliability and criterion-related validity (Askew, 2010a, Askew et al., 2010, Askew et al., 2012).

Rate your agreement with the following statements. Please respond to the statements with respect to your present job.

1	2	3	4	5	6
Disagree very much	**Disagree moderately**	**Disagree slightly**	**Agree slightly**	**Agree moderately**	**Agree very much**

_____ 1. I COULD hide what I do on my work computer from other employees.
_____ 2. I COULD pretend to be working on my computer and people would never know.
_____ 3. I COULD hide my computer activity if I wanted to.

Appendix D

Employee Survey

1. Are you currently employed?
    Yes   No

2. At work, do you have access to the internet? Access can be through a computer, smartphone, or both.
    Yes   No   NA

A. YOUR PERSONAL COMPUTER USE

In this section, you will be asked about your personal internet usage at work. Answer each question using the corresponding scales. *Your responses are completely confidential*. If you are unsure how to respond to a question, you may leave it blank.

During office hours, how often do you do each of the following through a DESKTOP COMPUTER or LAPTOP?

1	2	3	4	5	6
Never	A few times per month	A few times per week	Once a day	A few times a day	Constantly

_____ 1. Visit non-job related websites
_____ 2. Visit general news websites
_____ 3. Visit entertainment websites
_____ 4. Visit sports related websites
_____ 5. Instant message/chat online
_____ 6. Download non-work related information
_____ 7. Look for employment
_____ 8. Shop online
_____ 9. Play online games
_____ 10. Visit adult-oriented (sexually explicit) websites
_____ 11. Visit online discussion boards or forums
_____ 12. Visit video sharing sites (YouTube, etc.)
_____ 13. Visit social networking websites (Facebook, etc.)
_____ 14. Visit investment or banking websites
_____ 15. Check non-work related email
_____ 16. Send non-work related email
_____ 17. Receive non-work related email
_____ 18. Play games on social networking sites (Facebook games)
_____ 19. Visit social news websites (reddit)

During office hours, how often do you do each of the following through a CELL-PHONE?

1	2	3	4	5	6
Never	A few times per month	A few times per week	Once a day	A few times a day	Constantly

_____ 1. Read/write non-work related email
_____ 2. Visit non-job related websites
_____ 3. Visit social networking sites (Facebook, etc.)
_____ 4. Shop online
_____ 5. Make phone calls
_____ 6. Send or receive text messages
_____ 7. Play games

On a typical work day, how frequently do you do you...

1	2	3	4	5
Never do this	Less than once a day	Once or twice a day	Three to four times a day	Five or more times a day

_____ 1. take a quick break using a computer.
_____ 2. take a quick break using a cellphone.
_____ 3. take a long break using a computer.
_____ 4. take a long break using a cellphone.

B. COWORKERS & SUPERVISOR

In this section, you will be asked about your coworkers' and supervisor's personal computer use. Answer each question to the best of your ability using the corresponding scales. If you are unsure how to respond to a question, you may leave it blank.

How often do your COWORKERS perform these activities at work? Activities can be performed through a computer, smartphone, or both.

1	2	3	4	5	6
Never	A few times per month	A few times per week	Once a day	A few times a day	Constantly

_____ 1. Visit non-job related websites
_____ 2. Check non-work related email
_____ 3. Visit social networking sites (Facebook, etc.)

How often does your SUPERVISOR(s) perform these activities at work? Activities can be performed through a computer, smartphone, or both.

1	2	3	4	5	6
Never	A few times per month	A few times per week	Once a day	A few times a day	Constantly

_____ 1. Visit non-job related websites
_____ 2. Check non-work related email
_____ 3. Visit social networking sites (Facebook, etc.)

Report your perception of your coworkers' and supervisor's opinions using the scale below.

1	2	3	4	5
Strongly disapprove	Disapprove	Neither Approve, Nor Disapprove	Approve	Strongly Approve

_____ 1. My coworkers would approve of me visiting non-job related websites.
_____ 2. My coworkers would approve of me sending/receiving non-work related emails.
_____ 3. My coworkers would approve of me visiting social networking sites (Facebook, etc).
_____ 4. My supervisor would approve of me visiting non-job related websites.
_____ 5. My supervisor would approve of me sending/receiving non-work related emails.
_____ 6. My supervisor would approve of me visiting social networking sites (Facebook, etc).

C. THE JOB

In this section, you will be asked about your present job. Answer each question to the best of your ability using the corresponding scales. If you are unsure how to respond to a question, you may leave it blank.

The questions that follow all deal with your experience of your job as dull or exciting. Please answer the questions with respect to your own reactions to your **present** job.

1	2	3	4	5	6	7
Never	Very Rarely	Sometimes	Often	Very Often	Almost Always	Always

_____ 1. Do you find the job dull?
_____ 2. Does the job seem repetitive?
_____ 3. Is your work pretty much the same day after day?

Write the response for each question that comes closest to reflecting your opinion about it.

1	2	3	4	5	6
Disagree	**Disagree**	**Disagree**	**Agree**	**Agree**	**Agree**
very much	**moderately**	**slightly**	**slightly**	**moderately**	**very much**

_____ 1. My supervisor is quite competent in doing his/her job.
_____ 2. I like the people I work with.
_____ 3. I sometimes feel my job is meaningless.
_____ 4. My supervisor is unfair to me.
_____ 5. I find I have to work harder at my job because of the incompetence of people I work with.
_____ 6. I like doing the things I do at work.
_____ 7. My supervisor shows too little interest in the feelings of subordinates.
_____ 8. I enjoy my coworkers.
_____ 9. I feel a sense of pride in doing my job.
_____ 10. I like my supervisor.
_____ 11. There is too much bickering and fighting at work.
_____ 12. My job is enjoyable.

D. MISCELLANEOUS

In this section, you will be asked about miscellaneous questions that might relate to personal computer use at work. Answer each question to the best of your ability using the corresponding scales. If you are unsure how to respond to a question, you may leave it blank.

Rate your agreement with the following statements. Please respond to the statements with respect to your present job.

1	2	3	4	5	6
Disagree	**Disagree**	**Disagree**	**Agree**	**Agree**	**Agree**
very much	**moderately**	**slightly**	**slightly**	**moderately**	**very much**

_____ 1. I COULD hide what I do on my work computer from other employees.
_____ 2. I COULD pretend to be working on my computer and people would never know.
_____ 3. I COULD hide my computer activity if I wanted to.
_____ 4. My company monitors my computer activity.
_____ 5. My company keeps records of my computer activity.
_____ 6. My company keeps logs of the websites I visit.
_____ 7. My favorite websites are blocked at work.
_____ 8. My company blocks access to certain sites.
_____ 9. I can get to any website I want to at work.

Appendix D (continued)

For each question, place an "X" in the appropriate spot.

1. I intend to shop online while at work at least once in the forthcoming month.
   Extremely Unlikely : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Extremely Likely

2. I will use my phone for personal reasons while at work at least once in the forthcoming month.
   Extremely Unlikely : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Extremely Likely

3. I will send at least a few text messages while at work in the forthcoming month.
   Extremely Unlikely : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Extremely Likely

4. I intend to send a non-work related email at least once in the forthcoming month.
   Definitely False : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Definitely True

5. I plan to browse non-work related websites at work at least a few times in the forthcoming month.
   Definitely False : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Definitely True

6. I plan to use a social networking site (ex. Facebook) while at work at least once in the forthcoming month.
   Definitely False : ___ : ___ : ___ : ___ : ___ : ___ : ___ : Definitely True

For each question, place an "X" in the appropriate spot.

For me, using the internet at work for personal reasons is…
1. Worthless: ___ : ___ : ___ : ___ : ___ : ___ : ___ : Valuable
2. Unenjoyable: ___ : ___ : ___ : ___ : ___ : ___ : ___ : Enjoyable
3. Harmful: ___ : ___ : ___ : ___ : ___ : ___ : ___ : Beneficial
4. Bad: ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good

How often have you done each of the following things on your present job?

1	2	3	4	5
Never	Once or twice	Once or twice per month	Once or twice per week	Every day

_____ 1. Came to work late without permission
_____ 2. Stayed home from work and said you were sick when you weren't
_____ 3. Taken a longer break than you were allowed to take
_____ 4. Left work earlier than you were allowed to

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. Indicate for each statement whether it is accurate or not using the scale below.

1	2	3	4	5
Very Inaccurate	Moderately Inaccurate	Neither Accurate, Nor Inaccurate	Moderately Accurate	Very Accurate

_____ 1. Am always prepared
_____ 2. Leave my belongings around
_____ 3. Pay attention to details
_____ 4. Make a mess of things
_____ 5. Get chores done right away
_____ 6. Often forget to put things back in their proper place
_____ 7. Like order
_____ 8. Shirk my duties
_____ 9. Follow a schedule
_____ 10. Am exacting in my work

E. DEMOGRAPHICS

The following will enable me to identify trends among different people responding, so please provide me with answers to some basic questions about you.

1. Age: _____

2. Gender: Male   Female

3. Race: Caucasian   African American   American Indian   Asian   Other

4. What industry do you work in? (ex. manufacturing) _____

5. Which of the following best describes your current level in the organization? Staff Manager Executive

6. How many hours per week do you work?   0-10   11-20   21-30   31-40   41-50   51+

LAST QUESTION: PLEASE ANSWER HONESTLY!
Did you respond randomly in order finish the survey quickly? You will get credit regardless – I just need to know which data to drop. I won't tell your instructor.

Yes, I responded randomly   No, I did not respond randomly

Appendix E

Supervisor Survey

Rate the extent to which each statement describes the employee's performance at work in relation to other employees.

1	2	3	4	5
A lot less than others		About the same as others		A lot more than others

_____ 1. Adequately complete assigned duties
_____ 2. Fulfills the responsibilities specified in job description
_____ 3. Performs tasks that are expected of him/her
_____ 4. Meets formal performance requirements of the job
_____ 5. Engages in activities that will directly affect his/her performance evaluation

Rate your approval of the following behaviors during work hours.

1	2	3	4	5
Strongly disapprove	Disapprove	Neither Approve, Nor Disapprove	Approve	Strongly Approve

_____ 1. I approve of employees visiting non-job related websites.
_____ 2. I approve of me sending/receiving non-work related emails.
_____ 3. I approve of me visiting social networking sites (Facebook, etc).

During office hours, how often do YOU do each of the following through a desktop computer or laptop?

1	2	3	4	5	6
Never	A few times per month	A few times per week	Once a day	A few times a day	Constantly

_____ 1. Visit non-job related websites
_____ 2. Visit general news websites
_____ 3. Visit entertainment websites
_____ 4. Visit sports related websites
_____ 5. Instant message/chat online
_____ 6. Download non-work related information
_____ 7. Look for employment
_____ 8. Shop online
_____ 9. Play online games
_____ 10. Visit adult-oriented (sexually explicit) websites
_____ 11. Visit online discussion boards or forums
_____ 12. Visit video sharing sites (YouTube, etc.)
_____ 13. Visit social networking websites (Facebook, etc.)
_____ 14. Visit investment or banking websites
_____ 15. Check non-work related email
_____ 16. Send non-work related email
_____ 17. Receive non-work related email
_____ 18. Play games on social networking sites (Facebook games)
_____ 19. Visit social news websites (reddit)

Appendix F

About the Author

Kevin Askew graduated from the University of South Florida's Industrial/Organizational Psychology program in 2012. His research interests center around cyberloafing – the use of computers at work for non-worked related purposes. His current focus is in understanding how one's ability to hide cyberloafing impacts cyberloafing, and how cyberloafing differs across media.