Employee job attitudes and organizational characteristics as predictors of cyberloafing

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ABSTRACT

Cyberloafing is the personal use of the Internet by employees while at work. The purpose of this study is to examine whether employee job attitudes, organizational characteristics, attitudes towards cyberloafing, and other non-Internet loafing behaviors serve as antecedents to cyberloafing behaviors. We hypothesize that the employee job attitudes of job involvement and intrinsic involvement are related to cyberloafing. In addition, we hypothesize that organizational characteristics including the perceived cyberloafing of one's coworkers and managerial support for internet usage are related to cyberloafing. We also hypothesize that attitudes towards cyberloafing and the extent to which employees participate in non-Internet loafing behaviors (e.g., talking with coworkers, running personal errands) will both be related to cyberloafing. One hundred and forty-three working professional from a variety of industries were surveyed regarding their Internet usage at work. As hypothesized, the employee job attitudes of job involvement and intrinsic involvement were negatively related to cyberloafing. Also as predicted, the organizational characteristics of the perceived cyberloafing of one's coworkers and managerial support for internet usage were positively related to cyberloafing. Finally, results showed that attitudes towards cyberloafing and participation in non-Internet loafing behaviors were positively related to cyberloafing. Implications for both organizations and employees are discussed.

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1. Introduction

The impact that the Internet has had in the workplace has been a relatively unexplored area of research in organizational behavior. The majority of American employees have Internet access (Pew Internet & American Life Project, 2002, 2008), indicating the importance of understanding employee Internet use in the workplace. The Internet has brought about many benefits to organizations, such as reducing expenses, shortening product cycle times, increasing access to information, improving global communications, and marketing services and products more effectively (Anandarajan, Simmers, & Igbaria, 2000; Teo & Choo, 2001; Teo & Too, 2000). Despite the benefits of the Internet, reports of Internet misuse in which employees use the Internet for non-work related

purposes have become rampant. According to one survey of employees, 90% admitted engaging in non-work-related web-surfing at work and 84% said they sent personal e-mails at work (Naughton, Raymond, & Shulman, 1999). Another study found that of all websites accessed at work, 90% were not work-related (LaPlante, 1997). A recent survey of US workers found that they waste an average of 1.7 h each day on non-work-related activities, with Internet surfing being the largest culprit (Salary.com, 2007).

Cyberloafing can have a significant cost to employers and can also result in negative ramifications for employees, so it is important to understand the factors that contribute to this behavior. Cyberloafing can lead to reductions in productivity and an inefficient use of network resources, resulting in an uncompetitive organization (Chen, Chen, & Yang, 2008; Scheuermann & Langford, 1997; Stewart, 2000; Weatherbee, 2010). It has been estimated that cyberloafing can cost corporations up to $54 billion annually and can decrease employee productivity by as much as 40% (Conlin, 2000; Verton, 2000). A survey of 224 companies found that over 60% had disciplined and over 30% had fired workers for Internet misuse (Greenfield & Davis, 2002). Moreover, cyberloafing subjects the organization to a variety of legal liabilities

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(Scheuermann & Langford, 1997; Sipior & Ward, 2002; Weather-bee, 2010). These liabilities include: inbound behaviors, such as employees downloading illegal material including unlicensed software or hate speech, and outbound behaviors, such as employees engaging in hostile interactions with others via email, or making false statements, thereby creating liability for the organization through defamation of character (Scheuermann & Langford, 1997).

Despite the importance of understanding cyberloafing behavior, much of the research examining Internet usage from within the workplace is primarily anecdotal and descriptive. Lim and Teo (2005) define cyberloafing as the act of employees using their organizations' Internet access for personal purposes during work hours. Lim (2002) argues that cyberloafing is a counterproductive workplace behavior resulting in production deviance. Production deviance refers to voluntary acts undertaken by employees that violate organizational norms about how work is to be accomplished (Robinson & Bennett, 1995). These include behaviors that detract from production while at work such as cyberloafing. Examples of cyberloafing include sending and receiving e-mails to friends and family, posting updates on social networking sites such as Facebook and Twitter, going shopping online, visiting entertainment websites, and downloading software (e.g., videos, music, and games). Since cyberloafing can lead to negative consequences for the organization including reduced productivity levels, increased financial losses, and exposure to liability risks (Conlin, 2000; Lichtash, 2004; Stewart, 2000; Verton, 2000), it is important for organizations to understand why employees engage in cyberloafing in the workplace so that organizations can effectively manage employee's Internet usage at work.

The purpose of this research is to explore several antecedents to cyberloafing that include both individual and organizational factors. Six factors that affect the frequency of cyberloafing behaviors will be examined in the current study including employee job attitudes (job involvement and intrinsic involvement), organizational characteristics (the perceived cyberloafing of one's coworkers and managerial support for Internet usage), the extent to which employees participate in non-Internet loafing behaviors (e.g., chatting with coworkers, running non-work related errands), and employee attitudes toward cyberloafing. In particular, studies of cyberloafing have generally neglected to examine employee job attitudes as a predictor of cyberloafing. Furthermore, the link between whether employees who engage in non-Internet loafing activities influence participation in cyberloafing behaviors remains unexplored by researchers. We examine these variables as well as provide further support in the literature for organizational characteristics and employee attitudes towards cyberloafing as antecedents to cyberloafing. Utilizing previous research from the organizational psychology literature on counterproductive workplace behaviors/workplace deviance and the information technology literature on Internet usage in the workplace, we next provide support for each of the factors influencing employees' cyberloafing behaviors.

1.1. Employee job attitudes

Previous research examining the antecedents of counterproductive workplace behaviors has found empirical evidence which suggests that employees are more likely to engage in misconduct when they hold unfavorable job attitudes (Judge, Scott, & Ilies, 2006; Lau, Au, & Ho, 2003; Mount, Ilies, & Johnson, 2006) since these employees may engage in deviant behavior as a means of restoring control over the job (Bennett & Robinson, 2003). Research has found that employees are more likely to cyberloaf when they perceive lower levels of organizational justice (Blau, Yang, & Ward-Cook, 2006; de Lara, 2007; Lim, 2002), suggesting that negative job attitudes influence cyberloafing behaviors. One such job

attitude that has never been examined as an antecedent to cyberloafing is job involvement which is the degree to which one is cognitively preoccupied with, engaged in, and concerned with one's present job (Paullay, Alliger, & Stone-Romero, 1994). Galperin and Burke (2006) argued that employees who have higher levels of involvement with their work will be less likely to participate in workplace deviance due to their preoccupation with their job and do not have as much time to engage in workplace deviance. The authors showed that work involvement was negatively related to organizational deviance. In addition, lack of commitment to the organization is also related to cyberloafing (Garrett & Danziger, 2008).

Another job attitude that has not yet been examined as a predictor of cyberloafing is intrinsic involvement. George (1992) defines intrinsic involvement as the belief that the work being conducted by the employee is meaningful and that the employee's efforts are making an important contribution to the organization. Studies have shown that employees indicated that they were more likely to cyberloaf because they were bored while at work (D'Abate, 2005; Eastin, Glynn, & Griffiths, 2007). Similarly, employees are more likely to participate in non-work related activities during work time when they are disengaged at work or feel little interest in their work activities (Ketchen, Craighead, & Buckley, 2008). Martin, Brock, Buckley, and Ketchen (2010) note that employees who are engaged with their work will spend more time on the job doing the work that they perceive as meaningful and less time on non-work related activities. Moreover, the authors theorize that when employees experience unfavorable job attitudes, they feel less loyal and accountable towards the organization and are more likely to participate in off-task activities at work (Martin et al., 2010). Based on the literature reviewed, it is proposed that:

Hypothesis 1. There will be a *negative* relationship between job involvement and cyberloafing.

Hypothesis 2. There will be a *negative* relationship between intrinsic involvement and cyberloafing.

1.2. Organizational characteristics

Additional research has shown that the social context of the workplace has an extensive influence over whether individuals will behave in antisocial ways at work (Lau et al., 2003; Robinson & O'Leary-Kelly, 1998). Vardi and Wiener (1996) theorized that the organization's culture may influence employees' intentions to engage in acts of organizational misbehavior. In addition, research has shown that employees learn what group norms are appropriate in the workplace from their coworkers and supervisors (Feldman, 1984; Morrison, 1993). In an environment where many employees participate in non-work related activities, other employees are likely to emulate these behaviors because of the norm that indicates that off-task activities are acceptable to perform in the organization (Martin et al., 2010). Indeed research conducted by Blanchard and Henle (2008) found that coworker and supervisor norms supporting cyberloafing are positively related to cyberloafing. This suggests that cyberloafing may be influenced by the frequency of cyberloafing behaviors that an employee perceives his or her coworkers are engaging in. D'Abate (2005) found that employees stated that they were more likely to engage in a variety of activities including using the Internet for personal reasons because the cultural norms of the organization understood and accepted the behavior. Lim and Teo (2005) asked employees to state their justifications for cyberloafing in the workplace and found that 88% of participants reported that they engaged in cyberloafing

because they perceived others in their workplace to be cyberloafing as well, suggesting that cyberloafing is an everyday, common behavior. Additional research has found that social factors (e.g., coworker support, management support) were positively related to employees' intention to use the Internet for non-work related purposes (Chang & Cheung, 2001; Pee, Woon, & Kankanhalli, 2008; Woon & Pee, 2004).

While the research reviewed above provides support that the social norms of other employees towards cyberloafing in the workplace may affect an individual's cyberloafing behaviors, it is also important to consider whether managerial support for Internet usage influences cyberloafing. General managerial support for Internet usage at work without specifying how to use the Internet is likely to increase forms of Internet use among employees for both business and personal reasons. Managers' general support of internet use may be misinterpreted by employees as an endorsement of all types of Internet use, including cyberloafing. Research examining the predictors of cyberloafing has found that routinized usage of the Internet is positively associated with cyberloafing behaviors (Garrett & Danziger, 2008; Vitak, Crouse, & LaRose, 2011). Garrett and Danziger (2008) argue that when computer technology such as the Internet becomes a part of the employee's standard operating procedures in the workplace, there is an increased likelihood that the employee will utilize the Internet for personal usage and such usage will become commonplace. We expect that managerial support for Internet usage will lead to increased levels of Internet usage and as Internet usage becomes increasingly routinized for employees, employees will be likely to cyberloaf, particularly since research has shown that beliefs about technology use can be influenced by managerial commitment to new technology (Lewis, Agarwal, & Sambamurthy, 2003).

Hypothesis 3. There will be a *positive* relationship between the perceived cyberloafing of one's coworkers and cyberloafing.

Hypothesis 4. There will be a *positive* relationship between managerial support for internet usage and cyberloafing.

1.3. Non-Internet loafing

It also stands to reason that other forms of loafing that result in production deviance will be related to cyberloafing. Since research has shown that different types of workplace deviance are highly correlated with each other (Berry, Ones, & Sackett, 2007; Bolin & Heatherly, 2001; Dalal, 2005), employees who engage in loafing behaviors such as using the telephone to make non-work related phone calls, running non-work related errands during work hours, and chatting by the watercooler may be more likely to cyberloaf than employees who do not engage in non-Internet loafing behaviors. Blau et al. (2006) found that employees who were unconcerned with punctuality and attendance were more likely to cyberloaf. A study by D'Abate (2005) showed that employees engaged in a number of personal activities while at work including cyberloafing shared similar rationales for participating in all of the non-work related activities.

Hypothesis 5. There will be a *positive* relationship between one's non-internet loafing behaviors and cyberloafing.

1.4. Attitudes toward cyberloafing

Employees' attitudes towards cyberloafing in the workplace may also influence cyberloafing behaviors so that employees who generally evaluate cyberloafing in the workplace as acceptable will be more likely to engage in cyberloafing than employees who find

it unacceptable to cyberloaf at work. Research on the link between attitudes and behavior suggests that attitudes are a good predictor of behavior when those attitudes are about the specific behavior in question, thus specific attitudes about cyberloafing behavior should be a good predictor of employees' actual behavior (Ajzen & Fishbein, 1977; Kraus, 1995). In their qualitative review of the antecedents of counterproductive work behaviors, Lau et al. (2003) noted that employees' attitudes towards a specific counterproductive work behavior influenced the extent to which the employee engaged in the behavior. Research has shown that attitudes toward cyberloafing do play a role in cyberloafing behaviors. Morris (2007) found that individuals who reported more positive computer attitudes were more likely to use work computers for personal reasons. Mahatanankoon (2006) also found that attitudes toward using non-work-related websites predicted the use of such websites.

Hypothesis 6. There will be a *positive* relationship between favorable attitudes towards cyberloafing and cyberloafing.

2. Method

2.1. Participants and procedure

Participants were 151 employees who completed a survey while traveling on the Staten Island Ferry. Data from eight participants were excluded since they indicated that they did not have internet access at work. Therefore, data from 143 participants were included in the study. The researchers distributed a survey to riders of the Staten Island Ferry who volunteered to participate in the study. The survey contained questions regarding the participants' demographics, internet behaviors at work, and workplace attitudes. Among the respondents, 56% were male and subjects' ages ranged from 18 to 63, with an average age of 37.33 (SD = 12.49) years. Participants' average number of years of organizational tenure was 8.21 (SD = 8.49) years and the number of years in which they have been working in their current position in their organization was 4.95 (SD = 5.62).

Regarding the industry that participants worked in, 1% worked in manufacturing, 7% in services, 1% in wholesale or retail trade, 32% in financial/insurance/real estate, 5% in media or communications, and 54% worked in other industries. Five percent were senior executives, 7% top-level managers, 12% mid-level managers, 10% lower-level managers, 33% had professional positions, 21% administrative positions, 3% sales positions, and 9% had other positions. Thirteen percent of the respondents reported that the highest level of education that they had completed was high school, 32% some college, 30% college, 5% some graduate or professional study, and 19% reported obtaining a graduate or professional degree. In terms of ethnicity, 70% identified themselves as Caucasian, 9% as African–American/Black, 13% as Hispanic/Latino, 5% as Asian/Pacific Islander, and 3% as other. Additionally, 90% of the sample indicated that they had internet access at home.

2.2. Measures

2.2.1. Job involvement (α = .60)

Job involvement was measured via two items taken from Lodahl and Kejner's (1965) job involvement scale. Respondents answered their level of agreement on a 5-point Likert scale ranging from strongly disagree to strongly agree with the statements "I'll stay overtime to finish a job, even if I'm not paid for it" and "I used to care more about my work, but now other things are more important to me" (reverse-coded).

2.2.2. Intrinsic involvement (α = .77)

An indicator of intrinsic involvement, contribution, was used to measure employee's perceived ability to make an important contribution to their organization. The 3-item scale developed by George (1992) included items such as "I think that I can make a unique contribution to how successful my organization is." and "My organization's success hinges on employees like myself." on a 5-point Likert scale (1 = *strongly disagree* and 5 = *strongly agree*).

2.2.3. Managerial support for internet usage (α = .65)

Two questions from a scale created by Anandarajan et al. (2000) were used to measure whether the employee's supervisor and upper management encourage internet use. Participants indicated their level of agreement with the two items, "I am convinced that management is sure of the benefits that can be achieved with the internet" and "I am always supported and encouraged by my boss to use the internet in my job", on 5-point Likert scale.

2.2.4. Perceived cyberloafing of coworkers

The extent to which participants perceived cyberloafing in their coworkers was measured by asking participants: "On average, how many minutes per day do you estimate that your coworkers "play" online at work?". This item was measured on a 7-point time increment scale ranging from '0–5 min to 'more than 60 min.

2.2.5. Attitude towards cyberloafing

A single item question taken from a scale created by Anandarajan et al. (2000) was used to assess respondents' general evaluation of the acceptability of cyberloafing in the workplace. Participants reported their level of agreement on a 5-point scale ranging from strongly disagree to strongly agree with the following statement: "It seems to be okay to just surf the internet while at work".

2.2.6. Non-Internet loafing behaviors (α = .60)

To measure the extent to which employees socially loaf within the workplace apart from using the internet, employees responded to four questions designating the extent to which respondents engage in non-productive behaviors while at work. For the measures of non-Internet loafing behaviors, participants were first asked to indicate how often they performed each of the activities while at their place of work, ranging from 1 = *never* to 5 = *frequently*. The activities included chit-chatting with fellow coworkers, running non-work related errands (e.g., going to the bank, picking up a prescription at the pharmacy, etc.) outside of the lunch/break time that is allotted by one's supervisor, using either a cell phone or telephone to make non-work related telephone calls, and taking breaks in between work tasks (e.g., bathroom breaks, snack breaks, stretch breaks) outside of the time that is allotted by one's supervisor.

2.2.7. Cyberloafing behaviors (α = .67)

A total of six questions were used to assess the frequency with which employees participate in a variety of cyberloafing behaviors. Five of these questions were adapted from a cyberloafing scale developed by Lim (2002) in which two primary cyberloafing factors were identified, browsing and e-mailing activities. One question developed by the researchers provided an overall measure of the extent of the employee's internet usage to perform non-work related activities. Respondents were asked to indicate how many minutes per day they would estimate that they used the internet to perform each of the activities while at their place of work, using a scale ranging from 1 = *0–5 min* to 7 = *more than 60 min*. The activities included chatting on Instant Messenger programs (e.g., IM, ICQ), shopping online for personal goods via merchandiser's websites and e-auction sites, receiving and sending e-mail to family and friends, visiting entertainment, general news, and sports-related websites, visiting investment-related websites to check on their personal investments, and using the Internet to perform non-work related activities.

2.2.8. Control variables

The following six demographic variables were used as statistical controls to mitigate confound effects on cyberloafing behaviors and to eliminate rival explanations between the observed relationships amongst the variables: gender, age, race, job tenure, organization tenure, and Internet self-efficacy. Past research has found that females are less likely than males to abuse the Internet (Morahan-Martin, 2001) and females differ somewhat from males in the types of activities they perform on the Internet (Jackson, Ervin, Gardner, & Schmitt, 2001), suggesting that gender may be related to cyberloafing. Ethnicity may also be a factor in cyberloafing because some ethnic minorities report having greater anxiety about using computers (Rosen & Weil, 1994). Age is also likely to be an important factor because research has shown that younger people are more likely to use (Pew Internet & American Life Project, 2008) and abuse (Morahan-Martin, 2001) the Internet than older individuals. Additionally, organizational tenure is also likely to be related to cyberloafing, as employees who have been with their organization longer have been found to commit fewer counterproductive behaviors in the workplace (Hollinger, Slora, & Terris, 1992; Martin et al., 2010). Finally, those who possess greater skills in using the Internet will naturally use this resource more (Anandarajan et al., 2000), which could be related to use of the Internet for non-work-related purposes.

Gender (coded as 0 = male, 1 = female) and race (coded as 0 = Caucasian, 1 = Non-Caucasian) were both categorical variables, while age, job tenure, organization tenure, and Internet self-efficacy were numeric variables. Two items were developed to assess an employee's self-efficacy in using the internet (α = .79). Perceived Internet self-efficacy was measured by asking respondents the extent to which they agreed with the following two statements using a five-point Likert-type scale: "I feel confident in my abilities in using the internet" (1 = *strongly disagree* and 5 = *strongly agree*) and "My experience with using the internet is" (1 = *none* and 5 = *very extensive*).

3. Results

Table 1 presents the means, standard deviations, and correlations for each of the study variables. Hypotheses were tested using multiple regression analyses. The control variables of gender, age, race, job tenure, organization tenure, and Internet self-efficacy were entered into the first step of the regression. The second step of the regression analysis included the predictor variables of job involvement, intrinsic involvement, managerial support for internet usage, perceived cyberloafing of coworkers, attitude towards cyberloafing, and non-Internet loafing. Results of the regression analyses used to test our hypotheses appear in Table 2.

Hypotheses 1 and 2 proposed that job involvement and intrinsic involvement would be *negatively* related to cyberloafing behaviors. As shown in Table 2 in the Step 2 column, regression analyses revealed significant main effects for job involvement ($\beta = -.23$, $p < .01$) and intrinsic involvement ($\beta = -.22$, $p < .05$) on cyberloafing behaviors. Hypotheses 3–6 postulated that managerial support for internet usage, perceived cyberloafing of coworkers, attitude towards cyberloafing, and non-Internet loafing are *positively* related to cyberloafing behaviors. The Step 2 column in Table 2 reveals that managerial support for internet usage ($\beta = .17$, $p < .05$), perceived cyberloafing of coworkers ($\beta = .17$, $p < .05$), attitude to-

Table 1
Means, standard deviations, and correlations among study variables.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender[a]	–	–	–												
2. Age	37.33	12.49	−.04	–											
3. Race[b]	–	–	.05	−.13	–										
4. Job tenure	4.95	5.62	.03	.45**	−.04	–									
5. Organizational tenure	8.21	8.50	−.06	.57**	−.06	.45**	–								
6. Internet self-efficacy	4.14	.83	−.01	−.39**	−.12	−.22**	−.32**	–							
7. Job involvement	3.23	.82	−.09	.08	−.14	.08	.07	.11	–						
8. Intrinsic involvement	3.82	.77	.01	.19*	−.07	−.01	.12	.01	.14	–					
9. Managerial support	3.51	.92	−.02	−.06	−.09	−.14	−.16	.39**	.06	.30**	–				
10. Perceived cyberloafing of coworkers	2.91	1.46	.20*	.01*	.01	.08	.00	.13	.14	−.11	−.04	–			
11. Attitude towards cyberloafing	2.89	1.20	−.07	−.22**	−.03	−.08	−.09	.22**	.21*	−.04	.05	.26**	–		
12. Non-Internet loafing	2.61	.62	−.07	−.14	.10	.01	−.01	.14	.04	−.05	−.03	.09	.22**	–	
13. Cyberloafing behaviors	2.11	.78	.01	−.20*	.09	−.08	−.06	.23**	−.18*	−.20*	.19*	.20*	.28**	.35**	–

Note. N ranged from 131 to 142.
[a] 0 = Male, 1 = Female.
[b] 0 = Caucasian, 1 = Non-Caucasian.
* $p < .05$.
** $p < .01$.

Table 2
Regression results for prediction of cyberloafing behaviors.

Predictors	Cyberloafing	
	Step 1 β	Step 2 β
Control variables		
Gender[a]	.06	.02
Age	−.21†	−.08
Race[b]	.08	.05
Job tenure	.11	.04
Organization tenure	.09	.09
Internet self-efficacy	.19†	.11
Job involvement		−.23**
Intrinsic involvement		−.22*
Managerial support		.17*
Perceived cyberloafing of coworkers		.17*
Attitude towards cyberloafing		.19*
Non-Internet loafing		.25**
ΔR^2		.22
R^2	.05	.27

Note. N = 143.
Values are standardized beta coefficients (β).
[a] 0 = Male, 1 = Female.
[b] 0 = Caucasian, 1 = Minority.
* $p < .05$.
** $p < .01$.
† $p < .10$.

wards cyberloafing ($\beta = .19$, $p < .05$), and non-Internet loafing ($\beta = .25$, $p < .01$) were positively related to cyberloafing behaviors.

The variables of job involvement, intrinsic involvement, managerial support for internet usage, perceived cyberloafing of coworkers, attitude towards cyberloafing, and non-Internet loafing did explain a significant amount of the variance in cyberloafing ($\Delta R^2 = .22$, $p < .01$). In summary, Hypotheses 1–6 were supported, as job involvement and intrinsic involvement were negatively related to cyberloafing behaviors, and managerial support for internet usage, perceived cyberloafing of coworkers, attitude towards cyberloafing, and non-Internet loafing were positively related to cyberloafing behaviors.

4. Discussion

As cyberloafing becomes more prevalent in the workplace, reduces employee productivity and raises costs for organizations (Conlin, 2000; LaPlante, 1997; Naughton et al., 1999; Verton, 2000), organizational researchers' interest in understanding its antecedents has increased. The purpose of the current study was to examine a variety of individual and organizational factors that predict cyberloafing behaviors in the workplace. Results showed that employee job attitudes (lack of job involvement and intrinsic involvement), organizational characteristics (managerial support for Internet usage and perceived cyberloafing of coworkers), participation in non-Internet loafing activities, and employee attitudes toward cyberloafing were related to employees tendency to use the Internet for non-work-related purposes including sending and receiving e-mail, Internet-surfing, and instant messaging. These factors accounted for 22% of the variance in cyberloafing behavior. The current research also expands on past studies of cyberloafing by examining the combined effects of these varied factors in a single model to test the extent to which each contributes to cyberloafing in the context of the other factors and shows that all of these factors were equally important predictors of cyberloafing behavior.

Support was found for Hypotheses 1 and 2, demonstrating that employees who have lower levels of job involvement and intrinsic involvement are more likely to engage in cyberloafing behaviors. This indicates that managers must pay attention to the job attitudes of their employees. Managers should aim to create an organizational environment that supports workers to ensure that employees feel their work is meaningful and making a contribution to the organization. Organizational interventions to increase job and intrinsic involvement, whether through job design, job analysis, or training should reduce the likelihood that employees will cyberloaf since acts of workplace deviance have been shown to be an emotional response to frustrating job experiences reflected by low job involvement and intrinsic involvement perceptions (Robinson & Bennett, 1995). These results also lend support to past research demonstrating that job attitudes influence cyberloafing. These findings were consistent with studies showing that boredom with the job (D'Abate, 2005; Eastin et al., 2007) and lack of organizational commitment (Garrett & Danziger, 2008) can contribute to cyberloafing. Future research should examine a greater number of job attitudes that may prove useful for predicting cyberloafing behaviors. Though the current study focused exclusively on job involvement and intrinsic involvement, there are numerous other job attitudes (e.g., job satisfaction, job stress, employee engagement, and job insecurity) that may impact cyberloafing behaviors. Furthermore, there are numerous non-work related attitudes that may affect cyberloafing behaviors as well including self-esteem, moral values, and an individual's code of ethics. Organizational behavior researchers may also find it fruitful to explore the

mediating mechanisms behind why specific job attitudes affect cyberloafing behaviors. Research in the area of workplace deviance suggests that participation in cyberloafing may be a way for employees with negative job attitudes to either restore control over their job or to rationalize their counterproductive work behaviors as justifiable (Bennett & Robinson, 2003; Lim, 2002; Robinson & Kraatz, 1998). Including mediators that measure a variety of rationalization strategies may shed light into why job attitudes influence cyberloafing.

Analyses of Hypotheses 3 and 4 reveal that both the level of perceived cyberloafing by one's coworkers and managerial support for internet usage are positively related to cyberloafing. Support for Hypothesis 3 suggests that group norms within the organization influence employees' participation in cyberloafing. These findings also support research that has found that perceived coworker cyberloafing norms (Blanchard & Henle, 2008; D'Abate, 2005; Lim & Teo, 2005) can impact employees' tendency to engage in these behaviors. Blau et al. (2006) suggested social learning theory as a theoretical explanation for cyberloafing, noting that employees look to other coworkers as potential role models in the organization and that cyberloafing is learned through copying the behaviors that they see by individuals in their organizational environment. Finding support for Hypothesis 4 indicates that when employees are encouraged by their managers to use the Internet in their job, employees may be likely to interpret this type of support to include using the Internet for both work related and non-work related purposes. These results suggest that organizations must train managers to encourage and support Internet usage in the workplace but also to explain what the acceptable Internet practices sanctioned by the organization are to employees.

Our results show that Hypothesis 5 was supported, demonstrating that non-Internet loafing activities are related to cyberloafing behaviors. These findings indicate that cyberloafing tends to be part of an overall pattern of deviant behaviors (Berry et al., 2007; Bolin & Heatherly, 2001; Dalal, 2005). While our list of non-Internet loafing activities were minor in severity and only resulted in production deviance, it is important to examine in future research whether cyberloafing is related to other more extreme forms of deviant workplace behavior such as theft. Finally, this research found support for Hypothesis 6, providing further evidence of the attitude behavior link (Kraus, 1995) with respect to cyberloafing. There is a need for future research to examine how attitudes towards cyberloafing form and develop by looking at factors both within the organization (organizational norms and culture, formal Internet usage policies) and outside the organization (attitudes of friends and family members, news coverage of cyberloafing in the community).

Based on the workplace deviance literature, we also suggest that organizational design characteristics may influence cyberloafing behaviors and it is important for researchers to explore such factors in future studies of cyberloafing. For example, organizations with a non-bureaucratic organizational structure have been suggested to produce lower incidents of deviance due to open communication amongst employees (Robinson & Greenberg, 1998). Additionally, open office design layouts where employee actions are clearly visible to their supervisors may affect participation in cyberloafing. Indeed, de Lara, Tacoronte, & Ding (2006) showed that the physical proximity of supervisors impacts cyberloafing indirectly through perceptions of organizational control. Furthermore, the presence of formal organizational policies and sanctions for engaging in cyberloafing should reduce cyberloafing behaviors. Henle and Blanchard (2008) provide support for this as they showed that the perceived likelihood of their organization administering sanctions influenced cyberloafing. However, researchers could measure whether knowledge of disciplinary actions for employees participating in cyberloafing deters other employees

from cyberloafing as well. However, it should be noted that such control tactics may have the unintended effect of actually reducing employees' intrinsic involvement (Deci & Ryan, 2000) and thus interfering with their productivity. Thus if such control tactics are used it is important that they not be perceived by employees as deliberate attempts at control.

The current study has several strengths and limitations. This study examined the antecedents of cyberloafing with a diverse sample often not utilized in such research. The participants came from a variety of industries and levels, rather than focusing on a single company or small set of companies as many past studies have done. In addition, almost one-third of participants were minority group members and almost half of the participants did not have a college degree. Since cyberloafing studies often sample from populations of homogenous white-collar workers who are college educated, our study allows for increased generalizability of the results. Future researchers would benefit from continuing to examine the antecedents of cyberloafing on different heterogenous samples. Another strength of the study is that the items that measured the frequency of cyberloafing behaviors utilized a time-based measure as opposed to subjective perceptions of how frequently the employee participates in the cyberloafing behavior (e.g., sometimes or very often). This provides a more objective measure of time spent cyberloafing as someone who only spends a few minutes a day cyberloafing may perceive that amount of time as frequently cyberloafing.

It is necessary to note that the data collected was cross-sectional and self-report. The use of cross-sectional data does not allow us to know to what extent these factors actually cause employees to engage in cyberloafing behaviors. Longitudinal or experimental research could help illuminate how these factors affect cyberloafing and allow for causal inferences to be made. Further, due to social desirability concerns, participants may have underreported the extent to which they cyberloaf. However, Blanchard and Henle (2008) maintain that if participants are surveyed away from their work environments and the study keeps participants' identities anonymous, as we did in the present study, then participants are more likely to trust the researchers, respond honestly, and report their true cyberloafing behaviors. Future research could include reports of cyberloafing by others (e.g., peers, supervisors, subordinates) which may elicit more accurate assessments of cyberloafing behaviors and reduce social desirability issues. Additionally, future studies could incorporate qualitative research methodologies to explore why employees engage in cyberloafing and their affective reactions to cyberloafing.

Finally, the non-Internet loafing and managerial support for Internet usage scales do have limitations. While the non-Internet loafing items assess behaviors that are indicative of production deviance, it is important to note that the question asking participants the frequency with which they chit-chat with their coworkers may also be reflective of a behavior that promotes productivity in the workplace, as chatting with coworkers may be beneficial to the organization and one's job performance since employees may exchange information regarding their work in an informal way. Additional studies which examine the influence of non-Internet loafing behaviors on cyberloafing must include items which clarify that the particular behavior the employee engages in is for non-work related purposes. Moreover, the two items that measured perceived managerial support for Internet usage only assessed participants' perceptions of management support for *general* Internet usage at work without specifying whether employees' managers had a particular stance towards cyberloafing. Continuing research studies should further examine the extent that management support for cyberloafing and the perceived cyberloafing of one's manager influence cyberloafing behaviors in the workplace.

5. Conclusion

Currently, many organizations often deal with the issue of cyberloafing through the blocking of specific websites, electronic monitoring, and by introducing formal Internet usage policies (de Lara & Olivares-Mesa, 2010; Henle, Kohut, & Booth, 2009). Our research suggests that organizations will also need to attend to both individual and organizational factors in order to reduce cyberloafing behaviors in the workplace. As technology further develops and is increasingly utilized in the workplace, cyberloafing will continue to be an issue for organizations. The present research provides additional understanding of why employees engage in cyberloafing by demonstrating that employee job attitudes, organizational characteristics, the extent to which employees participate in non-Internet loafing behaviors, and employee attitudes toward cyberloafing predict cyberloafing behaviors. This research has several practical implications for employees and employers. By identifying what factors predict cyberloafing, employers can try to monitor and regulate those factors in order to reduce cyberloafing in the workplace. In addition, employees hoping to increase their own productivity could benefit from understanding what factors influence their own cyberloafing behaviors.

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