Using Computer Resources for Personal Activities at Work: Employee Perceptions of Acceptable Behavior

Troy J. Strader
Drake University

Lou Ann Simpson
Drake University

Suzanne R. Clayton
Drake University

Using Computer Resources for Personal Activities at Work: Employee Perceptions of Acceptable Behavior

Troy J. Strader
Drake University
USA

Lou Ann Simpson
Drake University
USA

Suzanne R. Clayton
Drake University
USA

ABSTRACT

Employees use computer resources at work for personal activities and the implementation of countermeasures has not reduced this behavior. In this study we investigate the extent to which an employee's ethical orientation and supervisory role have an impact on their perceptions regarding these behaviors. We find that employees assess acceptability using a utilitarian orientation. The more money and time involved in an activity, the more employees perceive them to be unacceptable. We also find that supervisors view these activities as less acceptable than do non-supervisor employees. Demographics have little to do with explaining perceptions. Research and managerial implications are discussed.

INTRODUCTION

Today's organizations utilize a broad range of computer related resources including personal computers, I/O devices, digital storage space, network bandwidth, and software to provide their employees with tools for communications and increased productivity. The distributed, ubiquitous, nature of information technology at work and at home has given individuals greater access to, and control over, these resources. But the same characteristics have also increased the potential for misuse (personal use of organizational computer resources at work, PUCRW). Forms of this misuse behavior are often referred to as either cyberslacking or cyberloafing. It is estimated that Internet misuse costs US firms tens of billions of dollars a year in lost productivity (Leger, 2008). A 2006 survey found that the average worker admits to squandering 1.86 hours per eight hour work day and the top time waster is surfing the Internet for personal reasons (Malachowski & Simonini, 2006). Including other forms of computer resource misuse would increase this monetary and time cost. In the 1980s an employee could waste time playing games on their office PC, but beginning in the 1990s Internet access compounded the problem by enabling employees to do non-work related online activities such as sending e-mail, reading news, shopping, banking, or social networking. Each of these activities potentially leads to time wasting, loss of productivity, security problems, and employer liability (Oswalt, 2003; Woolnaugh, 2008).

These problems are increasing and it is becoming more critical for organizations to understand the relevant issues, from all perspectives, to develop viable computer resource use policies for their employees. Given that many employees use the Internet and other computer resources to do their job, it is not an option to eliminate connections to the Internet from everyone's office computer. Over time the view of PUCRW behavior has begun to change from being entirely negative to one where managers and researchers have recognized that there may be benefits to permitting this behavior in certain circumstances to improve overall productivity or employee job satisfaction (Bock & Ho, 2009; Sydney Morning Herald, 2009). Ultimately, the primary issue is to understand the factors that affect this employee behavior and also their perceptions of what activities are acceptable and which are not.

In this study we address these issues from the perspective of individual employee's perceptions and ethical orientation. We focus primarily on answering the following four questions: (1) What ethical orientation do individual employees employ when determining the extent to which PUCRW is acceptable? (2) If individuals are utilitarians, which factors do they consider when determining the consequences of their actions or their co-workers actions? (3) Does being a supervisor alter an employee's perceptions of the acceptability of PUCRW? (4) And finally, do demographic factors add to our understanding of an employee's perceptions? The answers to these questions will provide input for organizations when they develop an acceptable computer resource use policy taking into account the perceptions of their employees. These are particularly important questions to answer because existing countermeasures such as appropriate use policies or filter/monitoring systems that are intended to reduce misuse do not appear to work (Lee, Lee, & King, 2007).

The paper is organized as follows. The theoretical background for this study is presented in the next section including discussion of the utilitarian ethical orientation and related study hypotheses. This is followed by a discussion of the research methodology and findings. And the final section outlines the overall conclusions along with research and managerial implications.

THEORETICAL BACKGROUND AND STUDY HYPOTHESES

Early studies of cyberslacking and cyberloafing assumed that employee behavior was entirely negative and needed to be eliminated through some means. Over time, the common theme among studies in this area has evolved to focus more on the need to understand why employees continue to do personal activities using computer resources while at work even though they recognize, at least to some extent, that it is not the right thing to do. Studies of individual employee misuse of computer resources fall primarily into one of three categories – demographic factors, psychological factors, and ethical orientations.

Literature Review

Demographic factors include individual characteristics such as income, education, gender, and age. A study by Ugrin, Pearson and Odom (2007) found that executives and younger individuals had the highest propensity to be cyberslackers while gender, culture, years of service, and pay status were not significantly related to this behavior. In a study by Garrett and Danziger (2008) it was found that inappropriate behavior was more frequent for higher-status employees – those

who were older, male, and had higher incomes, more education, and higher occupation status. This is somewhat counterintuitive because it is assumed that older, more knowledgeable employees, would be more aware of the potential ramifications associated with misuse of resources and would therefore be less prone to these behaviors. These findings provide one perspective to explain employee behavior, but it is apparent that more complex psychological factors are also involved.

In a study by Davis, Flett and Besser (2002), a multidimensional measure of problematic Internet use, the Online Cognition Scale (OCS), was developed and validated. The four dimensions of OCS include diminished impulse control, loneliness/depression, social comfort, and distraction. It was found that scores on the OCS predicted being reprimanded at school or work for inappropriate Internet use. Internet-related diminished impulse control involves an inability to reduce Internet use despite the desire to do so. Loneliness, and use of the Internet to increase social comfort (to reach others and increase a social network), is also associated with problematic Internet use. The Internet also provides a distraction from stressful activities that may be work related.

In a second study, a distinction is made between computer use that is counterproductive versus that which is merely not productive (Mastrangelo, 2006). It was found that nonproductive computer use occurred more when employees were younger, had Internet access at work longer, and had faster Internet connections at work than at home. Counterproductive computer use occurred more when Internet access was newer and employees knew others who had been warned about misuse. A study by Blanchard and Henle (2008) proposed the terms 'minor cyberloafing' and 'serious cyberloafing' and found that employees' perceptions of coworker and supervisor norms supporting cyberloafing are related to minor cyberloafing but not serious cyberloafing. The results support the notion that there are two levels of inappropriate use, and interactions with coworkers may affect employee perceptions and behavior.

An additional study found that role stressors in organizations, including role ambiguity, role conflict, and role overload, had an impact on cyberloafing (Henle and Blanchard, 2008). Employees were more likely to cyberloaf when they perceived role ambiguity or role conflict, and they were less likely to behave this way when they perceived role overload. It has also been found that once misuse becomes a habitual behavior it often overrides other rational decision factors (Chun & Bock, 2006). It is clear that individual psychological factors are important for understanding Internet use, and misuse, but there are conflicting findings across studies and additional factors need to be considered.

A new direction for research in this area is to extend psychological models to include an ethical dimension. A study by Lee et al. (2007) investigated how people's perceptions of moral dimensions contribute to non-work related use of the Internet for personal purposes during work hours. Two factors of interest from an ethical perspective included denial of responsibility and moral obligation. Denial of responsibility is related to rationalizing the consequences of one's behavior. Moral obligation represents an individual's perception of responsibility to perform or refuse to perform a certain behavior and it therefore has a relationship to human ethical decision making. Interestingly, denial of responsibility did affect personal Web usage, but moral obligation did not. An additional study of information technology ethical issues by Molnar,

Kletke and Chongwatpol (2008) investigated differences in perceptions of undergraduate student cheating in IT and non-IT environments. The study found that cheating using IT was viewed as more acceptable than cheating without the use of IT. These results point to the need for further study of the impact of individual ethical orientations, in combination with other factors, and how it may impact their misuse of computer resources at work.

Study Hypotheses

Whether an individual considers an act to be ethical or not can be addressed or interpreted using two distinct forms of reasoning – formalist and utilitarian (Brady, 1985; Alder, Schminke, & Noel, 2007). The formalist orientation looks to a set of rules or principles for guiding behavior and a utilitarian would judge actions as ethical if they produce the greatest good (the positive consequences outweigh the negative). Past studies have focused on ethical factors and their relationship to individual PUCRW behavior. The unique contribution of this study is that we focus on the issue of behavior consequences and their impact on perceptions of acceptability for various personal uses of computer resources at work. Perceived benefits for PUCRW is outside the scope of this study. Given that employees continue to misuse computer resources even though they know they should not, the theory employed in this study is that employees utilize a utilitarian approach to determine the extent to which they feel an activity is acceptable or unacceptable. To some extent they rationalize their actions, and the actions of others, because the perceived benefits outweigh the perceived negative consequences. They also recognize that the Internet is an effective tool for performing non-work activities while at work (Mahatanankoon, Klaus, & Wen, 2007). This leads to our first hypothesis.

> H1. Individual employees use a utilitarian orientation to determine whether a personal use of computer resources at work is acceptable.

The next question is to identify which factors are considered when determining the negative consequences of an action. In this study we focus on two simple negative consequences that relate to a wide range of computer resource uses – money and time – which are the basis for the next two hypotheses:

> H2. Individual employees consider the organization's monetary cost when determining whether a personal use of computer resources at work is acceptable.

> H3. Individual employees consider the time involved in an activity when determining whether a personal use of computer resources at work is acceptable.

In addition to the factors identified above, additional issues arising from previous studies are also considered to extend the current model. A previous study addressed the issue of workplace status and its impact on personal Internet use at work (Garrett & Danziger, 2008). In this study the distinction is made between supervisors and non-supervisors to identify whether this affects perceptions of unacceptable online activities at work. In the previous study it was found that higher-status employees engaged in these activities more than lower-status employees, but this does not necessarily mean their perceptions of co-workers activities would be consistent with rationalization of their own behavior. It may be that supervisors expect their employees to focus

more on work tasks and less on personal activities because they see the sum of all of these misuses thus increasing their perception of the negative consequences for cost and lost productivity. Therefore, the hypothesis for this study can be stated in the following:

> H4. Individuals who supervise other employees view personal use of computer resources at work as less acceptable than non-supervisor employees.

Finally, we incorporate the demographic dimension into the study to identify whether demographic factors such as years of work experience, age, and gender impact perceptions of acceptability for various activities. Do employees with different demographic characteristics perceive these PUCRW behaviors differently? The impact of cultural differences on perceptions regarding appropriate use of computers has been investigated in a prior study (Keith & Perreault, 2006), but it outside the scope of our study.

In the study discussed earlier by Garrett and Danziger (2008), higher-status employees misused resources more. Given the counterintuitive nature of these results, the hypotheses for this study assume that older, more experienced, employees would be more aware of the negative consequences of these misuses of computer resources. The work experience and age related hypotheses are stated as follows:

> H5. Employees with more (less) work experience will perceive personal use of computer resources at work as less (more) acceptable.

> H6. Older employees will perceive personal use of computer resources at work as less acceptable than younger employees.

For this final hypothesis we replicate the findings from the Garrett and Danziger (2008) study that are related to gender. They found that men engaged in more personal Internet use at work than did women. In the study they argue that because men spend more time on leisure activities they may be more likely to utilize the Internet for leisure activities even though they are at work. For our study we test whether this differential behavior also impact men's perceptions of the acceptability of others engaging in these activities. This finding is replicated in the following:

> H7. Men will perceive personal use of computer resources at work as more acceptable than women.

> The study hypotheses are summarized in Figure 1.

Figure 1: Summary of Hypotheses.
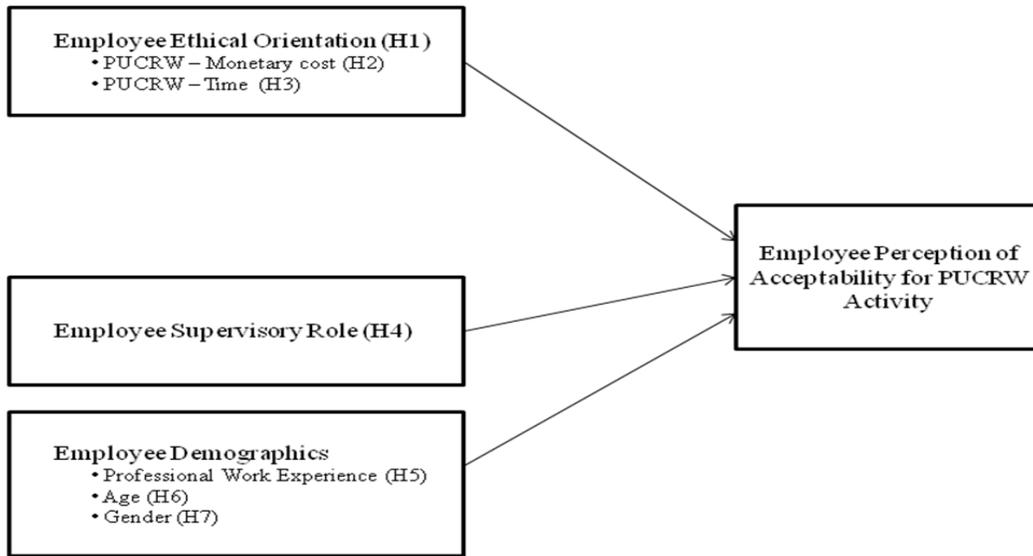
METHODOLOGY

To test the hypotheses, a survey was developed that included 14 examples of PUCRW activities. The first page of the survey is included in the Appendix. Most previous studies focused on misuse of Internet access, but the examples included in this survey are expanded to encompass a wider range of activities including various forms of viewing information online, using I/O devices, using digital storage devices or bandwidth, sending e-mail, playing games, online shopping, or using organizational computer services such as using a help desk. The population of interest for this study is employed, educated, individuals who have at least some opportunity to access computer resources at work. The survey was distributed to approximately 100 people in three graduate classes in business administration and public administration. Eighty usable surveys were returned for a response rate of 80%. Sample descriptive statistics are shown in Table 1.

Table 1: Survey Sample Characteristics.

Demographic	Categories	Number	%
Gender	Male	34	42.5%
	Female	46	57.5%
Age	21-24	18	22.5%
	25-29	28	35.0%
	30-39	24	30.0%
	40-49	9	11.3%
	50+	1	1.2%
Years of work experience		Average 8.05 years Range 1-28 years	
Supervise other employees	Yes	24	30%
	No	56	70%

For each of the 14 tasks, respondents were asked to indicate their level of agreement with the statement that a certain activity is acceptable using a seven point scale ranging from strongly disagree (1) to strongly agree (7). This was followed by questions to assess their perceptions of the monetary cost and time associated with each activity. Seven point scales were used for these perceptions with monetary costs ranging from no cost (1), a few cents (2), 25-50 cents (3), $1 (4), a few dollars (5), 10-50 dollars (6), and $50+ (7) for a single instance of the associated activity, and time ranging from no time (1), a few seconds (2), 1-2 minutes (3), 5-10 minutes (4), 10-30 minutes (5), one hour (6), and several hours (7). Demographic questions asked respondents to report their years of professional work experience, whether they supervise employees or not, as well as gender and age category.

FINDINGS

Hypothesis 1 suggests that employees are utilitarians in that they view the acceptability of various personal uses of computer resources at work differently depending on their perceptions regarding the overall benefits and negative consequences. Table 2 summarizes the overall level of acceptability found for each of the 14 activities.

Table 2: Employee Perceptions of Acceptability for Computer Resource Uses at Work.

Personal Activity at Work	Perceived Acceptability (1=low, 7=high)
3. View weather information online	6.41
14. Read newspaper online	5.31
4. Send e-mail using work e-mail address	5.04
13. Look up online map	4.78
8. Print personal documents	4.09
7. View personal spreadsheet using work computer	4.04
1. Make copies of personal documents	3.83
2. Store personal music files on office computer	3.54
6. Call work help desk for home PC problem	2.44
9. Monitor online auctions at work	2.40
10. Download large video clip using office PC	1.93
5. Play games online	1.83
12. Use work antivirus software at home	1.81
11. Use organization's CDs to burn personal files	1.71

The results support H1. Perceptions of activity acceptability range from viewing weather information online (6.41, highly acceptable) to using an organization's CDs to burn copies of personal files (1.71, highly unacceptable). If employees took a formalist view of the activities they would be more likely to judge each activity as unacceptable because it is wrong, in and of itself, to use an organization's resources for personal reasons. But the findings support the

notion that employees employ a utilitarian approach to evaluate the ethics of each of these activities. They find some activities to be acceptable, while other activities are not.

The next two hypotheses (H2 and H3) state that two of the consequences considered by employees when utilizing a utilitarian approach to evaluating the ethics of PUCRW will be monetary cost to the organization and time taken away from work activities. Results for a series of regression models are summarized in Table 3.

Table 3: Parameter Estimates for Models to Test Hypotheses.

Predictor	Model 1		Model 2		Model 3	
	b	t	b	t	b	t
Intercept	5.67	34.69***	5.75	34.61***	5.91	20.47***
Monetary Cost	-0.40	-14.81***	-0.40	-14.81***	-0.39	-14.56***
Time	-0.22	-5.63***	-0.22	-5.59***	-0.22	-5.60***
Supervisor Role			-0.30	-2.46**	-0.28	-2.31**
Work Experience (years)					-0.01	-0.89
Age					-0.01	-0.12
Gender					-0.19	-1.65*
R-Square	0.228		0.232		0.236	

***$p < .01$; **$p < .05$; *$p < .10$

Model 1 is associated with H2 and H3 and the results support both hypotheses. Unacceptable activities cost organizations more money than acceptable activities. The same is true for the time spent on an activity. Thus, employees often use a utilitarian orientation and two of the negative consequences they consider are monetary cost and time.

In H4 the impact of a supervisory role is considered in addition to the cost and time factors. Does responsibility for supervision of other employees impact someone's perceptions of the acceptability of these personal uses of organizational computer resources? Utilizing a dummy variable (0=non-supervisors, 1=supervisors), the results shown in Model 2 of Table 3 indicate that the supervisory role does affect perceptions. Supervisors view each of these activities to be less acceptable than non-supervisors. One reason may be that the supervisor views the consequences from a group level rather than an individual level so the cost and time spent on these activities is perceived as much larger. It could also be that their job performance is measured by the group's productivity so that any money or time wasted on personal activities would impact them through the actions of the employees they supervise.

The final three hypotheses, H5, H6, and H7, propose that demographic factors also affect perceptions of acceptability or these activities. Years of work experience, age, and gender are added to the previous model and results are shown in Model 3 of Table 3. Contrary to previous

findings, no relationship is found between years of professional work experience or age and individual perceptions of activity acceptability. Therefore, H5 and H6 are not supported. For gender there is a weak statistical relationship that agrees with previous findings. Male employees find these activities to be more acceptable. Thus, H7 is supported. The results confirm the idea that understanding employee misuse of computer resources is not a simple question, but involves more complex psychological factors and ethical orientations that go beyond simple demographic classifications.

CONCLUSIONS AND IMPLICATIONS

The purpose of this study is to determine which factors affect an employee's perceptions of the acceptability of various examples of PUCRW. As with any study, there are a number of limitations in this study, but there are also a number of interesting implications for researchers and managers. It should be noted that the findings and implications drawn are based on a single study. The generalizability of the study's findings could be reinforced by replications using other samples and other sets of computer-related activities.

Research Implications

This study makes several unique research contributions. When considering misuse of computer resources at work, more than just Internet (or Web) usage was considered. In addition, this study addressed employee perceptions of computer resource use activities rather than the factors that directly affect behavior. Employee ethical orientation is an important consideration when attempting to understand someone's perceptions related to use of computer resources at work for many personal activities. Also, recognizing that employees are utilitarians' points to the need to identify the benefits and negative consequences they associate with their perceptions of each activity. And the study identified supervisory role as a factor that impacts perceptions. Finally, demographics alone do not explain perceptual differences. The best direction for future studies appears to be to include a combination of psychological factors and ethical orientation to understand perceptions and behaviors for PUCRW.

A number of extensions to this study could be addressed in future research. A wider range of activities could be considered to see if the monetary cost and time findings are generalizable. Given that supervisor perceptions are different from non-supervisors, it would be interesting to survey students who are not currently employed to see if they are more accepting of these activities, and senior managers could also be surveyed to see if they are even less accepting than supervisors. This could be used to identify whether a linear relationship exists between hierarchical position in an organization and one's perceptions of personal use of computer resources at work. Online activity addiction is an interesting psychological phenomenon (Park & Chen, 2007), and this could be incorporated into future studies to see if addictive behavior impacts perceptions of ethical IT use. Studies could also be done in different industries to see if there are unique characteristics that impact acceptability perceptions because of the nature of jobs or the nature of the information being collected and analyzed. Future studies could also look at existing computer resource policies to see what cultures and perspectives exist regarding these issues and how successful they have been at reducing misuse of computer resources at work.

Managerial Implications

Organizations need to consider employee perceptions of acceptability for PUCRW when developing acceptable use policies. The ubiquitous nature of today's information technology makes it nearly impossible to separate work and home life for many professional occupations. Wasting money may always be a concern, but there may be some time flexibility. Allowing employees some latitude to determine when it is appropriate to do personal activities at work will create great benefits and may result in overall great job satisfaction and productivity. It also creates a culture where they feel that doing work while on their own time is acceptable because of the flexibility shown by their employer. The level of flexibility may not be appropriate for all types of jobs and organizations. Government, legal, or medical professions may be less flexible because of the nature of the information they process. Perceptions in the legal community may also be affected by a lack of experience with what constitutes merely unethical use of computer technology versus a computer-related crime (Post & Kagan, 2007). Jobs involving customer service may also not be as flexible because employees must be available to serve their customers at any time. Jobs that are evaluated by the output they create, such as software developers or writers, may be very flexible in their policies to appropriate use of computer resources because the time the work is done is less important than the final product.

REFERENCES

Alder, G. S., Schminke, M., & Noel, T. W. (2007). The Impact of Individual Ethics on Reactions to Potentially Invasive HR Practices. *Journal of Business Ethics,* 75, 201-214.

Blanchard, A. L. & Henle, C. A. (2008). Correlates of Different Forms of Cyberloafing: The Role of Norms and External Locus of Control. *Computers in Human Behavior,* 24, 1067-1084.

Bock, G-W. & Ho, S. L. (2009). Non-Work Related Computing (NWRC). *Communications of the ACM,* 52(4), 124-128.

Brady, E. N. (1985). A Janus-Headed Model of Ethical Theory: Looking Two Ways at Business/Society Issues. *Academy of Management Review,* 10, 568-576.

Chun, Z. Y. & Bock, G-W. (2006). Why Employees Do Non-Work-Related Computing: An Investigation of Factors Affecting NWRC in a Workplace. *Proceedings of the Tenth Pacific Asia Conference on Information Systems (PACIS 2006),* 1259-1273.

Davis, R. A., Flett, G. L., & Besser, A. (2002). Validation of a New Scale for Measuring Problematic Internet Use: Implications for Pre-employment Screening. *CyberPsychology & Behavior,* 5(4), 331-345.

Garrett, R. K. & Danziger, J. N. (2008). On Cyberslacking: Workplace Status and Personal Internet Use at Work. *CyberPsychology & Behavior,* 11(3), 287-292.

Henle, C. A. & Blanchard, A. L. (2008). The Interaction of Work Stressors and Organizational Sanctions on Cyberloafing. *Journal of Managerial Issues,* 20(3), 383-400.

Keith, N. & Perreault, H. (2006). Differing Cultural Perceptions Regarding the Appropriate Use of Workplace Computer Technologies. *Journal of International Technology and Information Management,* 15(1), 19-26.

Lee, Y., Lee, Z., & Kim, Y. (2007). Understanding Personal Web Usage in Organizations. *Journal of Organizational Computing and Electronic Commerce,* 17(1), 75-99.

Leger, K. (2008, April 4). Stealing Time at Work on the Net – Companies Cracking Down on Cyberslacking. Retrieved June 11, 2009 from canada.com.

Mahatanankoon, P., Klaus, T., & Wen, H. J. (2007). An Examination of Internet Effectiveness for Non-work Activities. *Journal of International Technology and Information Management,* 16(3), 23-34.

Malachowski, D. & Simonini, J. (2006). Wasted Time at Work Still Costing Companies Billions in 2006. Retrieved June 11, 2009 from salary.com.

Mastrangelo, P. M., Everton, W., & Jolton, J. A. (2006). Personal Use of Work Computers: Distraction versus Destruction. *CyberPsychology & Behavior,* 9(6), 730-741.

Molnar, K. K., Kletke, M. G., & Chongwatpol, J. (2008). Ethics vs. IT Ethics: Do Undergraduate Students Perceive a Difference? *Journal of Business Ethics,* 83, 657-671.

Oswalt, B. & Elliott-Howard, F. (2003). Cyberslacking – Legal and Ethical Issues Facing IT Managers. *Proceedings of the International Association for Computer Information Systems 2003 Conference (IACIS 2003)*, 646-652.

Park, Y. & Chen, J. V. (2007). In Search of Factors to Online Game Addiction and its Implications. *Journal of International Technology and Information Management,* 16(2), 73-79.

Post, G. V. & Kagan, A. (2007). Improving the Judicial System to Handle Computer Crime. *Journal of International Technology and Information Management,* 16(2), 1-14.

Sydney Morning Herald. (2009). Cyberslacking Boosts Productivity: Study. Retrieved June 11, 2009 from http://www.smh.com.au/articles/2009/04/02/1238261711714.html

Ugrin, J. C., Pearson, J. M., & Odom, M. D. (2007). Profiling Cyber-Slackers in the Workplace: Demographic, Cultural, and Workplace Factors. *Journal of Internet Commerce,* 6(3), 75-89.

Woolnaugh, R. (2008). Get out of my Facebook. *Employers Law,* 13649493.

APPENDIX

Individual Perceptions of Acceptable Activities

For questions 1-14 please circle the appropriate number indicating the extent to which you disagree or agree with the following statements.

It is acceptable for an employee to:	Strongly disagree						Strongly agree
1. make copies of personal documents using the organizations photocopier.	1	2	3	4	5	6	7
2. store personal music files on the computer in their office.	1	2	3	4	5	6	7
3. view weather information online prior to driving home after work.	1	2	3	4	5	6	7
4. send a personal e-mail message from work using their work e-mail account.	1	2	3	4	5	6	7
5. play games online.	1	2	3	4	5	6	7
6. call the organizations help desk for help with a home computer problem.	1	2	3	4	5	6	7
7. view a spreadsheet with personal investment information using their work computer.	1	2	3	4	5	6	7
8. print personal documents using the organizations printer.	1	2	3	4	5	6	7
9. monitor online auctions and make bids at work for items they will use at home.	1	2	3	4	5	6	7
10. download large video clips using office computer for personal use at home.	1	2	3	4	5	6	7
11. use organizations CDs to burn personal copies of music files.	1	2	3	4	5	6	7
12. use antivirus software provided for work computer, that the organization pays a per license fee for, on home computer.	1	2	3	4	5	6	7
13. use office computer to look up online map for personal trip.	1	2	3	4	5	6	7
14. use office computer to read online newspaper.	1	2	3	4	5	6	7