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When do employees cyberloaf? An interactionist perspective examining personality, justice, and empowerment

Summary

Cyberloafing—using the internet for non-work-related activities—is a prevalent counterproductive work behavior (CWBs) in the workplace, but researchers have not yet paid sufficient attention to this issue, especially related to the role of personality in cyberloafing. Recognizing such a research gap, and using a trait activation theory framework, this study examines whether conscientiousness and emotional stability negatively relate to cyberloafing. We further investigate how organizational justice perceptions and psychological empowerment moderate the negative relationship between these personality traits and cyberloafing. Based on a sample of 247 employees, we find that those high in conscientiousness cyberloaf less when they perceive greater levels of organizational justice. In addition, highly conscientious individuals cyberloaf less when they have low, rather than high, levels of psychological empowerment. Implications for research and practice as well as future research directions are discussed.

Keywords: cyberloafing; personality; empowerment; justice

The Internet has made business more effective by increasing employee productivity, overcoming the constraints of time and space in doing business, and enabling better interactions with customers. However, the use of the Internet has its dark side. Surfing the Web during work hours, exchanging instant messages, and spending time doing non-business-related activities at work are prevalent in the contemporary workplace (Malachowski, 2005). These counterproductive work behaviors called “cyberloafing” are defined as “any voluntary act of employees’ using their companies’ internet access during office hours to surf non-job related Web sites for personal purposes and to check personal e-mail” (Lim, 2002, p. 677). Through cyberloafing, employees waste time and are less engaged in their work, which, in turn, decreases their productivity (Malachowski, 2005; Stewart, 2000). For example, it is reported that 59% of Internet use at work is not relevant to work (Griffiths, 2003). Cyberloafing also causes problems in information systems and data security, such as network bandwidth overload, system performance degradation, spyware infection and virus malware introduction through illicit software downloading and surfing insecure sites, all of which can make the company vulnerable (Levoie & Pychyl, 2001; Sipior & Ward, 2002).

Acknowledging the serious consequences of cyberloafing, research has been conducted to identify what leads to cyberloafing behaviors (Blanchard & Henle, 2008; Liberman, Seidman, McKenna, & Buffardi, 2011, Lim, 2002). Stressors, injustice perceptions toward the organization, external locus of control, sleep deprivation, and workplace norms supporting cyberloafing have been found to augment loafing on the web (Blanchard & Henle, 2008; Henle & Blanchard, 2008; Krishnan & Lim, 2010; Lim, 2002). Blau, Yang, and Ward-Cook (2006) also found that employees who feel powerless in their work environment are more likely to engage in interactive forms of cyberloafing, including playing games. In contrast, job satisfaction and involvement

When do employees cyberloaf? Personality, justice, and empowerment and organizational justice perceptions are identified as restraining cyberloafing (Lieberman et al., 2011; Lim, 2002). However, we still lack an understanding of the antecedents of cyberloafing. In particular, the lack of research attention to the role of personality is astonishing in that individuals' dispositions significantly predict job attitudes over a time span (Staw, Bell, & Clausen, 1986; Staw & Ross, 1985). For example, Krishnan and Lim (2010) showed that individuals high on extroversion are more likely to cyberloaf from sleep deprivation compared to those low in extroversion. Blanchard and Henle (2008) also found that people with a higher belief in chance (i.e., one subset of external locus of control) were more likely to engage in cyberloafing because they believe that good or bad things happen for unknown, external reasons. Very few studies we identified in an extensive literature search studied personality and cyberloafing in a work setting (Krishnan & Lim, 2010, is an exception based on university student samples). Another example is the work of Restubog, Garcia, Toledano, Amarnani, Tolentino, and Tang (2011), who uncovered a stronger negative effect between justice perceptions and cyberloafing for employees high in self-control as opposed to low in self-control.

Given the scarcity of studies on the role of personality traits in the extant cyberloafing literature, this research focuses on conscientiousness and emotional stability. These two traits were chosen because they are the strongest predictors of job performance, and highly related to task achievement (Barrick, Stewart, & Piotrowski, 2002; Mount, Barrick, Scullen, & Rounds, 2005). Along the same lines, these traits should be highly related to cyberloafing since conscientiousness and emotional stability are associated with tendencies to strive for achievement. People with strong striving for achievement are more likely to harness their behaviors in order to correctly complete their jobs at work. This may play a critical role in controlling their time and focusing their attention on work; they may not spend their resources

(i.e., time) and energy on being distracted from work (i.e., cyberloafing). Thus, we examine whether these personality traits reduce cyberloafing. Our theory is based on the self-regulatory motivation process framework (Kanfer & Heggstad, 1997) and, in particular, trait activation theory (Tett & Burnett, 2003). We are also interested in examining whether the association between personality traits and cyberloafing varies according to situational factors. Trait activation theory, which focuses on the moderating role of situational cues where personality traits are expressed in trait-relevant work behavior (Tett & Guterman, 2000), predicts that correlations between traits and behavioral intentions are stronger in situations that would be appropriate for bringing out the trait. Drawing on trait activation theory, we focus on two important boundary conditions, organizational justice and psychological empowerment, by recognizing the critical influence of one's perceptions about fair treatment and task environment on the association of personality traits and cyberloafing. First, we suggest that perceived organizational justice (the perceived fairness in an organization; Colquitt, Conlon, Porter, Wesson, & Ng, 2001), along with personality traits, may have synergic effects to reduce cyberloafing. Previous studies have investigated the direct effect of organizational justice on cyberloafing (Lim, 2002), but they have not explored its interaction with personality. Second, we propose that when psychological empowerment (the degree to which an employee is able to perform the job successfully and in the manner of his/her choosing; Spreitzer, 1995) is high, the negative association between the personality traits and cyberloafing will be stronger. To our knowledge, this study is the first to look at empowerment as an important boundary condition in the personality traits-cyberloafing relationship. We examine the interaction of personality and situational characteristics to explain cyberloafing.

Taken together, our research is intended to contribute to a better understanding of

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dispositional antecedents of cyberloafing in organizations by integrating boundary conditions.

We believe this may contribute to the literature by providing theoretical and practical implications with regard to what may reduce cyberloafing. Theoretically, by extending trait activation theory (Tett & Burnett, 2003), which emphasizes the role(s) of situation(s) in facilitating a trait, to cyberloafing research, we contribute a better understanding of situational cues that activate or deactivate certain personality traits. Practically, as employees are more connected with virtual work teams, flexible work arrangements, and personal electronic devices, the opportunities for cyberloafing are more plentiful and it is meaningful to explore what traits and situational features are linked with cyberloafing. Internet usage has changed drastically in the last decade with the introduction of personal electronic devices like the iPhone, iPad, Android and others. Employees are connected to the Internet at all times by devices in their pocket or purse, and that has changed the way we live and work. Understanding (mis)use of technology is a timely, practical question for organizations.

Insert Figure 1 about here

Our theoretical model is presented in Figure 1. We begin by reviewing the literature on cyberloafing.

Literature Review and Hypotheses Development

Cyberloafing may be considered production deviance (Lim, 2002), one of four categories (i.e., production, property, and political deviance, and personal aggression) of counterproductive work behaviors (CWBs), defined broadly as behaviors that harm organizations and/or people in organizations (Robinson & Bennett, 1995; Spector & Fox, 2005). That is, we assume that cyberloafing is a form of CWB directed at an organization, and one that diminishes employees'

performance. The extant literature has paid attention to finding out what leads to this prevalent form of CWB in the workplace. For example, Lim (2002) asserts that when employees perceive their organization to be unjust – distributively, procedurally or interactionally – they are more likely to engage in cyberloafing. Stressors (i.e., role ambiguity and role conflict) have also been found to positively relate to cyberloafing (Henle & Blanchard, 2008). By differentiating two forms of cyberloafing – minor cyberloafing (e.g., checking and sending non-work-related email) and serious cyberloafing (e.g., surfing adult-oriented websites) – Blanchard and Henle (2008) find that individuals' perceptions of coworker and supervisor norms can be important drivers for minor cyberloafing. Extending the literature, Liberman and colleagues (2011) state that job attitudes, such as job involvement and intrinsic motivation, are negatively related to cyberloafing. Recently, sleep deprivation, especially bed time and wake time after sleep onset, has been found to significantly predict cyberloafing (Krishnan & Lim, 2010).

Personality traits, critical dispositional factors, are consistently and significantly linked to a broad range of CWBs (Berry, Ones, & Sackett, 2007; Dalal, 2005; Douglas & Martinko, 2001; Mount, Ilies, & Johnson, 2006; Salgado, 2002). However, notably little attention has been paid to personality as an antecedent of cyberloafing. This lack of research attention leaves much to be desired for a better understanding of CWBs, since cyberloafing is, in general, rather continual in daily work life. For example, according to statistics, 59% of employees were using the internet for personal use (Griffith, 2003). A recent survey shows that cyberloafing is the most common way that employees waste time at work (Malachowski, 2005). The amount of time employees spend on cyberloafing is also increasing; current estimates range from 3 hours per week to 2.5 hours per day (Blanchard & Helne, 2008; Greenfield & Davis, 2002; Mills, Hu, Beldona, & Clay, 2001). As such, it is quite distinguishable from other types of CWB that occur more occasionally

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or are one time events, such as absenteeism, production deviance, theft, sexual harassment or others.

Among the Big Five personality traits (i.e., conscientiousness, agreeableness, extraversion, emotional stability, openness to experience), the present study focuses on the roles of conscientiousness and emotional stability in individual cyberloafing behaviors. Conscientious individuals are characterized as being dependable, hard-working, rule abiding, and organized (McCrae & John, 1992). Therefore, conscientious employees seek to fulfill their obligations, which normally center on task accomplishment, because people high on conscientiousness are highly motivated in accomplishment and focus on following the rules. With these characteristics, we might expect them to be less likely to be distracted and cross the line to engage in cyberloafing in the workplace (Barrick et al., 2002). Individuals with greater emotional stability are described as relaxed, secure, and patient (McCrae & Costa, 1987). Emotionally stable individuals have less need to spend time and energy regulating their emotions; consequently, they have more capacity to allocate resources to task accomplishment (Barrick & Mount, 2005). Likewise, since emotionally stable employees are less likely to be disturbed by emotional regulation, they are less likely to lack focus in their job and cyberloaf. Solid research findings show that conscientiousness is the strongest predictor of job performance, followed by emotional stability (Barrick & Mount, 1991; Barrick et al., 2002; Berry et al., 2007; Organ & Ryan, 1995; Salgado, 2002; Tett, Jackson, & Rothstein, 1991). We extend these findings and connect them to cyberloafing because the same traits that drive employee performance will likely determine whether employees get distracted with other non-work-related tasks during the workday. Highly conscientious and emotionally stable employees will be more engaged in their work to achieve their goals. Therefore, we focus on conscientiousness and emotional stability.

According to Kanfer and Heggstad's (1997) motivation theory, personality traits are related to employee performance through motivational intentions associated with goal setting. When individuals strive to achieve goals, they present self-regulatory motivation control strategies (e.g., self-set goals) as well as emotion control strategies (e.g., controlling negative emotions, reevaluating negative stimuli in work and non-work settings). Employees adopting motivation and emotion control strategies are more likely to exert their work effort in a persistent way and to minimize being distracted by negative emotional responses. That is, personality traits are linked to work outcomes via motivational and self-regulation processes (Barrick et al., 2002; Barrick, Mount, & Gupta, 2003). Accordingly, the two specific personality traits, conscientiousness and emotional stability, are related to accomplishment striving through the process of motivation and emotion control strategies, respectively. They motivate employees to direct considerable attention, time, and energy toward the completion of work tasks (Barrick et al., 2002; 2003) and to not be distracted by their emotional states (Keith & Frese, 2005; Richards & Gross, 2000). Accordingly, we expect that conscientiousness and emotional stability may effectively predict CWBs, specifically cyberloafing.

Berry et al.'s (2007) meta-analysis demonstrates that conscientiousness is negatively related to organizationally directed CWBs (Berry et al., 2007). It has also been reported that emotional stability is negatively related to CWBs (Berry et al., 2007; Rotundo & Sackett, 2002). Recently, some research in cyberloafing and internet abuse has suggested that cyberloafing is related to individual self-regulation. Individual self regulatory resources play a crucial role in resisting the temptation to engage in cyberloafing (Wagner, Barnes, Lim, & Ferris, 2012). Thus, individual differences in the ability to self-control inherent in personality traits play an important role in the self-regulation process (Chen, Chen, & Yang, 2008; Restubog et al, 2011; Wagner et

al., 2012). For example, Wagner et al. (2012) show that highly conscientious individuals tend to engage less in cyberloafing, even when they have a low quality of sleep, because they routinely make an effort to fulfill their obligations in the workplace and are less likely to be distracted when pursuing goals (Wagner et al., 2012). Emotionally unstable employees experience more mood swings throughout the day and are more easily distracted from their work; in turn, this may lead to more cyberloafing. According to trait activation theory (Tett & Guterman, 2000), the potential for trait activation depends upon the person's situation. Correlations between traits and behavioral intentions are stronger in situations that would be appropriate for bringing out the trait (Tett & Guterman, 2000). We build upon this work and propose that work environments are appropriate to activate employees' conscientiousness and emotional stability, both desirable characteristics at work.

Taken together, conscientiousness and emotional stability may reduce cyberloafing behaviors, through enabling one to better control one's motivation and emotion, respectively (Kanfer & Heggstad, 1997). Some empirical evidence points to conscientiousness and emotional stability as being negatively related to CWBs (Berry et al., 2007; Rotundo & Sackett, 2002). Therefore, we expect both conscientious individuals and emotionally stable individuals to be less likely to engage in cyberloafing in a work context because their disciplined and stable nature is likely to be primed.

Hypothesis 1: Conscientiousness negatively relates to cyberloafing.

Hypothesis 2: Emotional stability negatively relates to cyberloafing.

Justice in the relationship between personality and cyberloafing

We argue that conscientiousness and emotional stability will be negatively related to cyberloafing but this may vary depending upon the situation because individual behavior can be

When do employees cyberloaf? Personality, justice, and empowerment influenced by the interactions of person and situation (Endler & Magnusson, 1976). The negative effects of personality traits on cyberloafing may be further strengthened (or weakened) under certain situations. Previous studies have explored the interactive effects of personality and situational factors simultaneously in predicting various forms of CWBs (Bowling & Eschleman, 2010; Colbert, Mount, Harter, Witt, & Barrick, 2004; Marcus & Schuler, 2004; Penney & Spector, 2005; Skarlicki, Folger, & Tesluk, 1999). For example, Colbert and colleagues (2004) show that a low level of developmental environment (the extent to which the job itself and others in the organization provide challenge, support, encouragement, and feedback) triggers employees low in conscientiousness or emotional stability to express more organizational deviance. Another example is that work stressors, such as interpersonal conflict, constraints, and role stressors, drive less conscientious employees to engage in more CWBs (Bowling & Eschleman, 2010). However, research exploring the interaction of personality and situation is almost non-existent related to cyberloafing. Recognizing this, the current study proposes overall organizational justice and psychological empowerment as potentially important boundary conditions in the relationships between the two personality traits of interest and cyberloafing.

Organizational justice is defined as an individual's perception of and reactions to fairness in an organization (Greenberg, 1987). In the justice literature, three dimensions of organizational justice have been explored. Distributive justice is concerned with the distribution of organizational resources, such as rewards (Greenberg & Lind, 2000). Procedural justice is concerned with making and implementing decisions according to fair processes when making such distributions (Greenberg & Barling, 1998). Interactional justice is the degree to which the people affected by decisions are treated with dignity and respect (Skarlicki & Folger, 1997). Justice perceptions have been found to influence employee attitudes (e.g., job satisfaction,

organizational commitment, and trust) and behaviors (e.g., job performance, organizational citizenship behavior, CWBs, and withdrawal) (see Colquitt et al., 2001, for a review).

Indeed, considerable empirical support demonstrates the relationship between each type of justice and a wide range of individual outcomes. However, researchers recently cast doubt on the benefits of exclusively examining specific types of justice, suggesting a shift of focus to investigating overall justice (Ambrose & Schminke, 2009). Even though individuals are able to distinguish the sources of justice experiences, they make holistic judgments when forming impressions of unfairness (Ambrose & Schminke, 2009; Lind, 2001). In addition, individuals react to their general experience of injustice rather than specific types of justice experience (Shapiro, 2001). Thus, focusing on overall justice may provide a more complete understanding of individual justice experiences, overcoming the limitations of solely investigating specific types of justice.

We propose that organizational justice may have a synergic impact on employees' cyberloafing behavior when it interacts with certain personality traits. This is based on trait activation theory (Tett & Guterman, 2000) which posits that traits are not always expressed through behaviors; trait-relevant situational cues arouse those traits. Trait activation theory focuses on person-situation behavior based on responses to situations that trigger trait-relevant cues. The theory predicts that traits are more likely to manifest themselves in some situations more than others. A situation is considered trait-relevant if it provides opportunity to activate traits (Tett & Guterman, 2000). We pay attention to justice perceptions of employees because fairness is perceived through employees' everyday life experiences across a variety of human resource practices, such as performance appraisals and reward systems. Accordingly, justice perceptions should be a critical situational factor for employees in organizations. Organizational

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justice can be interpreted as a catalyst that activates the expression of trait-relevant behavior (Tett & Burnett, 2003). In other words, organizational justice may induce highly conscientious employees to express trait-consistent behaviors (i.e., low cyberloafing).

If an employee perceives that s/he has been treated fairly by the organization, we would predict that fairness would cue conscientiousness. Highly conscientious people should be especially more diligent and avoid cyberloafing when they perceive high levels of organizational justice, because highly conscientious people are organized, reliable, hardworking, self-disciplined, and abide by rules and norms (Barrick et al., 2002; Costa & McCrae, 1992; Goldberg, 1992). When justice is high, employees have no reason to try to even the score with their employer. Therefore, fairness may serve to activate employees' own natural tendencies to respond to the work setting. Conscientious people should respond to fairness with hard work and diligence, because that is in their nature (McCrae & John, 1992).

Trait activation theory (Tett & Guterman, 2000) would also predict that the effects of emotional stability on cyberloafing can be weakened by perceptions of fairness. This is because perceived organizational justice could be the source of organization level trait-relevant cues (e.g., how fairly employees are rewarded) which makes personality traits that affect work behaviors more salient. Emotionally stable employees experience fewer mood swings throughout the day and can more easily concentrate on their work. However, because employees are inevitably under the influence of the workplace environment, emotional stability is related to less cyberloafing, and this should be strengthened if they perceive the organization to be just. Emotionally stable employees who perceive high levels of organizational justice should be cued not to cyberloaf, because fairness perception will help them focus on their work and not be cognitively distracted by an injustice perception.

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To the contrary, low levels of justice perception may fail to activate, or at least weaken, the effects of conscientiousness and emotional stability on cyberloafing. We expect that cyberloafing is more influenced by low levels of justice perception rather than by the two personality traits—conscientiousness and emotional stability. That is, the variance in cyberloafing related to conscientiousness and emotional stability may be weaker when employees perceive low levels of justice perception. This is because employees are more likely to react strongly to the lower levels of justice perceptions than they are to strongly present trait-consistent behavior.

Taken together, consistent with trait activation theory (Tett & Gutterman, 2000), we expect that organizational justice perceptions will act as a catalyst that triggers the effects of conscientiousness and emotional stability and amplifies their effects on cyberloafing. We propose that organizational justice will strengthen the negative relationship between both conscientiousness and emotional stability, and cyberloafing. Specifically, it is expected that justice perception will have a synergistic negative effect on cyberloafing, with conscientiousness and emotional stability:

Hypothesis 3a: Perceived organizational justice moderates the negative relationship between conscientiousness and cyberloafing, such that the relationship is stronger when the perception of justice is greater.

Hypothesis 3b: Perceived organizational justice moderates the negative relationship between emotional stability and cyberloafing, such that the relationship is stronger when the perception of justice is greater.

Empowerment in the relationship between personality and cyberloafing

Psychological empowerment is defined as the way individuals see themselves in regard to their task environment (Spreitzer, 1995; Thomas & Velthouse, 1990). It is composed of four

When do employees cyberloaf? Personality, justice, and empowerment cognitions: meaning, self-determination, competence, and impact (Spreitzer, 1995; Seibert, Wang, & Courtright, 2011). *Meaning* indicates whether the demands of one's work role are aligned with one's own beliefs, values, and standards while *self-determination* refers to one's sense of choice about the regulation of one's actions. *Competence* is the belief about one's capability to successfully perform the work. Lastly, *impact* refers to one's belief about his/her influence on work activities and outcomes in one's work unit. Psychological empowerment has been found to positively relate to job satisfaction, organizational commitment, and performance, and negatively relate to strain and turnover intention (see Seibert et al., 2011, for a meta-analytic review). The four cognitions combine additively to form a single overall construct because the lack of any single dimension decreases the overall degree of empowerment an individual experiences (Spreitzer, 1995). Recognizing the nature of the construct, studies have been conducted using the single unitary construct (Conger & Kanungo, 1998; Kraimer, Seibert, & Liden, 1999; Seibert, Silver, & Randolph, 2004; Sparrowe, 1995; Spreitzer, Kizilos, & Nason, 1997; Thomas & Velthouse, 1990).

Trait activation theory (Tett & Guterman, 2000) would predict that empowerment is a contextual factor that can activate personality traits. The logic of trait activation theory relies heavily on the work of Mischel (1973, 1977) describing the strength of a situation. Strong situations are ones where behavioral expectations are clear (e.g., a funeral, a library, college students sitting in a classroom lecture) and therefore, there is limited variation in behavior and limited room for individual traits to express themselves. Weak situations are ones where there is more room for individual trait expression because the norms of behavior are not as strongly prescribed (Mischel, 1973, 1977). We propose that work is a moderately strong situation because rules of propriety such as employment laws about harassment, norms of professionalism, and

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employee handbook rules (e.g., no sleeping at work) will govern behavior. However, the norms are not as strong as one would find at a funeral or library. Applying trait activation theory to our research, we focus on the moderating effects of psychological empowerment in that the nature of conscientiousness and emotional stability will be more activated (or articulated) under weak situations. When individual empowerment is high at work, the situation is significantly weaker because employees are given room to do their jobs as they see fit. According to trait activation theory (Tett & Guterman, 2000), this provides more opportunity for individual traits such as conscientiousness and emotional stability to manifest themselves. In the absence of a strong situational expectation of behavior, the employees' own traits will govern their behavior.

Studies have demonstrated clear positive linkages in the relationship between psychological empowerment and work performance (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Huang, Iun, Liu, & Gong, 2010). According to Spreitzer (2008), empowered employees exhibit more positive and constructive work behaviors, including organizational citizenship behavior. Similarly, we argue that empowered employees will be less likely to engage in CWBs such as cyberloafing, since they have strong intrinsic motivation toward their work through higher levels of meaning, self-determination, competence, and impact.

We further propose that psychological empowerment strengthens the natural characteristics of conscientiousness and emotional stability with regard to cyberloafing. When empowerment is high, trait activation theory (Tett & Guterman, 2000) would predict that the context is set for employees' own traits to have more of an effect on the way they work. For example, empowerment may activate conscientiousness because it can bring out a conscientious

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employee's beliefs in their competence and ability to impact performance.¹ Conscientious employees should be less likely to cyberloaf because of their scrupulous nature compared to employees low in conscientiousness who are not as meticulous in their work. Employees high in conscientiousness should be unlikely to cyberloaf even when empowerment is high because of their responsible work ethic. However, employees low in conscientiousness should be cued to cyberloaf when empowerment is high because their natural tendency is to not be very detail-oriented or careful in their work (McCrae & John, 1992). Left to their own devices, the tendency of those low in conscientiousness should be to cyberloaf when empowered. When empowerment is low, we would expect employees low on conscientiousness to cyberloaf less because the situation is stronger, thereby leaving less room for the expression of their natural traits (Mischel, 1973, 1977; Tett & Gutterman, 2000). They may still cyberloaf a little bit more than those high in conscientiousness. However, we expect cyberloafing to generally be low when empowerment is low because behavior is prescribed and there is limited room for cyberloafing in a strong situation.

Regarding emotional stability, trait activation theory (Tett & Gutterman, 2000) would predict that emotionally stable employees should also cyberloaf less than their emotionally unstable counterparts when empowerment is high because they naturally exhibit stable behavior and concentration on their work (McCrae & Costa, 1987). To the contrary, emotionally unstable employees have a tendency to worry about things, experience negative moods, and have ups and downs during the work day (McCrae & Costa, 1987). When empowerment is high, we expect that emotionally unstable individuals will cyberloaf more because it is in their nature to be

¹ We are grateful to an anonymous reviewer for stating this so clearly.

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unstable and experience more distractions at work. When empowerment is low, we expect cyberloafing to be lower regardless of an employee's level of emotional stability because the situation is strong (Mischel, 1973, 1977) and appropriate role behavior is prescribed. Taken together, we propose that psychological empowerment will interact with conscientiousness and emotional stability to influence cyberloafing behavior. We hypothesize the moderating effect of empowerment as follows:

Hypothesis 4a: Empowerment moderates the negative relationship between conscientiousness and cyberloafing, such that the relationship is stronger when empowerment is greater.

Hypothesis 4b: Empowerment moderates the negative relationship between emotional stability and cyberloafing, such that the relationship is stronger when empowerment is greater.

Method

Participants and procedures

We recruited voluntary participants at a website designed for researchers. We solicited 1,000 full-time white-collar employees using computers at their workplace. A random sample of 283 such employees was generated. The company sent out recruitment emails with links to an online survey. Participants were told that the research was voluntary and no monetary incentives were provided in exchange for participation. A total of 283 individuals completed the survey. Of these, 36 were excluded because they did not respond to cyberloafing behavior questions or answered less than half of the survey questions. This data collection procedure produced 247 useable responses. Demographic information indicated that the average age was 37 years, 50% of respondents were female, and 61% of respondents had bachelor's degrees or higher. Average

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organizational tenure was 7.40 years.

Measures

Conscientiousness and emotional stability

To assess conscientiousness and emotional stability, we used the Big Five Personality scales developed by Goldberg and colleagues (2006). Respondents were asked to indicate the extent to which they agreed with each statement using a scale ranging from 1 = “strongly disagree,” to 5 = “strongly agree.” Examples from the ten-item scale of conscientiousness include “I am always prepared,” and “I am exacting in my work.” Examples from the 10-item scale of emotional stability include “I seldom feel blue,” and “I am relaxed most of the time.” Coefficient alpha was .78 for conscientiousness and .82 for emotional stability.

Organizational justice

To assess perceived overall justice, we used the scale developed by Ambrose and Schminke (2009). Respondents were asked to indicate the extent to which they agreed with each statement using a scale ranging from 1 = “strongly disagree,” to 5 = “strongly agree.” An example from the six-item scale of overall justice is “Overall, I’m treated fairly by my organization.” Coefficient alpha was .85.

Empowerment

To assess psychological empowerment, we used the scale developed by Spreitzer (1995). Respondents were asked to indicate the extent to which they agree with each statement using a scale ranging from 1 = “strongly disagree,” to 5 = “strongly agree.” Examples from the 12-item scale include “The work I do is very important to me,” “I am confident about my ability to do my job,” “I have significant autonomy in determining how I do my job,” and “My impact on what happens in my department is large,” which represent items from meaning, competence, self-

determination, and impact, respectively. Coefficient alpha was .92.

Cyberloafing

To assess the frequency of cyberloafing, we used the scales developed by Lim (2002). Respondents were asked to indicate how often they had engaged in cyberloafing over the past month using a scale ranging from 1 = “never,” to 5 = “constantly.” Examples from the 11-item measure of cyberloafing include “Browsing investment related Web sites,” and “Checking non-work related e-mail.” Coefficient alpha was .87.

Control Variables

We controlled for variables that might influence cyberloafing behavior. Respondents' gender (coded as 0 = male, 1 = female) was controlled for because men are more likely to engage in cyberloafing than women (Lim & Chen, 2009). Age was controlled since it has been found that individuals in their late 20s to early 30s are more likely to use the Internet (Reed, Doty, & May, 2005). Also, educational level was controlled, since highly educated employees might have been more exposed to Internet usage. Educational level was measured as “1” = middle school graduate, “2” = high school graduate, “3” = 2-year college graduate, “4” = 4-year university graduate, and “5” = master's degree or higher.

Measurement model

Confirmatory factor analysis (CFA) was used to confirm the dimensionality of the variables included in the study, using LISREL (Jöreskog & Sörbom, 2006). We conducted CFAs using “parcels” instead of individual items as indicators, since individual items tend to have low reliabilities and often violate assumptions of multivariate normality (Bandalos, 2002; Nasser & Wisenbake, 2003). Specifically, the CFA was conducted using three or four parcels for each factor, which were based on item-total correlations so that reliability within each parcel was

balanced within each factor. We tested the hypothesized five-factor measurement model, which shows acceptable fit to the data, $\chi^2(95, N = 247) = 211.42, p < .001, NNFI = .94, CFI = .95, RMSEA = .07$ (Hu & Bentler, 1995; Schmacker & Lomax, 2004). To further examine the validity of the hypothesized five-factor measurement model, we tested alternative measurement models. In the alternative four-factor measurement model, empowerment and justice were merged into one aggregate factor. We examined additional four-factor measurement models in which empowerment and justice were merged with cyberloafing. As seen in Table 1, the alternative measurement models fit the data significantly less well than did the hypothesized measurement model in terms of omnibus fit indexes as well as chi-square difference tests. In sum, the confirmatory factor analyses indicated that the items were best clustered as intended, supporting the validity of the hypothesized constructs. An additional test including one more common method factor did not have acceptable fit (see Table 1), thus providing initial evidence against bias from common method variance (Podaskoff, MacKenzie, Lee, & Podsakoff, 2003). We also ran a one-factor model. All but one of the factor loadings remained significant, indicating that common method variance did not distort the construct validity of the scales (Kelloway, Loughlin, Barling, & Nault, 2002).

Insert Table 1 about here

Analyses

To test Hypotheses 1-4, we used hierarchical linear regression. When testing the interaction effects, variables were centered to reduce multicollinearity (Aiken & West, 1991).

Results

Descriptive statistics

Table 2 provides the means, standard deviations, and zero-order correlations among the study variables. Both conscientiousness and emotional stability negatively correlate to cyberloafing ($r = -.19, p < .01$ and $r = -.21, p < .01$, respectively).

Insert Table 2 about here

Test of hypotheses

Table 3 presents the results of the hierarchical regression analyses. As seen in Model 2, the regression coefficient of conscientiousness was negative and statistically significant ($\beta = -.19, p < .05$), supporting Hypothesis 1. Regarding the negative relationship between emotional stability and cyberloafing, the regression coefficient was negative and significant ($\beta = -.15, p < .05$), which supports Hypothesis 2. Hypothesis 3a predicts that organizational justice would moderate the relationship between conscientiousness and cyberloafing. The regression coefficient of the interaction term was significant in Model 3 ($\beta = -.37, p < .001$). Further, Figure 2 shows that the pattern of interaction was consistent with what was predicted: the simple slope (Aiken and West, 1991) for the high justice group was significant ($b = -1.01, t = -5.03, p < .001$), whereas that for the low justice group was not ($b = 0.10, t = 0.63, n.s.$), which supports Hypothesis 3a. However, Hypothesis 3b, which proposes the moderation effect of justice on the emotional stability-cyberloafing relationship, is not supported.

Insert Table 3 and Figure 2 about here

Hypothesis 4a proposed that empowerment moderates the negative relationship between conscientiousness and cyberloafing. The regression coefficient of the interaction term of conscientiousness and empowerment was significant in Model 3 ($\beta = .22, p < .01$). However,

Figure 3 shows that the pattern of interaction was the opposite of what was predicted: the simple slope (Aiken & West, 1991) for the low empowerment group was significant ($b = -0.81, t = -4.55, p < .001$), whereas the simple slope for the high empowerment group was not ($b = -0.11, t = -0.66, n.s.$). Only low empowerment mattered and it mattered to both low and high conscientiousness employees. Both groups cyberloafed when empowered, but when empowerment was low, those low in conscientiousness cyberloafed more while those high in conscientiousness cyberloafed less. Unexpectedly, highly conscientious employees engaged in cyberloafing more when they perceived greater levels of empowerment. Thus, Hypothesis 4a is not supported. Lastly, Hypothesis 4b, proposing the moderation effect of empowerment on the emotional stability-cyberloafing relationship, is not supported.

Insert Figure 3 about here

Discussion

The current study examines conscientiousness and emotional stability as antecedents of cyberloafing. We explore what boundary conditions may magnify the strength of the personality and cyberloafing relationship and activate the roles of personality traits in predicting cyberloafing. We find that both conscientiousness and emotional stability negatively relate to cyberloafing. Further, our study demonstrates that people high on conscientiousness cyberloaf less when they perceive a higher level of overall organizational justice. Lastly, the findings also show that people high on conscientiousness cyberloaf less when their psychological empowerment is lower, rather than higher.

Implications for research

Our research suggests several contributions to the literature. First, the current study

contributes to better knowledge about cyberloafing, a specific type of CWB in an organizational setting, by exploring the interactive effects of an employee's personality traits, justice, and empowerment on cyberloafing. One recent study looks at personality as a predictor of cyberloafing, based on a student sample (Krishnan & Lim, 2010), but the literature remains relatively silent on dispositional influences on cyberloafing in an organizational setting. Real work settings might be somewhat different from a student setting because university students may not be constrained by social sanctions (e.g., company policies and control systems) regarding Internet access (Flynn, 2005; Henle & Blanchard, 2008). Our findings demonstrate that both conscientiousness and emotional stability are valid predictors of cyberloafing at work. This result adds empirical support for motivation/self-regulation theory (Kanfer & Heggstad, 1997) by showing that personality influences a work outcome. Results imply that both conscientiousness and emotional stability negatively influence cyberloafing through cognitive and emotional control respectively, although this study did not measure that process.

A second, more unique, contribution of this study is to examine how the personality-cyberloafing association may vary under certain situational contexts by reflecting the person-situation interactive perspective and trait-activation theory (Endler & Magnusson, 1976; Tett & Burnett, 2003). We extend trait activation theory (Tett & Guterman, 2000) to examine cyberloafing at work and how it varies depending upon some important situational cues. High levels of justice perceptions play a critical role in activating employee conscientiousness and emotional stability. However, low levels of justice perception fail to activate these traits since the low level of justice perception itself would upset employees regardless of their traits. When empowerment was high, there was no relationship between conscientiousness and cyberloafing. Instead, cyberloafing was constant and relatively high. This modifies and extends trait activation

theory. The theory would predict that having a weak situation would allow the employee's traits to be demonstrated. Instead, conscientiousness made no difference in cyberloafing when empowerment was high. The temptation to cyberloaf may be too great (even for the conscientious) when they are empowered. These findings are also in line with findings in computer-mediated communication (CMC) research showing that the process of social interaction is more important than personality and technological factors (Postmes, Spears, & Lea, 2000, 2002; Walter, 1996).

Could employee empowerment ever be bad for organizations? Studies have found that empowerment is good for employee performance (Chen et al. 2007; Huang et al., 2010), yet our study finds that it may open the door for most people to cyberloaf. Empowered employees have opportunities to cyberloaf, because they can choose how their work gets done and they have control over their behavior at work. Further, empowered employees may be empowered because they perform at a high level. This would give them more time to cyberloaf once their tasks have been completed. Also, their managers may tolerate cyberloafing if the employees' performance is high. However, when empowerment is low and employees do not have control over how their work is done, it would be against the rules to cyberloaf and those high in conscientiousness follow the rules which makes them less likely to cyberloaf.² Our findings show that only employees high in conscientiousness and with low empowerment showed lower cyberloafing. We believe modern technology may present what Tett and Burnett (2003) described as a distractor, or a situational feature that interferes with performance. It appears that empowerment provides employees with opportunities to access these distractors and engage in cyberloafing.

² We would like to thank an anonymous reviewer for suggesting these explanations for our unexpected findings around the interaction of conscientiousness and empowerment.

Further, consistent with our prediction that justice has synergic effects when it interacts with conscientiousness, when conscientious employees perceive justice, they are less likely to engage in cyberloafing. Although organizational justice has been one key factor leading to less cyberloafing, empirical evidence for the interactive role with personality has not been provided. In particular, since conscientious employees tend to be more achievement-oriented, justice perceptions should play a multiplicative role in their motivation. In this sense, we contribute to the current literature by providing evidence about the importance and function of justice as a catalyst to decrease cyberloafing.

Implications for practice

The current study also offers a few practical implications regarding how to reduce cyberloafing in the workplace, which is costly for both the organization and individual employees. First, given the importance of conscientiousness and emotional stability in lowering cyberloafing, selection efforts for certain jobs where cyberloafing causes serious problems, such as jobs requiring a higher level of data security and surveillance, should pay attention to these findings. For example, organizations could screen for conscientiousness and emotional stability in addition to knowledge, skills, and abilities for jobs requiring a higher level of data surveillance. This is in line with the selection research emphasizing a certain personality for specific job contexts; for instance, agreeableness is a valid predictor for job performance in sales jobs. Also, emotional stability is a trait, but employees' emotional *states* might increase cyberloafing, so contextual influences from colleagues, supervisors, and the organizational climate on one's emotions should garner more attention. If necessary, companies could intervene to reduce factors that might negatively influence employees' emotions.

Additionally, the current study provides practical evidence that employees' perceptions of

When do employees cyberloaf? Personality, justice, and empowerment organizational justice are particularly important for employees scoring high on conscientiousness. In interpreting the findings of the study, we infer that employees' justice perceptions are critical to their work behaviors. If they do not perceive justice, then they are more likely to be involved in cyberloafing. Organizations should recognize the importance of justice perceptions and, accordingly, they should try to create HR practices that are fair. Further, they should pay attention to better communicating with employees in order to prevent psychological contract breaches, which might arouse an injustice perception and lead to more cyberloafing in return for the injustice perception. Lim (2002) found that employees who perceived injustice legitimized their cyberloafing through a rationalization process which suggests that they can even the score. Lim's findings and the findings of the present study imply that fair practices should reduce cyberloafing among conscientious employees. Fair organizational practices are a good idea for organizations in general and may reduce many types of counterproductive behaviors.

Our findings and our literature search imply that cyberloafing may be difficult to stop. One way to reduce cyberloafing would be through organizational norms and policies. Blanchard and Henle (2008) found that employees engaged in more minor forms of cyberloafing when they thought their supervisor and coworkers supported that norm. Zoghbi (2006) found that the negative relationship between interactional justice and workplace Internet deviance was mediated by fear of formal punishment. However, the relationship between fear of formal punishment and workplace Internet deviance was positive. Blau et al. (2006) found that employees who perceived little control over their environment (i.e., powerlessness) were more likely to engage in interactive cyberloafing. If cyberloafing seems to happen under most conditions, how is it possible that people are getting any work done? One explanation is that most professional employees with access to the Internet can get work done from home on the

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evening and weekends. The lines between work and home are becoming more blurred given modern technology, which may reconcile how cyberloafing exists, yet work gets done, and explain why employees and their significant others report work/life conflict (Watkins, Ren, Boswell, Umphress, Triana, & Zardkoohi, 2012).

Nevertheless, from a practical perspective, we find it worth noting that we are not sure whether cyberloafing is always bad for organizations. If employees are checking email and Facebook all day long instead of getting their work done, then obviously this will be bad for productivity. However, if done in moderation, using technology for a few brief breaks throughout the day might enhance the quality of an employee's work if it mentally refreshes them from their primary task. Indeed, taking brief breaks from a task has been identified as a best practice for improving creativity in teams (Paulus & Brown, 2003; Paulus & Nakui, 2005).

According to our findings, empowerment may facilitate cyberloafing in some situations. The bivariate correlation between empowerment and cyberloafing was small, positive, and not statistically significant. It was only in the regression when personality traits and controls were included that the effect of empowerment on cyberloafing was positive and statistically significant. What implications does this have for organizations? We suggest three things. First, we suggest organizations could use conscientiousness and emotional stability tests in selection to help identify people who are less likely to cyberloaf to begin with. Second, organizations should apply as many fair processes as possible so that employees perceive justice and have no incentive to cyberloaf. Third, employers should have a policy that personal devices and email for non-work reasons should be checked during breaks or only as needed throughout the day to avoid unnecessary distractions from work. These things can help keep cyberloafing under control without taking away the many benefits associated with empowerment (Seibert et al., 2011).

Also, why would minor forms of cyberloafing with the use of the Internet be considered any worse than other forms of loafing that can be done using older technology or done face-to-face? Minor forms of cyberloafing, such as sending personal emails at work (Blanchard & Henle, 2008) may be very similar to other forms of loafing which do not happen on the Internet. For example, some employees spend time at work taking personal phone calls or chatting with coworkers around the water cooler and other places. In trait activation theory, Tett and Burnett (2003) define a distracter at work using an example of a highly social manager who is distracted on the job because the organization is full of extroverts who like to chat. Extroverts who chat all day long are loafing in their own way, so why would cyberloafing be seen as counterproductive when similar activities that do not involve the Internet waste equal amounts of time? Future research may investigate whether face-to-face or Internet loafing have differential outcomes on employee productivity.

Limitations and future research

Our study is not without limitations, which provide venues for future research. The first limitation concerns a potential common-source bias of the data based on participants' responses. As the data were based on self-report measures, the effect of common method variance is a potential threat to the internal validity of this study's findings. Throughout the study's design and survey administration, we took several precautions (i.e., separating key scales, assuring confidentiality) to mitigate method bias from respondents' evaluation apprehension, social desirability, and/or consistency effect (Podsakoff et al., 2003). In addition, to investigate the nature and extent of the effects of common methods of measurement, we conducted a rigorous CFA; the measurement model demonstrated that common method bias was not serious to the extent of distorting our results. Also, there is no theoretical reason to expect spurious interaction

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effects due to common method variance (Evans, 1985; Schmitt, 1994). Nevertheless, future studies based on different sources (e.g., rating of cyberloafing by colleagues) could provide a more rigorous examination of the relationships in our research model.

Second, we must consider more contextual influences from upper levels (i.e., team, work unit, or organization) on cyberloafing in future studies by adopting multi-level analyses. For example, related to our study, shared cognitions about justice or empowerment perceptions at an organizational level (i.e., justice and empowerment climate; Liao & Rupp, 2005; Seibert et al., 2011) would better capture the nature of the work environment, rather than relying on individual self appraisal and its influence on an individual employee. Also, examining contagion effects on cyberloafing from colleagues within the same work unit might contribute to a better understanding of the importance of social influence. By doing so, future research could gain greater insight into situational influences on cyberloafing.

Third, our hypothesis development for the negative associations between personality traits and cyberloafing drew on Kanfer and Heggstad's (1997) motivation/self-regulation theory, which argues that personality traits are linked to job performance via motivational and self-regulation processes (i.e., cognitive and emotional control). However, although we empirically support that conscientiousness and emotional stability negatively relate to cyberloafing, we did not actually measure these processes. Thus, to further our findings, future research should empirically demonstrate the process model of the personality traits on cyberloafing by measuring cognitive and emotional control variables.

Fourth, we did not examine the consequences of cyberloafing. Future research should clarify if and how cyberloafing could be beneficial. Previous work assumes the negative aspect of cyberloafing, but almost no studies explore whether cyberloafing positively influences work

outcomes. Although cyberloafing is viewed as a counterproductive work behavior, under some circumstances, it could play a constructive role (Lim & Chen, 2009). For example, cyberloafing might effectively relieve stress and anxiety, while preventing burnout for employees at the workplace, thereby increasing work productivity (Anandarajan & Simmers, 2005; Maslach & Leiter, 1997; Oravec, 2002; Stanton, 2002). Also, a certain amount of cyberloafing is inevitable and acceptable for giving employees a break and some rejuvenation. Thereby, cyberloafing may allow employees to momentarily escape from unyielding situations or putting in long hours. Another potentially constructive outcome of cyberloafing is that employees can apply the information and knowledge they gain from cyberloafing to work-relevant activities that may be of value to organizations (Belanger & van Slyke, 2002; Oravec, 2002). All these presumptions support the value of future studies in generating a more complete understanding of the consequences of cyberloafing within organizational contexts.

Additionally, due to concerns about participant confidentiality, we were unable to capture detailed information about respondents' company policies on electronic controls in the workplace, regardless of the fact that they might influence employees' cyberloafing behaviors (Straub & Nance, 1990; Zoghbi & Olivares-Mesa, 2010). Thus, it would be interesting to explore how organizational practices regarding electronic monitoring and policies and settings for computer usage in the workplace influence employee behaviors in terms of the pattern, amount, and frequency of cyberloafing.

Finally, future research should consider contextual factors about the nature of an industry or job and use that to establish research questions and/or study design. Malachowski (2005) reports that the industries of insurance, public sector, research and development, education, software and the Internet are more time-consuming whereas the industries of shipping and

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receiving, manufacturing, healthcare, finance and banking, and marketing and communication are more time-conserving. Thus, depending on these categories, employee cyberloafing may present systematic variation in terms of amount and frequency. For example, in a research and development setting, there should be more opportunity to cyberloaf both in amount and frequency. By contrast, for a bank teller, there may be fewer chances for cyberloafing. Relatedly, it is also plausible that the interactive effects of empowerment and conscientiousness on cyberloafing may differ across work contexts. For example, in certain job settings where standardized procedures and bureaucratic structures prevail, employees will have less opportunity to engage in cyberloafing in comparison to settings that allow employees more discretionary behavior (Batt, 2000).

Conclusion

We extend the research on cyberloafing by demonstrating that conscientious and emotionally stable individuals cyberloaf less. Further, as expected, we find that the negative relationship between conscientiousness and cyberloafing is stronger when organizational justice is greater. Lastly, those high on conscientiousness cyberloaf less when they have a lower, rather than higher, level of empowerment. These results imply that emotional stability is a valid predictor of cyberloafing in a consistent way across situations, but the predictability of conscientiousness depends on situations—conscientiousness reduces the likelihood of cyberloafing when justice is high and when empowerment is low.

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Table 1. Confirmatory factor analysis results of variables

Model	<i>df</i>	χ^2	$\Delta\chi^2$	NNFI	CFI	RMSEA
5-factor measurement model	95	211.42***		.94	.95	.07
4A-factor measurement model ^a	99	546.54***	335.12***	.81	.84	.14
4B-factor measurement model ^b	99	647.39***	100.85***	.75	.80	.15
4C-factor measurement model ^c	99	647.39***	100.85***	.75	.80	.15
3-factor measurement model ^d	102	983.15***	711.73***	.62	.68	.19
1-factor measurement model	105	1693.06***	1481.64***	.38	.45	.25

Note. $\Delta\chi^2$ indicates the deviation of each alternative model compared to the hypothesized five-factor measurement model; NNFI = nonnormed fit index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation.

N = 247. *** $p < .001$; ^a Combining empowerment and justice; ^b Combining empowerment and cyberloafing; ^c Combining justice and cyberloafing; ^d Combining empowerment, justice and cyberloafing

Table 2. Descriptive statistics and correlations

Variable	Mean	s.d.	1	2	3	4	5	6	7	8
1. Age	36.97	8.37								
2. Gender (0=male, 1=female)	.50	.50	-.20**							
3. Education	3.58	.84	-.09	-.16*						
4. Conscientiousness	3.55	.43	.11	.01	.07	(.78)				
5. Emotional stability	3.09	.51	.11	-.09	.08	.38**	(.82)			
6. Organizational Justice	3.17	.60	.12	-.04	.11	.20**	.22**	(.85)		
7. Empowerment	3.67	.54	.20**	-.12	.09	.40**	.18**	.32**	(.92)	
8. Cyberloafing	2.51	.68	-.01	-.11	-.06	-.19**	-.21**	-.08	.06	(.87)

N = 247. Reliability coefficients (alpha) are on the diagonal.

p* < .05, *p* < .01

Table 3. Results of hierarchical regression analysis^a

Variables	Cyberloafing		
	Model 1	Model 2	Model 3
Controls			
Age	-.04	-.03	-.04
Gender ^a	-.13	-.14	-.14*
Education	-.07	-.05	-.07
Direct effects			
Conscientiousness		-.19*	-.28***
Emotional stability		-.15*	-.16*
Organizational Justice		-.07	.09
Empowerment		.19**	.23**
Moderating			
C X Organizational Justice			-.37***
ES X Organizational Justice			.14
C X Empowerment			.22**
ES X Empowerment			.04
R^2	.02	.09*	.17**
Adjusted R^2	.01	.07*	.14**
ΔR^2		.02*	.07**
F	1.39	3.71**	4.37***

Note. $N = 247$; C = Conscientiousness, ES = Emotional stability. Values in the table are standardized regression coefficients

^a 0 = male, 1 = female; * $p < .05$, ** $p < .01$, *** $p < .001$

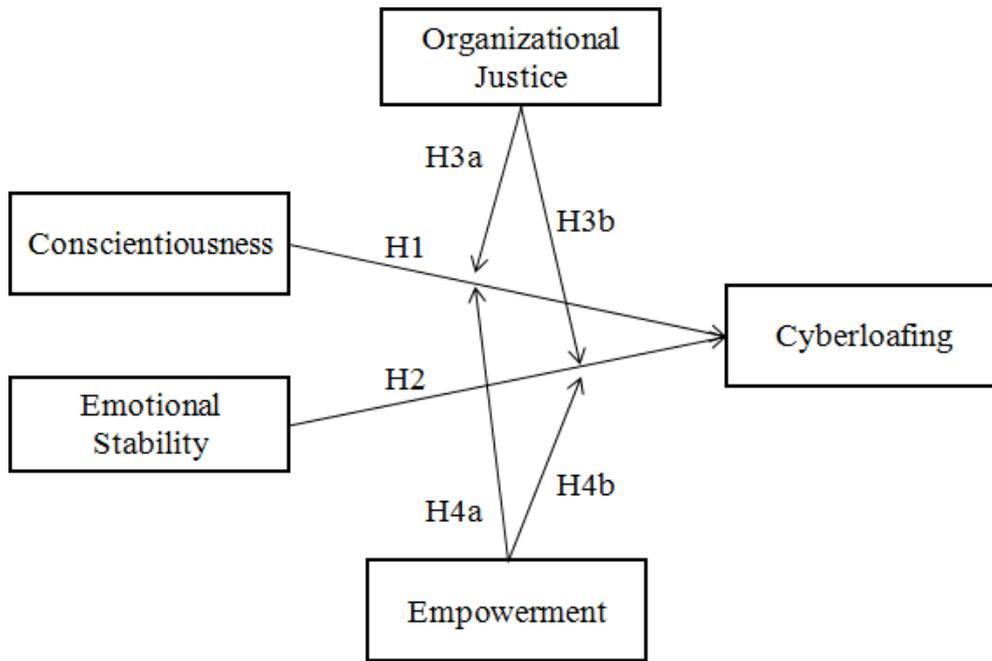


Figure 1. Hypothesized model

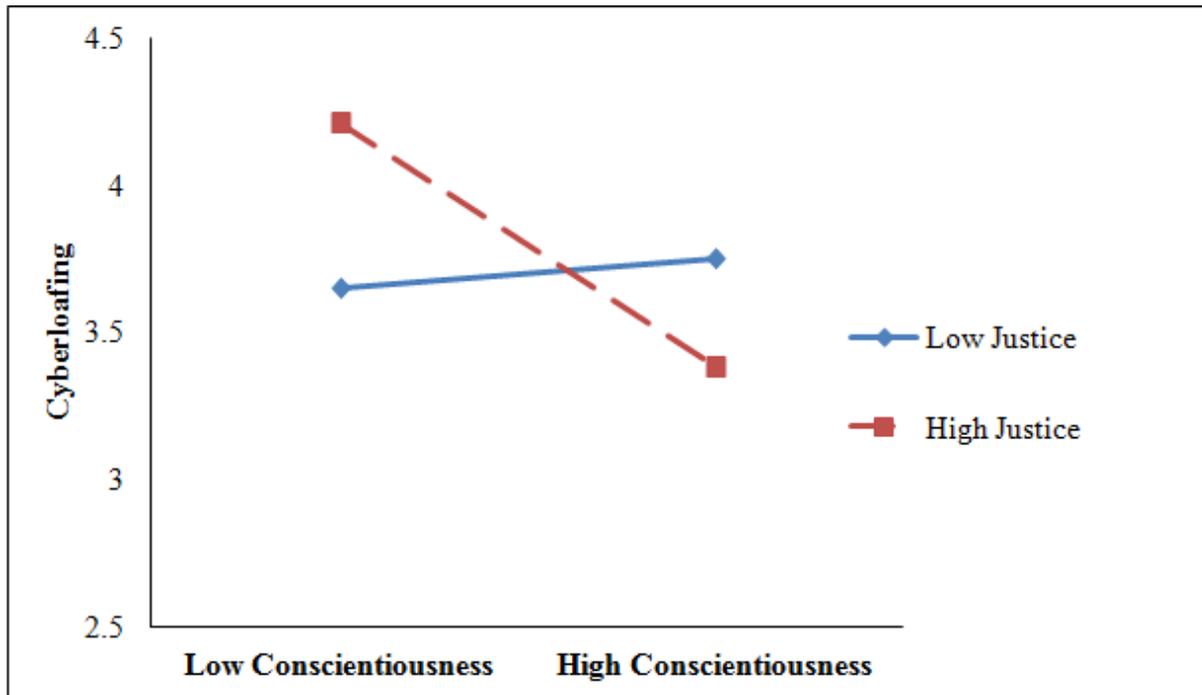


Figure 2. Interaction plot of conscientiousness and justice

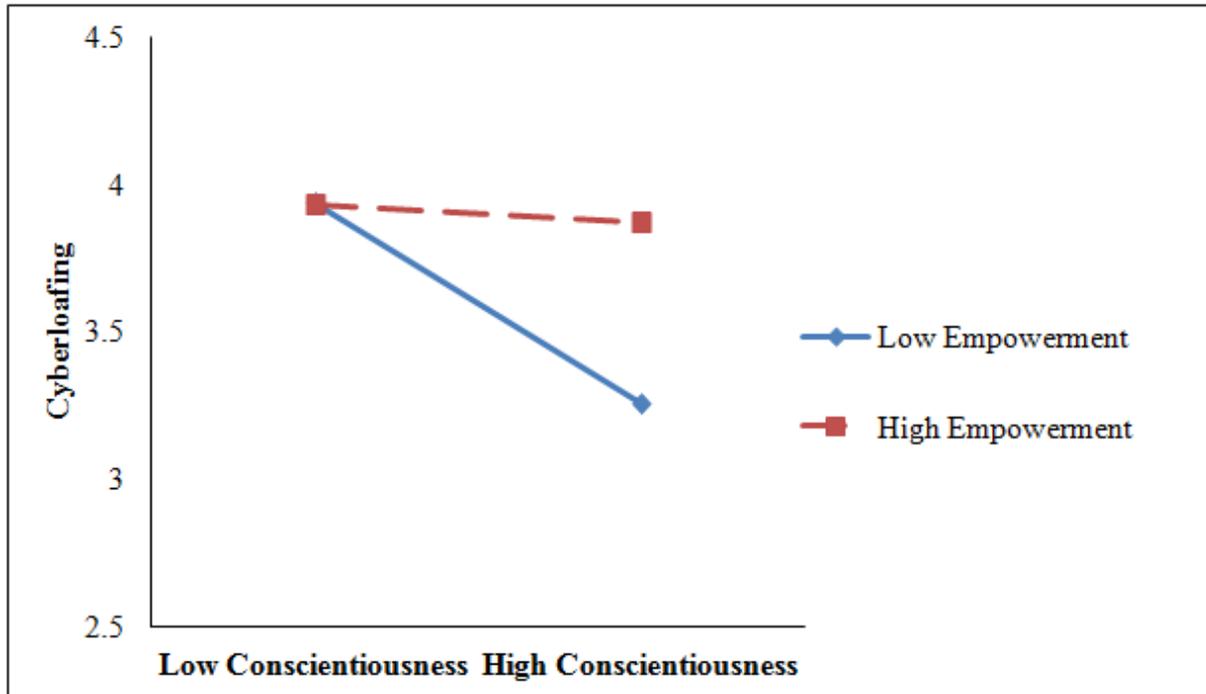


Figure 3. Interaction plot of conscientiousness and empowerment