Psychological and Workplace Attributes that Influence Personal Web Use (PWU)

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Abstract

Using the Internet during work time for personal interest is defined as personal web use (PWU), yet only limited knowledge is available on why people engage in varying degrees in this activity. To address this shortcoming, this research project tested a heavily moderated theoretical model of thirteen psychological and workplace attributes expected to influence differences in individuals' PWU: moral norms, boredom, workgroup norms, workload, use of the 'ledger neutralisation strategy', certainty about PWU rules, attitude towards work, reactance, supervisor treatment, attitude towards PWU control, status, tenure and social loafing risk. Five facets of PWU were measured as separate criterion variables: past frequency, habitual PWU, duration, and two PWU activity types.

Data for the model testing was gathered through an extensive on-line questionnaire. The responses of 267 participants with varying demographics and work situations were used to test the theoretical model, using moderated regression analyses. Significant interactions were explored further through the Modgraph procedure.

The model testing results showed that PWU was more common in respondents who morally approved of PWU and who were bored at their work. How often people engaged in PWU (either out of habit or in general), for how long and in what types of activities, was influenced by specific combinations of the remaining attributes. Only four of the hypothesised twelve interactions played statistically significant roles, only habitual PWU was influenced by workload; and only information-seeking activities were influenced by workgroup norms. Attributes with 'revenge' connotations were noticeably absent as significant influences. The findings are discussed in some detail.

To further explore the context of PWU, thematic analysis was undertaken of answers to two open-response questions provided by a sub-sample of 119 participants. Results supported the role of workplace boredom in PWU situations, specified the moral issues of PWU approval, and suggested that PWU is best understood and examined in the wider context of organisational culture.

The thesis concludes with synthesis and discussion of statistical and qualitative analyses results, identifying the contributions the research has made to the field of study. Suggested practical applications of the findings, limitations of the research project and suggestions for future studies conclude the documentation.

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Chapter 1

Introduction

Anyone who has ever sat in front of a computer at work, who has connected to the Internet and then established contacts or accessed information that was not part of his or her official job description, has engaged in personal web use (PWU). Some individuals do it for minutes - others for hours; some do it once a day - others several times a day. People also differ in the type of activities they engage in: some prefer to read the news and search for information, while others predominantly email and seek contact with friends, family and colleagues. Depending on the policies, procedures and culture of the organisation this behaviour is ignored, tolerated, or managed through monitoring, controls and discipline. For some employees and organisations PWU appears to be no issue for concern (Greenfield & Davis, 2002), while others use labels like 'time theft', 'lack of trust' and 'Big Brother is watching' to describe PWU and its related control and monitoring aspects. In either case, PWU is a relatively new workplace phenomenon that has become, over the last decade, a source for increasing research and debate in the popular and academic literatures.

One question of interest to researchers and practitioners alike is why people differ in the extent to which they engage in PWU. This research project aims to contribute an answer to this question by drawing on data gathered from individuals engaging in PWU through an online survey, and testing a theoretical model of influences on PWU.

In this chapter PWU is first defined before pointing to the different perspectives that are currently taken on PWU. These perspectives determine, to some degree, the theoretical frameworks used by previous researchers investigating PWU. Therefore, the theoretical approaches used at present to understand PWU are summarised, and the position taken in this research project is identified, before elaboration on the aims of this study and presenting an outline of this thesis.

1.1 Current PWU research directions

Personal web use (PWU) was defined by Mahatanankoon, Anandarajan, and Igbaria (2004, p 93) as "voluntary on-line web behaviours during working time using any of the organisation's resources for activities outside current customary job/work requirements". PWU is, therefore, a behaviour distinct from Internet use, or Internet misuse in general, as well as from Internet use for work purposes. Mahatanankoon's basic definition of PWU is sometimes altered by adding a specific time limit or focusing on the activities engaged in. Lee, Lee and Kim (2004), for example, defined PWU as behaviour

that is sustained for more than 30 minutes. The definitional focus on how long one accesses the Internet at work is also embraced by Teo, Lim and Lai (1997) who viewed PWU as 'cyberloafing', a behaviour akin to taking unauthorized long lunches. The focus on the time aspect of PWU is also often found in popular literature warning companies about the legal and financial costs of lengthy employee engagement in PWU. At the same time, definitions of PWU are also altered to have an activity-specific dimension, sidelining the time aspect, and focusing on the activities one engages in (e.g. Blau, Yang, Ward-Cook, 2004; Lim, 2002). These different approaches to defining PWU can be seen as an indication of the 'youth' of the field, where the different dimensions of the behaviour of interest, PWU, are still being explored.

In the past, Internet-use research has examined determinants of its use and misuse as well as uses of the Internet for work, focusing on general web behaviours and on the impact the Internet has on peoples' lives (e.g. Gephart, 2002; Greenfield & Davis, 2002; Stanton, 2002). In the field of psychology, the research focus has traditionally been on determinants of Internet dependency and misuse (e.g. Modayil, Thompson, Varnhagen & Wilson, 2003; Rotunda, Kass, Sutton & Leon, 2003). The majority of research into PWU, theoretical and empirical, has approached the topic from a managerial or information–technology point of view, primarily with the aim of assisting organisations to develop effective PWU control strategies. To date no study has been published that examines the influences on PWU from an organisational psychology perspective, i.e. combining the interests of the organisation with those of the individual. This research project attempts to fill this apparent gap.

Another example of the youth of PWU as a research field may be the fact that research publications are clearly divided over whether PWU as an organisational behaviour is negative or positive. On the one hand, from a managerial perspective, PWU is frequently described in a negative context. It has been repeatedly reported, for example, that PWU is increasing in unexpected proportions (e.g. Malachowski, 2005; Malchowski & Simonini, 2007; Vault.com, 2004) up to the point where government organisations in the United States have feared for the security of their computer-based systems and information (Devaney, 2006). Consequently, a number of studies called for the implementation of control mechanisms (Greenfield & Davis, 2002) and risk management strategies (Young & Case, 2004). Other publications made organisations aware of lost productivity and working time (Anandarajan & Simmers, 2002; Lee, Teo & Loo, 2002; Mirchandani & Motwani, 2003), and called upon the business community to implement strict and clear guidelines, controls and consequences to manage this apparently negative and undesirable behaviour (KensigntonSwan, 2003; Scheuerman & Langford, 1997; Vorobyov, 2005). In recent years

PWU was described as ‘cyber slacking’ by some (Mills, Hu, Beldona & Clay, 2001), and ‘cyberloafing’ by others (Lim, 2002, 2005) to conceptually portray the practice as negative and a misuse of company resources.

On the other hand, a small number of researchers take a more individual-focused perspective, pointing to the more positive aspects of PWU for organisations and employees. In the past, these positive aspects included ease of knowledge transfer (Belanger & Van Slyke, 2002), and stress release, through enabling micro breaks without leaving the work area (Oravec, 2002). Initial indications have also been given that PWU can contribute to increases in job satisfaction (Anandarajan, Simmers & Igbaria, 2000) and employee productivity (Stiller-Hughes & Robertson, 2002), or play a part in improving communication in a global economy (Simmers, 2002). These voices, aiming to present a more balanced view of PWU by pointing to potentially positive aspects of the behaviour, are on the increase but are still less vocal in the research and applied literature. With this research project the aim is to strengthen these voices by focusing on why individuals differ in their PWU, and by acknowledging that the organisation and the individual are both participants in PWU, and that both can perceive the behaviour in a positive or a negative light.

The apparent fragmentation of current research can be seen as a further indication that PWU as a research field is still young, with different theoretical and empirical research perspectives still being explored. The currently prevailing perspective of emphasis on the negative aspects of PWU may exist because the outward, visible and relatively immediate consequences of PWU are fairly easy to focus on, identify and categorise as organisational misbehaviour. This tendency to focus attention on negative information is described in social psychology as the negativity bias (Ito, Larsen, Smith & Cacioppo, 1998; Rozin & Royzman, 2001) and in management studies by McGregor’s Theory X–Theory Y (Kreitner & Kinicki, 2007).

Yet understanding the psychology of PWU is potentially less overt and, like most psychological phenomena, relatively complex and multi-facetted. When examining why individuals differ in their PWU, subtle nuances of moral values, group influences, attitudes and personality traits can interact with different situational conditions such as workload, boredom or social loafing risks to influence organisational behaviours like PWU. Understanding the multiple influences on this increasingly common workplace behaviour may thus require a combination of different theoretical approaches. In this research project the perspective is taken that PWU as an organisational behaviour may have positive and negative aspects, depending on the characteristics of individuals and their workplaces. With its emphasis on the individual, the study is firmly positioned within the field of organisational psychology.

Although a vocal group of writers tended to condemn PWU and pointed to the legal and security risks of PWU (e.g. KensingtonSwan, 2002; Malachowski, 2005; Richardson, 2003; Vorobyov, 2005) little is known how people are influenced to differ in the extent to which they engage in PWU. Only a small group of researchers has begun, over the last ten years, to specifically examine the influences that a number of individual and environmental characteristics have on PWU. The youth of this field of research is thus further reflected in the different theories researchers have drawn upon when investigating influences on PWU. Some examine these influences by drawing on psychological theories that are applied to and often adapted for business environments. Here the most frequently used theoretical frameworks are the theory of reasoned action (TRA) and the technology acceptance model (TAM) (e.g. Anandarajan, Simmers & Igbaria, 2000; Anandarajan & Simmers, 2002; Lim, 2002; Stanton, 2002). The aim of the majority of these studies is to establish the processes leading to personal web use, as well as exploring environmental and individual factors that contribute to the behaviour.

At the same time, organisational behaviourists, criminologists and sociologists offer to investigators of the influences on PWU, theories used to explore misbehaviour in organisations, often including determinants of computer-related crimes utilising the Internet. These theories include a framework determining organisational misbehaviour (OMB; Vardi & Weitz, 2004), general deterrence theory (Parker, 1998), ethical decision making theories (e.g. Rest, 1986; Trevino, 1986) or social learning theory (Agnew, 1995). The aim of the majority of these studies is to understand aspects of employee behaviours that lead to mostly criminal and/or unethical acts which are harmful to individuals, organisations or society in general.

Conversely, psychologists researching within the theoretical framework of individual differences examine the links of personality traits such as sensation seeking (Shaffer, 1996), and agreeableness, conscientiousness and extraversion (Landers & Lounsbury, 2006) with heavy Internet use. Their aim is predominantly to understand what type of person is most ‘at risk’ to engage in excessive web use in general, with little or no reference to PWU. The individual differences-based research is typically linked to investigations focusing on the health and addiction aspects of Internet use, and is often conducted by psychiatrists and behaviour modification researchers. In those investigations individual differences and medical criteria described in the DSM-IV are investigated together when examining the relationship between Internet use and addiction (Armstrong, Phillips, & Saling, 2000; Modayil, Thompson, Varnhagen & Wilson, 2003; Rotunda, Kass, Sutton & Leon, 2003; Yellowlees & Marks, 2007). These studies aim to understand the possibly

addictive nature of Internet use which can cause problems for individuals in their home and working lives.

However, as yet, none of the above-mentioned theoretical perspectives and models is dominant within the field of PWU. The investigation of influences on individuals' PWU in the present study is built on the existing research by drawing on some of the currently used theoretical frameworks. The field is then extended by including psychological theories in the presented arguments that have to date not been applied to PWU research.

1.2 This research project

With this research the aim is to contribute to a better understanding of why individuals vary in the extent to which they engage in PWU. At the same time, the aim is to explore where PWU fits into the context of working lives and organisations. Main points of interest here are what the consequences of PWU are, and how individuals perceive the PWU control mechanisms their organisations might have in place. To achieve these aims, existing research findings were drawn upon, and variables that have previously been identified as influences on or determinants of PWU are included. At the same time, these findings are extended by investigating the influence a number of variables have on PWU that are not yet explored as influences on it.

The theoretical arguments for the influence these variables may have on PWU, is in part based on findings and theoretical frameworks from different research disciplines (e.g. management and information systems, management and organisation systems, organisational behaviour and psychology), and includes theorising about the relationships the chosen variables may have with the two dimensions of PWU (time and type of activity). These proposed causal links are then presented in a moderated model of expected relationships between PWU and the predictor variables. These variables are relatively stable attributes of individuals and their workplace. As such they are more likely to alter the strength of the relationships with each other (moderation) than be a necessary prerequisite for an influence on PWU (mediation). Due to the exploratory nature of the model, feedback or reciprocal relationships are not considered at this stage.

The context of PWU, in turn, is explored through the comments given by research participants to directed, open-response questions aiming to gain insights into how these individuals experience PWU in their working lives. The small and clearly limited pieces of insight gained by testing the proposed model and analysing the respondents' comments, however, contribute to our current understanding of PWU, as the final discussion in this research document will present.

The dimensions of PWU that serve as criteria in this study are time and activity. Within the dimension of time, it is investigated why individuals vary in their PWU regarding both their overall and habitual frequencies of PWU, and the average duration of their PWU. Within the dimension of activity, the investigation focuses on why individuals vary regarding their frequency of engagement in specific PWU activities. All investigations are based on past time periods of either one or two weeks. These time periods were chosen because it is reasonable to assume study participants can recall their PWU with reasonable accuracy over those short time spans.

The influences selected for this study are relatively stable attributes of the individual and the organisational environment that are familiar to most employees. The attributes of the individual include the moral standards a person holds regarding PWU; the predisposition a person has to react in a certain way as a response to rules, regulations and restrictions; a person's general attitudes towards work, and how a person explains and justifies why he or she engages, maybe only occasionally, in PWU despite knowing it is frowned upon or outright forbidden at the organisation or within the work group. The attributes linked to the organisational environment include the workload and level of boredom an employee may experience; the norms and accepted practices regarding PWU that may exist within the employee's organisation; as well as the level of knowledge the employee has regarding clear rules and policies in place to manage PWU, and the degree to which employees have the opportunity to just loaf off task and off work. Of interest here are also what employees think about the relationship with their supervisors, the employees' tenure, and their work roles, as indicators of their relative status within the organisation.

The work presented in this thesis contributes to the field of PWU research, theoretical arguments and models from the perspective of organisational psychology an approach hitherto under represented in that particular research field. The theorising and model testing then contributes insights into the relationships the selected psychological and workplace attributes have with the chosen facets of PWU. These insights, in turn, contribute to a better understanding of PWU as an organisational behaviour that can have both negative and positive impacts on individuals and organisations.

1.3 Thesis structure

This research project consists of an Internet-based survey to examine possible influences of PWU in an effort to increase our understanding of why individuals vary in their PWU. In this chapter PWU is defined, and currently used theoretical frameworks and the different perspectives taken on PWU as an organisational behaviour are outlined, together with the aims of this research project, showing why it is placed within the field of

organisational psychology, and pointed to the contribution the study makes to the current state of PWU research.

In chapter 2 *(The current state of research into influences on PWU)* critical reviews of the five currently published, previous studies into determinants of PWU are presented, and some of the existing research gaps are highlighted. The focus of this literature review is on presenting the research on which our current understanding of the influences on PWU is based, and thus placing this research project into its appropriate context. In this chapter other areas of Internet research, such as those investigating addiction and personality, are briefly acknowledged. However, these areas are examined only as far as they are salient to the design of this research project. Equally, lines of PWU research that did not directly contribute to the development of the theoretical model tested, such as the association between job satisfaction and PWU, are acknowledged but not in detail examined.

In chapter 3 *(Conceptual exploration of PWU and attributes that can influence the behaviour and explain why individuals vary in their PWU)* personal web use (PWU) and those attributes of the organisational environment and the individual that are proposed as influencing the behaviour are conceptualised. Furthermore, the dimensionality of PWU is investigated, the influences on PWU, selected for this project, are introduced, and their theoretical relationships with the identified facets of PWU are examined in some detail.

In chapter 4 *(The research model of psychological and workplace attributes influencing PWU)* a theoretical model linking together the conceptualised influences on PWU is introduced. In this chapter the choice of model and present detailed descriptions of and theoretical arguments for the proposed effects and relationships is discussed. These theoretical arguments conclude with twelve hypotheses to be tested through moderated hierarchical regression analyses.

In Chapter 5 *(Research method)* I detail the method used in this study. Here the participants of the study are introduced, details of the chosen measures are described, and the study's method is explained. This chapter concludes with a description of the specific quantitative procedures used to test the theoretical model, and the qualitative procedures used to investigate the open-response questions that were included in the survey.

In chapter 6 *(The PWU patterns of the research participants)* the relevant results of the statistical analyses that identify the PWU patterns of the research participants as a group are presented. At the same time, their tendencies in PWU frequency, habitual PWU, PWU duration and patterns of specific PWU activities are highlighted. The information

presented in this chapter places the model testing results in the context of the research participants' PWU patterns.

In chapter 7 *(Model testing results and discussion)* the relevant results of the statistical procedures used to test the theoretical model are presented. The presentation of these results is then followed by a brief discussion of the findings.

In chapter 8 *(Thematic analysis of PWU)* the rationale for including qualitative data in this research project is introduced, and the method used to analyse the responses to the open-response questions in the on-line survey is described. Finally, the results of this analysis and their relevance to this research project are presented and discussed.

In chapter 9 *(Synthesis)* the main findings of the statistical and qualitative data analyses are analysed, and, with reference to the present study's aim and research question, interpretations and discussions of the obtained results are offered. Based on the findings and their discussion the contributions this research project makes to the understanding of PWU are highlighted. This chapter also includes possible applied implications of the findings, acknowledges limitations of the study and concludes by pointing to future directions for research in the field of PWU.

Chapter 2

The current state of research into personal web use (PWU)

A search of the academic literature revealed that there are only five studies that focus on the question of what factors influence personal web use (PWU). These five studies contribute in differing degrees to our understanding of why individuals vary in their PWU.

At the same time, they provide inspiration for future investigations, some of which prompted the research presented here, and which demonstrated clearly the need for more detailed research. Because our current understanding of the influences on PWU is based on these five studies, they deserve closer scrutiny to enable clearer assessment of the state of the field, and to place this research project in the context of this field of study. In the present chapter, therefore each of these five studies is critically evaluated in some detail, and the influence that personality might have on PWU are briefly discussed. Finally, some conclusions that can be drawn from the literature are presented.

2.1 Factors influencing individuals' personal web use

2.1.1 Personal and organisational characteristics as influences on PWU

In one of the earliest studies examining factors influencing PWU, Anandarajan, Simmers and Igbaria (2000) focused on combining organisational and individual factors in a mediated model using as its theoretical basis the theory of reasoned action: TRA (Fishbein & Ajzen, 1975) and the technology acceptance model: TAM (Davis, 1989). Both these theoretical frameworks explain processes that lead to the intention to engage in a behaviour (TRA) or acceptance of a new technology (TAM). Intention and acceptance are then seen as precursors to engaging in the target behaviour that of accessing the Internet at work. Anandarajan, Simmers and Igbaria (2000) proposed that individual factors (age, gender, optimism, Internet skills) and organisational factors (social pressure, security threats, task characteristics) have an impact on employees' Internet attitudes and beliefs. These attitudes, in turn, were hypothesised to lead directly to Internet use at work, measured by frequency, duration, business activities and types of web pages visited. Personal web use was distinguished from Internet use for work by classifying the type of websites accessed.

To examine the associations between potential antecedent factors and their criterion variable of Internet usage, Anandarajan, Simmers and Igbaria (2000) collected data from 39 part-time MBA students through a paper-and-pencil self-reporting questionnaire. All respondents had Internet access at their workplaces. Most were between 26 and 38 years old, male (82%), and worked predominantly in finance/insurance/real estate organisations (32%). Half of the respondents were either professionals (27%) or middle level managers (23%). Since this small sample is not representative of the whole population of employees using the Internet at work, the findings of this research need to be interpreted cautiously.

To gauge Internet use the authors used four indicators: duration of use, frequency of use, the extent of using the Internet for a variety of activities, and the likelihood of accessing different types of web pages while at work. Five website types were defined as personal web use sites: websites with general interest content, travel or leisure information, sports- or arts-related websites, and free game software websites. Six website types were categorised as work pages: competitors' and customer websites, government websites, those giving business, financial, or supplier information, and news websites. Respondents were asked to indicate how likely they were to access the websites listed. Unfortunately, the 'Internet frequency and duration' measures did not distinguish between accessing work-related or personal interest pages, but asked only how often and how long a person spends time "on the Internet at work".

The measures of individual factors proposed in the model included eliciting demographic information (age and gender), as well as multi-item measures of "Internet playfulness" (Webster & Martocchio, 1995) and Internet skills. The measures of organisational factors proposed in the model included measures of social pressure, organisational support and task characteristics. Social pressure was measured with one item asking what people important to the respondent might think regarding the regular use of the Internet in their jobs. Organisational support was assessed through four items examining the degree to which respondents feel their organisation and supervisors encourage Internet use. Task characteristics referred to the amount of structure and variety in the job itself. These were measured using an eight-item measure developed by Withey, Daft and Cooper (1983).

The beliefs and attitudes that were seen to be a result of these individual and organisational factors were assessed with three different measures. Internet self-efficacy elicited six items (Hollenbeck & Brief, 1987) questioning respondents' beliefs about their ability to use the Internet competently. Internet attitudes were measured through a 19-item measure modified from the original by Nickell and Pinto (1986). This measure elicited agreement with statements regarding the role the Internet plays in the respondents' lives.

The Internet satisfaction measure included nine items adapted from a previous scale measuring microcomputer user satisfaction (Igbaria, 1990).

Although presenting at the start of their study a mediated process model, because of the small sample size (n=39), the authors reported only the results of principal component analyses (PCA) and scale reliabilities. Instead of the planned structural equation modeling, Anandarajan Simmers and Igbaria (2000) reported only groups of bi-variate correlations among all variables measured. Few of the correlations between Internet use at work (PWU and work-related) and its hypothesised antecedents were significant. The results suggested that women were less likely to access work-related Internet pages than men ($r=-0.62$, $p<.001$), and that, with increased task structure, the access of personal web pages at work decreased ($r=-0.51$, $p<.001$). At the same time a general feeling of pessimism was related to an increased engagement in PWU ($r=0.44$, $p<.01$). Anandarajan, Simmers and Igbaria (2000) concluded from their findings that highly structured tasks might prevent PWU. The authors also suggested that organisational factors such as management involvement and social pressures may also have an influence on PWU, although no significant statistical relationships were reported. Furthermore, “Internet playfulness” and perceived usefulness were seen to have positive (job satisfaction) and negative (increased inefficiency) outcomes through engagement in PWU; however, no data supporting these statements were presented.

Because of its small sample size and correlation analysis results, the contribution of Anandarajan, Simmers and Igbaria’s (2000) study to our knowledge of influences on personal web use (PWU) lies in calling for further research into that area. Future studies, like this research, may want to build on the theoretical notions proposed by Anandarajan, Simmers and Igbaria (2000), and examine more closely the idea that organisational and individual aspects together determine PWU through the mediating effects of attitudes and beliefs. Future research may also want to measure PWU not only through the activities involved (e.g. web sites accessed), but also through the dimension of time (e.g. how long and how often one engages in this behaviour). Subsequent research might also want to investigate whether the different dimensions of PWU (time and activity) are influenced by the same or different personal and environmental characteristics.

In summary, the study by Anandarajan, Simmers and Igbaria (2000) suggested the existence of patterns in the relationships between individual and organisational factors, attitudes and PWU at work. At the same time, however, through the fact that it had been published in a respectable, peer-reviewed journa,l the study draws attention to the dearth of research in the field of PWU determinants, and the need for more rigorous theoretical and empirical research.

2.1.2 Personal ethics and social norms as influences on PWU

Building on the rather indicative findings of the above-discussed study, Anandarajan and Simmers (2002) continued their search for factors influencing Internet access behaviours at work. The authors tested a partially mediated model suggesting that Internet use at work, including both the accessing of work-related and personal interest websites, is determined by so-called “antecedent factors”: management support for Internet use, Internet experience of the employee, formal employee Internet training and self-training. The relationship between these antecedent factors and Internet use was seen to be partially mediated by “perceptual factors” such as perceived enjoyment and usefulness of the Internet, ethical beliefs and social pressure.

Closer examination of Anandarajan and Simmer’s research model raises some questions the authors did not address. These concern the fact that no distinction was made between work-related and personal interest-related Internet experiences or web use when describing the research model and hypotheses. In contrast, when describing their hypotheses the authors expected that individuals may “use the web for work-related purposes because of the pressure from those in the environment to use the web. Such pressure can force individuals to disengage from self-limiting behaviour such as surfing” (p 40). It is not clear why social pressure should not also work the other way round, and encourage people to surf the Internet for web pages of personal interest, neglecting their work and the access of work-related websites.

Similarly, although acknowledging the fact that web access behaviours can be work-related or personal interest related, Anandarajan and Simmers (2002) focused their argument on management support being vital to motivate “appropriate behaviour” (p. 50). The possibility that management actions, or the lack of these, can be seen as explicit or implicit support of accessing personal interest related websites was not discussed.

At the same time, the authors hypothesised that a lack of formal and / or informal Internet use training “could result in employees exhibiting hedonic behaviour, using the Web for pleasure purpose” (p. 51). Again, the authors did not discuss why a high degree of Internet training should result in engaging in work-related web use rather than in PWU. It is, for example, quite possible that a person who is well-trained in the use of the Internet is aware of the multitude of opportunities that exist for using it for personal interest as well as work purposes. This person could then have even more reason to engage in PWU than a person with less training and little knowledge of these opportunities.

Early in their argument, Anandarajan and Simmers (2002) stated that the aim of their research was to understand the factors that determine PWU, in contrast to those that

determine work-related web use. It is of interest to note, however, that when expressing their research hypotheses, the authors referred to the general construct of “web site access behaviour” rather than to the two specific behaviours stated to be the focus of their investigation, and included in their theoretical model.

Data to test the proposed theoretical model, suggesting that the relationship between antecedent factors and two types of web use at work was partially mediated by perceptual factors, was collected using a questionnaire survey sent to 3000 alumni of a major university in the United States. Of the 505 responses received, only 334 had Internet access at work and were used for further analysis, representing a relatively low response rate of 11%. Over half of the respondents were male (63.5%); the average age was 40.5 years (ranging from below 26 to 61 and above). No statistically significant differences were found between respondents and non-respondents based on age and gender. Most respondents had a graduate or professional degree (51.5%), coming from a range of business sectors, including service (20.1%), manufacturing (16.2%) and finance/industrial/real estate (14.1%). Most were professionals (38.9%), followed by middle-level (19.8%) and top-level managers (17.1%). The length of time in their present position ranged from 1 to 35 years with an average of 5.86 years and with 61.8% reporting tenure in the current position of five years or less. The demographics suggest that the research may have issues with external validity, based on the low response rate, possible selection bias and the choice of people approached to participate in the study (alumni of a US university).

Participants’ responses were measured on five-point Likert scales (1 = very unlikely, 5 = very likely). Internet activity measures were created for the study, respondents were asked to indicate how likely they were to access seven different types of web pages while at work. Three of these website types were work-related (competitors, suppliers, and customers, $\alpha = 0.71$) while four were personal interest related (entertainment, travel and leisure, living/consumer, and sports/news, $\alpha = 0.86$). The measure for web use distinguished between PWU and work-related web use on the basis of the type of websites accessed at work.

The influences on web use were examined through eight different measures developed for the research or adapted from previously published measures. The measure for perceived enjoyment used four out of seven items developed by Webster and Martocchio (1992), investigating an individual’s tendency to interact spontaneously, inventively and imaginatively with the Internet ($\alpha = 0.69$). Perceived usefulness was constructed from a five-item scale adapted from previous research (Davis, 1989; Igbaria, 1990), asking individuals’ agreement to statements as to how the Internet increases productivity and effectiveness on the job ($\alpha = 0.91$). Perceived ethical beliefs were measured with a three-item scale developed for the study. Participants were asked how

much they agreed with statements of feelings regarding the use of the Internet at work for personal interest, how much this personal use is tolerated in their organisation and if companies should block access to personal interest-related websites (α = 0.68). The measure of social pressure was a single item based on the TRA, adapted for the study from previous work (Igbaria, 1990). Respondents were asked to indicate their agreement with whether, at work, people of importance to the respondents think they should regularly be using the Internet. Management support was measured through three items ascertaining general Internet use support at work, including encouragement and provision of adequate resources (α = 0.79). Web experience was assessed through three items enquiring about respondent extent of experience using the Internet. The mean of these three items was used as a measure of general Internet experience (α = 0.85). Internet formal- and self-training was assessed initially through four items asking respondents to indicate the extent of training (1 = very little, 5 = very extensive) they received from four different sources: vendors, in-house company courses, fellow workers, and self training. PCA with varimax rotation yielded two factors and the authors used the mean of the first three sources as a measure of formal Internet training (α = 0.60), and the score for the self-training question as a single-item measure. The measures used to examine the factors influencing web use in Anandarajan and Simmers' (2002) study proved to have reliability coefficients that ranged from desirable (α = 0.91) to just acceptable (α = 0.60), a result not unusual for measures that are adaptations of original measures, and that are used in contexts different from those for which the original measures were developed and psychometrically validated.

Anandarajan and Simmers (2002) reported that the goodness-of-fit statistics used in the structural equation modeling (SEM) evaluating their theoretical model indicated an acceptable model fit (GFI-0.82, RMSEA=0.05, CFI=0.92). The results suggested that differences existed between the direct influences on PWU and those on work-related Internet access, as summarised in Table 2.1.

The single strongest direct influence on PWU in Anandarajan and Simmers' (2002) study were the ethical beliefs a person held about PWU (Table 2.1). While these ethical beliefs appeared to reduce PWU, they tended to increase work-related Internet access to a small degree. The second largest influence on PWU was the enjoyment a person is perceived to get from accessing the Internet at work. Enjoyment in using the Internet appeared to increase PWU to a medium degree, and increased use of the Internet for work purposes to a small degree.

Table 2.1: Summarising the statistically significant regression results of variables directly influencing PWU and work-related Internet use reported by Anandarajan and Simmers (2002)

	PWU	Work-related Internet use
Direct influences	Beta	Beta
Perceived ethical beliefs	-.53	.14
Perceived enjoyment	.24	.15
Self-training of Internet use	.17	
Management support	-.16	
Experience with Internet use	-.15	.18
Formal Internet training	.15	
Social pressure		.17
Perceived usefulness		.18

Although self-training of Internet use increased PWU by only a small degree directly, it had an indirect effect on PWU through ethical beliefs. Not surprisingly, management support and encouragement to use the Internet for work appeared to decrease PWU. However, the same management support and encouragement had only an indirect impact on work-related Internet use through social approval and expectations. Being experienced in the use of the Internet appeared to decrease PWU and increase the use of work-related websites, as well as having medium-sized indirect effects on perceived enjoyment ($\beta = .36$, $p<.05$), perceived usefulness ($\beta = .36$, $p<.05$), and ethical beliefs ($\beta = -.23$, $p<.05$). Social approval and expectations to use the Internet and its perceived usefulness increased only the accessing of work-related websites, not PWU. From the results of the study it appeared that personal web use and work-related Internet use were not necessarily influenced by the same factors. Where, however, PWU and work-related Internet use share-influencing factors, the strength and sometimes the direction of these influences tend to differ. The most convincing finding in Anandarajan and Simmers' (2002) research was the influence the ethical beliefs have on PWU.

With the introduction of ethical beliefs as an influencing factor Anandarajan and Simmers (2002) added a new aspect to the investigation. Ethical beliefs about behaviour differ from general attitudes towards that behaviour in as much as they include aspects of the overarching values a person holds regarding ethical and unethical behaviours.

However, in spite of the chosen construct label ("perceived ethical beliefs"), it is not clear that the intended concept of personal ethics with regards to Internet use was really what the authors examined in their study.

The three questions labelled by Anandarajan and Simmers (2002) as representing the construct 'ethical beliefs', were too broad to allow adequate reflection of respondents' ethical beliefs. The questions included feelings of acceptability of personal Internet searches, statements that these searches are tolerated in the company, and the feeling that work-unrelated websites should be blocked. Although all questions examined aspects of right and wrong, it would be overstating their meaning to see them as representations of a person's ethical norms regarding Internet use at work in general or PWU in particular. At best one item represented a person's evaluation of PWU as acceptable or not, while the other two items were statements on what is or should be customary in the company, in the eyes of the respondent.

Therefore, although the study reported that ethical beliefs had a strong influence on PWU, in Anandarajan and Simmers' (2002) study, the measure actually included no clear indication of an individual's ethical beliefs regarding Internet use or PWU. Furthermore, it is not clear which of the two different aspects of that construct provided the measured influence. Approval or acceptance of the organisational practices may influence an individual's engagement in PWU, as may one's ethical norms. However, the attitude towards organisational practices may not necessarily be the same as or even similar to the moral norms one holds regarding PWU. For future studies, such as this research, it is therefore of interest to examine the ethical norms a person holds regarding PWU as separate to the perception of organisational practices aimed at controlling or managing PWU.

In the discussion of their results Anandarajan and Simmers (2002) linked their findings to previous research promoting the use of information technology. At the same time, the authors used the labels they gave their own constructs to make rather general statements about what influences PWU and work-related use of the Internet at work. Some of these statements appear to be valid on the surface, but closer investigation, focusing on the content of the measures, gives rise to a number of questions. For example, the authors stated that "the potential for enjoyment and the heightened social pressure and ethical beliefs for use are more fully realised in work-related Web site access" (p.60). First, neither from the results nor from the ensuing discussion of the findings is it clear why social pressure as such should not encourage people to engage in PWU, or why the potential for enjoyment should be higher for work-related website access than for PWU. The authors made no mention of the possibility that social influence could equally encourage people to use the Internet at work for personal interest. On the contrary, the authors argued that

social pressure would “force individuals to disengage from surfing” (p. 49). One of the reasons for these inconsistencies and lack of explanations may lie in the fact that Anandarajan and Simmers (2002) failed to clearly discuss and maintain the differentiation between PWU and work-related Internet use. Another associated reason may lie in the measure used to assess social pressure.

Social pressure was measured by a single, rather ambiguously phrased item: “At my workplace, most people who are important to me think I should be regularly using the Internet”. In this item no distinction was made between accesses of a personal website or work-related websites, no identification of who these important people are was possible, and no mention was made of important influences outside of work. Therefore, the interpretation of the SEM result suggesting that social pressure has a small, significant direct effect only on the access of work-related websites is rather limited to the ambiguous concept of “people important to the respondent”, and needs further clarification in future studies.

It is of interest to find out more about these influential people representing social pressure. Are they supervisors in power positions, or colleagues and subordinates? Would the expectation of one group pose different social pressure to that of another group? Would the result be different if clear distinctions are being made between social pressure regarding PWU and work-related web use? Bandura’s (1977) social learning theory suggests that observation and modelling behaviours of others are more important influences on one’s behaviour than being told what or what not to do. Consequently, it is expected that what others are seen to do regarding PWU and work-related Internet access, rather than what they think about it, is a better choice of a social influence measure. Therefore future studies, such as this research, might want to investigate whether the perception of social pressure is based on assumed approval by referent persons, or based on observations of those persons’ actual behaviour.

One final comment needs to be made about the external validity of the reviewed study by Anandarajan and Simmers (2002). Although the authors stated that their aim was to obtain a cross section of responses in their sample (presumably to increase external validity) they chose as their potential participants university alumni. The selection was random and therefore could potentially include undergraduates and graduates of that university. However, since it excluded people who did not finish their education at the university or who did not attend university, it is hardly a representative sample of the population of employees using Internet-enabled computers at work. This lack of external validity is further highlighted by the relatively low response rate to the survey, indicating self-selection bias. The report that respondents and non-respondents did not differ in age

and gender did not increase external validity, because these two variables were not investigated as web use influences by the authors. If a representative sample of the stated target population (people using the Internet at work) is desired, it is suggested that future studies do not confine themselves to university students or alumni when recruiting research participants.

The work by Anandarajan and Simmers (2002) indicated that PWU and work-related Internet use appear to be influenced by similar factors, although not necessarily to the same effect. It appears that personal web use at work is influenced to a large degree by how morally appropriate a person thinks PWU is, and by how the organisation deals with it through management actions and organisational procedures. Ethical norms, on the other hand, have a far smaller impact on work-related Internet use than they have on PWU, suggesting that the question of whether or not to engage in PWU at work may depend on the ethical standards held by individuals.

2.1.3 Questioning the influence of ethical norms on PWU

The idea that a person's ethical standards influence his or her engagement in PWU was investigated in further detail by Lee, Lee and Kim (2004). Why employees engage in PWU, and why organisational efforts to manage it are not effective was investigated by focusing on perceptual differences between groups of individuals engaging or not engaging in PWU. To establish a theoretical framework for their investigation the authors drew on four existing theories: ethical decision-making; general deterrence theory; and social learning theory to provide explanations of the factors that could play a role in making the decision to engage in PWU. The fourth, the theory of planned behaviour (TPB), provided a process explanation of how the decision was made.

Previous research on ethical decision making suggested that unethical behaviours are affected by moral norms, moral intensity and denial of responsibility. General deterrence theory, in turn, assumes that behaviour could be deterred if individuals felt insecure about being detected and punished. Social learning theory proposes that individuals engaging in PWU are more likely to associate with others similarly engaged, and therefore these peers reinforce their own values and the idea that PWU is okay. The theory of planned behaviour, finally, suggests that behaviour is determined by intention, which is itself formed based on an individual's attitudes towards the behaviour, the perceived controls and subjective norms, involving the perception that others would improve or disapprove of the behaviour in question.

Based on the tenets of these four theories, Lee, Lee and Kim (2004) presented a theoretical model proposing that PWU is directly influenced by five perceptual constructs:

attitude towards PWU, denial of responsibility, moral obligation, social influence and general resource facilitating conditions. The proposed model was an attempt to integrate a range of potentially related constructs that were expected to influence personal web use.

The choice of a theoretical model without moderation or mediation effects is somewhat surprising, seeing that the authors reported developing the model based on that of the theory of planned behaviour, which is a mediated model explaining the process through which hypothesised influences determine behaviour. Without interaction effects, however, Lee, Lee and Kim's (2004) theoretical model may not appropriately capture the possibly joint effects the influences that dispositional factors may have on PWU.

The researchers reported that all measures of their constructs were developed based on previous studies. In general, however, they were sparse with descriptive details of these measures. The only indication of their measures' reliability was a summative statement that, where applicable, the reliability coefficient alpha was above .06. Personal web use was conceptualised by the authors as non-work-related Internet use for more than 30 minutes a day. The authors argued that whether PWU becomes unethical or abusive behaviour depends on the matter of frequency and time spent. Subsequently they decided for their "analysis purposes" (p 32) to consider non-work related Internet use for more than 30 minutes per day as excessive. Additionally, the authors referred to past research (Siau, Nah & Teng, 2002) suggesting that most organisations may tolerate PWU not exceeding this 30 minute per day timeframe. In their survey they authors then reported to have measured PWU in three ways: (i) through frequency and (ii) amount of time actually engaged in PWU, and (iii) the intention to engage in PWU.

The attitude towards PWU was defined as the degree to which an individual has a favourable or unfavourable evaluation of PWU. The measure of attitudes towards it was based on Ajzen's (1985) suggestion of measuring attitudes with a semantic differential scale. It was expected that individuals with an unfavourable attitude towards PWU will engage in it less than those with a positive attitude towards it. Denial of responsibility was seen as a measure of an individual's tendency to either take responsibility oneself, or to diffuse and depersonalise it to others. It was expected that individuals with a high tendency to deny responsibility would also have a high tendency to engage in PWU. The authors omitted to mention how denial of responsibility was measured. Lee, Lee and Kim (2004) based the concept of 'moral obligation' on moral norm research by Conner and Armitage (1998), which represented individual perception of the moral correctness or incorrectness of engaging in PWU. The authors expected individuals' high sense of moral obligation to be negatively associated with PWU. The measure for moral obligation was a single-item adaptation of a previously published measure (Banerjee, Cronan & Jones, 1998). The authors, however, did not provide any information on how they adapted this measure to their study. Social influence was defined as the social pressure to perform or not perform a

behaviour. It was expected that an individual's perceptions of what significant others do and think regarding PWU will positively influence that person's PWU. Social influence was measured through items developed for the study and based on the social norm measures proposed by Ajzen (1985). In addition to the rather general term of 'significant people in my life' proposed by Ajzen (1985), Lee and his colleagues also elicited perceptions of co-worker's and supervisors' attitudes and PWU activities.

The concept of 'resource-facilitating conditions' was presented by the authors as an extension of the 'behaviour control' facet of the theory of planned behaviour. Five resource-facilitating factors specific to PWU were identified through interviews with twelve employees prior to the published study. These factors were the accessibility of a personal computer, the seclusion of the office, amount of workload, web use policy and electronic monitoring systems. It was expected that each of these five factors would relate directly to PWU. The authors reported that "each of them was measured using a single item" (p.36). Unfortunately, this brief description does not provide any insight into what exactly was measured and how. For example, we do not know if the single item asked for agreement with the existence of the factor, or whether it asked about how much the factor was present or affected the individual. Although not mentioned when first presenting their theoretical model, Lee, Lee and Kim (2004) introduced in their Method section references to previous research suggesting that age, gender, years of experience and position in the organisational hierarchy are related to ethical decision making. The authors subsequently expected to find gender differences in PWU, and years of experience and position level to be negatively related to PWU. In general, the concepts and measures of the study were described with little detail.

Data for the study was obtained through distribution of questionnaires to 740 U.S. business professionals. A return of 546 complete and valid responses represented a response rate of 74%. Slightly over half of the respondents (50.9%) were male and 68% were younger than 41. The average work experience was 10.1 years. In response to the question of how often respondents engage in PWU, 29.5% reported never doing so, while 70.5% reported doing so at least once a month. Since the authors believed that the hypothesised antecedent factors affected individuals engaging in PWU differently to those not engaging in PWU, the response data were split into two respective groups. For those not currently engaging in PWU (n=164), the criterion variable was the intention regarding PWU in the future; for the other group (n=382) the criterion variables were current frequency and duration of PWU.

Multiple ordinary least-squares hierarchical regression analysis was used to test the theoretical model, split between the currently non-PWU group with intention to engage in PWU as the criterion variable, and the PWU group with frequency and duration as criterion

variables. To ascertain the effect the proposed control variables (years of experience, gender, organisational hierarchy) had on PWU, these were first used to explain the variance, before the remaining five variables were included in a second analysis to see how much of the variance would be explained further (r-squared change). For the individuals currently not engaging in PWU the control variables alone explained only 1% of the variance in intention to engage in PWU in the future; for the PWU group the variables explained 6% of the variance. The statistically significant results of the regression analysis are summarised in Table 2.2.

Table 2.2: Statistically significant regression results of influences on personal web use intentions (non-PWU group), PWU frequency and PWU duration (PWU group) as reported by Lee, Lee and Kim (2004)

	Non-PWU (Intention)	PWU (Frequency)	PWU (Duration)
Variables	Beta	Beta	Beta
Years of experience		-.188	-.221
Organisational hierarchy	-.173	.095	
Attitude	.272		
Denial of responsibility		.167	.160
Social influence		.109	.100
Seclusion of office	-.165		
Amount of workload	-.226	-.192	-.144
Availability of PC			-.224
Monitoring systems			.120

In contrast to Anandarajan and Simmers' (2002) findings, Lee, Lee and Kim (2004) found that moral obligations had no significant influence either on frequency or duration of PWU, nor on intention to engage in PWU. Having a favourable attitude towards PWU was the strongest positive influence on the intention to engage in PWU for employees who currently do not do so. At the same time, a high workload and lack of seclusion of one's workstation appeared to be barriers to plans to engage in PWU. The authors reported that being high in the organisational hierarchy resulted in stronger intentions to engage in PWU. (Note: The negative beta value reported appears counter-intuitive to this explanation and is possibly a result of the unreported measurement coding).

The strongest influence on PWU frequency and duration came from the years of experience individuals have in their current job, indicating that recent employees tended to use the Internet at work for personal interest more frequently and longer than employees who have been on the job longer. A high workload was more a deterrent factor for engaging frequently in PWU, than it was for doing so for longer periods of time. Denial of responsibility and social influences were almost equally strong factors determining PWU frequency and duration, whereas the ready availability of a PC at work and presence of electronic monitoring systems were reported to have an impact only on PWU duration, not on frequency. It furthermore appeared that a job's standing in the organisational hierarchy determined PWU frequency to a small degree, but had no impact on its duration. In general it appeared that intention to engage in PWU, its duration and frequency were not necessarily determined by the same factors, nor to the same degree. Additionally, moral obligations or ethical beliefs appeared to have no impact on an individual's intent to engage in PWU or the actual frequency and duration.

The authors interpreted their findings as a demonstration that employees do not engage in PWU or refrain from it based on their moral norms, as Anandarajan and Simmers (2002) had indicated. In contrast, Lee and colleagues (2004) proposed that employees do not seriously think of PWU as unethical behaviour. Consequently, the authors argued, employees currently not engaging in PWU are refraining not because they feel PWU is a harmful and unethical behaviour, but because they either have not enough time to do so, or lack a sufficiently private work space. PWU frequency and duration were seen to be predominantly influenced by situational factors such as approval of colleagues, means and opportunity, as well as on denial of responsibility, represented by the belief that engagement in PWU is not harmful to the organisation but actually beneficial to it. Lee, Lee and Kim (2004) suggested that the workplace situation, rather than dispositional factors of the individual, is of interest to future PWU research and organisations.

In Lee, Lee and Kim's (2004) study, workplace situations such as seclusion of work space, workload, years of experience and organisational hierarchy appeared to influence PWU more than dispositional factors of individuals. However, the authors' choice to be brief in the description of the measures used has potential impact on the external construct and statistical conclusion validities of the study. This is especially the case with regard to the resource facilitating/constraining factors that apparently exerted a significant influence on PWU.

It would have been important, for example, to know more about the twelve employees participating in the extensive interviews identifying the resource factors. Differing demographic characteristics between the interview and questionnaire groups could potentially impact on the appropriateness of the chosen factors. At the same time, it

would be important to know how and why the authors selected the five facilitating/constraining factors used in the questionnaire, which presumably came from a pool of factors mentioned in the interviews. The reason for the selection could inform the reader about the authors' rationale and methods. Finally, Lee, Lee and Kim (2004) reported that the "measurement was modified through pre-test and pilot test" (p.36) but omitted to report any of the psychometric procedures used (for example PCA) or their results (for example, eigenvalues, factor loadings or variances explained).

Similarly briefly, the authors reported that they had asked "business professionals in the northeast coast" of the US to participate in their study. However, very little information was given on the respondents. Besides age, gender and tenure summary information the reader learns only that the "respondents are evenly distributed in the organisational hierarchy" (p. 36). However, without knowing which industries the respondents came from, how "organisational hierarchy" was defined, and whether "years of experience" referred to years in a career, a job or a company, accurate evaluation of Lee, Lee and Kim's (2004) findings is hampered. Also, the fact that the respondents came from a geographically small and distinct area of the United States restricts generalisation across other U.S. professionals. The evaluation of the external validity of Lee, Lee and Kim's research findings is somewhat constrained through the limited information provided by the authors.

When discussing their findings on determinants of PWU, the authors chose to limit themselves to briefly relating their statistical results to organisational contexts. This choice, however, left some theoretical questions unanswered. For example, although the authors had initially placed their investigations into a theoretical framework of ethics, their results suggested that the influence of ethics on PWU was not as expected. The discrepancy between expectation and actual research findings, however, was not discussed by Lee, Lee and Kim (2004). The unexpected lack of influence that ethical beliefs had on PWU could possibly be explained through the choice of measure or wording of items. However, evaluation of these is not possible due to lack of information about the measure. The original measure of moral obligations by Banerjee, Cronan and Jones (1998) was based on the presentation of several different scenarios involving possible degrees of moral obligations (e.g." How morally obligated are you to take the necessary corrective action in this case?'). The reported lack of significant influence of moral obligation on PWU can conceivably be due to an inappropriate choice of scenarios given to respondents. Lee, Lee and Kim (2004), however, did not report how they adapted their measure from the one described by Banerjee and colleagues, limiting our ability to evaluate the appropriateness of the measure for the stated purpose.

In spite of the limitations discussed here, Lee, Lee and Kim's (2004) study can stimulate further research into the field of PWU. The authors' theoretical model, for example, was a simple one, devoid of mediating or moderating relationships. Future research, therefore, may find it interesting to explore potentially moderating or mediating relationships between different personal and environmental influences on PWU. For example, one may investigate whether the apparently strong influence of denial of responsibility is moderated by one's ethical norms. Is it possible that the ethical norms an individual holds regarding PWU depend on the situation rather than representing a fixed, uniform ethical belief? For instance, is PWU becoming more ethically acceptable to an individual when the line between work and personal life becomes blurred?

Similarly it is of interest to explore whether the social influence of what colleagues and supervisors do and think regarding PWU is moderated by one's own ethical norms. Therefore, future studies could expand on the proposed link between social influences, ethical beliefs and PWU.

Of interest to future research is also the deterring influence on PWU found in lack of secluded work space. Lack of visibility of what an employee does and subsequent difficulty in identifying that person's work contribution are influences leading to social loafing (Williams, Harkins & Latane, 1981). The authors' proposition that one's personal Internet activities at work may depend on workstation seclusion encourages future studies, such as this research, to more closely investigate the relationship between PWU and social loafing.

2.1.4 Cyberloafing - the IT way to slack off at work?

Social loafing in an Internet setting has been termed 'cyberloafing'. As a field of study began it with the creation of the term 'cyberloafing' by Frook (1996), followed by an Internet article on 'cyberslacking' by Hoyniman (2000); it was introduced into the academic literature through work by Mills, Hu, Beldona and Clay (2001). More recently, cyberloafing as the Information Technology (IT) way of loafing on the job was investigated by Lim and her team (e.g. Lim, 2002; Lim, Teo & Loo, 2002; Lim, Thompson, Teo & Loo, 2002; Lim & Teo, 2005).

While Mahatanankoon, Anandarajan, Lee and their colleagues strove to present a balanced view of personal web use (PWU), authors investigating cyberloafing tended to focus on its costly and undesirable consequences. Lim (2002), for example defined cyberloafing as misuse of the Internet, i.e. any voluntary act of employees using their companies' Internet access during office hours to surf non-job related websites for personal purposes and to check personal email. This definition is similar to that of PWU proposed by Mahatanankoon, Anandarajan, & Igbaria (2004). Lim (2002), however, continued in her definition of cyberloafing, explicitly stating that these behaviours constitute an unproductive

use of employers' time and resources and distract employees from carrying out and completing their main duties. As such, cyberloafing is, in Lim's view, clearly a deviant behaviour, more specifically, a production deviance. This deviant behaviour notion of cyberloafing is also shared by Blau, Yang and Ward-Cook (2004) who further tested Lim's (2002) measure of cyberloafing. Due to this difference in perception of the behaviour, this research project uses the term 'cyberloafing' when referring to research published by Lim and her team, as well as that published by Blau, Yang and Ward-Cook (2004). In all other cases, this dissertation continues to use the term 'personal web use' (PWU) in acknowledgement of its more neutral connotations.

In her study examining what motivates employees to cyberloaf, Lim (2002) used the theoretical frameworks offered by social exchange theory, organisational justice and neutralisation to develop a theoretical model explaining this employee behaviour. Lim's mediated model suggested that cyberloafing is a response to perceived unfair treatment by the organisation, mediated by one's use of neutralisation techniques.

In the model, organisational fairness perceptions were composed of three components: distributive, procedural and interactional justice. Lim (2002) argued, based on social exchange and organisational justice theories, that before engaging in cyberloafing individuals evaluate: a) whether the exchange processes in their place of work are fair with regards to the outcome (distributive justice); b) the way the outcome allocation is determined (procedural justice); and c) the quality of the interpersonal treatment received from supervisors and management (interactional justice).

Lim (2002) further suggested that the relationship between organisational justice and cyberloafing is mediated by the use of a specific neutralisation technique called 'the metaphor of the ledger'. Neutralisation is an a priori rationalization which individuals invoke before engaging in deviant behaviours in order to convince themselves that these behaviours are excusable. The technique of 'the metaphor of the ledger' involves the individual perceiving that he or she has in the past, through positive behaviours, accumulated points on the positive side of an imaginary ledger maintained to keep track of the exchange relationship. When invoking the metaphor individuals rationalise the behaviour they will engage in, just prior to doing so, through the idea that they have accrued a number of behavioural 'credits' they are about to 'cash'.

From Lim's (2002) discussions, however, it is not clear whether the use of the ledger strategy is conscious and whether it is employed before every act of cyberloafing. The neutralisation literature is equally vague about these issues. Social exchange theory, on the other hand, suggests that individuals subconsciously and continuously evaluate their environment regarding the status of exchange relationships. This evaluation process moves into the conscious realm in situations where individuals perceive the need to 'think

about' their actions. It is, furthermore, unclear if the author conceived of cyberloafing as prompting such active thinking, or if she saw cyberloafing as a more automated, habitual activity, only initially prompted by the hypothesised influences.

Lim (2002) tested her theoretical model with survey data collected through an Internet-based questionnaire and small discussion groups. To encourage participation, Lim offered the incentive of a token phone card to the first 100 respondents of her survey. The final sample consisted of 188 Singaporean working adults with an average age of 30 years. About 85% of the participants had at least a diploma or bachelor's degree. All participants used the Internet at work for work, and personal reasons. They were mainly employed in the IT industries (55%) and the public sector (34%). One month after completion of the questionnaire, Lim conducted one-hour, structured focus group interviews with twenty of those respondents who had agreed to be interviewed.

Cyberloafing, as the criterion variable in the model, was measured using a list of 11 activities that were identified as cyberloafing activities in previous studies by Teo, Lim and Lai (1997) as well as Lim, Teo and Loo (2002). The measure asked respondents to indicate on a five-point scale (1 = never, 5 = constantly) how often they engaged in these activities during working hours. Lim reported that exploratory factor analysis (PCA with varimax rotation) indicated a two-factor structure of the measure.

One factor (browsing activities, coefficient α=0.85) pertained to how often an individual used the Internet during working hours to surf various non-work related web sites. Factor loadings of the eight items included in this factor here ranged from 0.87 to 0.55. The second factor (emailing activities, coefficient α=0.90) included three items assessing how often respondents sent and checked personal emails during working hours. Factor loadings here ranged from 0.90 to 0.85.

Lim (2002) measured organisational justice using scales developed by Moorman (1991). Confirmatory factor analysis was used to ensure that in her sample the measures indeed represented three separate constructs: distributive, procedural and interactional justice. The factor 'distributive justice' included five items on how fairly the respondent felt the organisation had rewarded him or her. Factor loadings here were between 0.92 and 0.85, with a reliability coefficient of α=0.95. The factor 'procedural justice' included seven items on how fair the respondent thought the organisation's procedures were concerning a number of information and decision-making processes. The factor loadings here ranged from 0.90 to 0.81, with a reliability coefficient of α=0.95. The factor 'interactional justice' included six items on the treatment received from one's supervisor, with factor loadings from 0.92 to 0.75, and a coefficient of α=0.93.

The “metaphor of the ledger” variable was measured using a scale based on one developed earlier by Hollinger (1991), a scale consisting of six items (α=0.76) assessing indirectly how respondents viewed their personal ledgers with their present employers (e.g.” I receive enough help and equipment to get the job done’. ‘I have enough time to get the job done.”) Lim (2002) reported using these incidents of possible ledger status to develop a measure that asked respondents to indicate their level of agreement that cyberloafing is acceptable if one has put in extra work, if one did not receive enough help, or has to put in extra time at work to get the job done. However, Lim did not report how many items she used in her measure, nor any psychometric analyses she may have conducted in the creation or validation of the measure.

To test her theoretical model through SEM, Lim (2002) used the questionnaire data of her 188 research participants. The proposed model, suggesting total mediation of the organisational fairness–cyberloafing link by the metaphor of the ledger, provided a good fit. A non-significant chi-square value (chi-squared [6,188]=8.08) was reported as well as acceptable goodness-of-fit statistics (NFI=0.97; CFI=0.98). Lim concluded that the results showed distributive justice (β=-0.48), procedural justice (β =-0.46) and interactional justice (β =-0.42) significantly and negatively associated with the metaphor of the ledger, thus supporting her hypothesis that decreases in organisational fairness lead to increases in cyberloafing. The strong, positive association of the metaphor of the ledger with the tendency to cyberloaf (β =0.70) was seen as supporting Lim’s (2002) hypothesis that increased cyberloafing is due to an increased use of neutralisation.

The final structural equation model described, however, made no reference to possible direct links between organisational justice and cyberloafing. Although Lim mentioned that alternative models had been explored, no details of these models or their SEM statistics were reported. Because the published model was one of total mediation, it can be assumed that at least one of the alternative models included partial mediation of the metaphor of the ledger, indicating possible direct pathways from organisational justice to cyberloafing. In the interest of gaining a more complete picture of the validity of the published model it would have been interesting to know the goodness-of-fit statistics or regression analysis results of such a partial mediation model. However, even without those statistics, Lim’s (2002) findings increase our understanding of potential influences on PWU.

Lim’s (2002) study contributes to our understanding of which factors influence cyberloafing (and possibly PWU) through considering interaction effects between situational and personal influences on PWU. Lim’s findings suggest that perceptions of organisational fairness, mediated by an individual’s use of the ledger technique, can be

important influences on PWU. However, at the same time, it is appropriate to raise some critical comments regarding Lim's (2002) reported findings and conclusions.

In Lim's (2002) study the measure of cyberloafing was reported to consist of two separate factors/activities with two separate reliability coefficients: browsing activities and emailing activities. While in the structural equation model the two cyberloafing activities were treated as two manifest variables representing one latent variable (cyberloafing), in the discussion cyberloafing was mentioned only as one single variable. For our better understanding of the construct 'cyberloafing', it would have been beneficial to know some detail about the relationship between the two manifest variables. The reporting of correlation coefficients may have explained the closeness of the relationship between browsing and emailing activities which were combined into one measure of cyberloafing tendency. Because of this lack of clarity in mapping the measure to the construct, it is hard to determine the precise nature of the variable cyberloafing and consequently to interpret the meaning of the found relationships. This clarity would help especially in interpreting the found, unexpectedly low correlations between the organisational justice and cyberloafing measures.

The reported, and in the study's context, unexpectedly low correlations between the organisational justice measures and cyberloafing (distributive justice r=-.38, procedural justice r=-.38, interactional justice r=-.29) can possibly be due to the choice of measures. Although Lim (2002) used organisational justice scales developed in previous research (Moorman, 1991), the appropriateness of these scales can be debated. For example, the scale measuring procedural justice asked employees to report the fairness of the general decision making and information dissemination processes in their organisations. None of the measure's items referred to cyberloafing, Internet use, or policies and procedures regarding either or both of these activities. It is, however, possible that perceptions of general decision-making procedural fairness have little impact on cyberloafing because they have little relevance to cyberloafing. Disgruntled employees have a large number of retaliatory behaviours at their disposal (see Vardi and Weitz's model and theory of organisational misbehaviour, 2004) that tend to be related to the type of perceived unfairness. The availability of different ways to retaliate would make it more likely for employees to engage in cyberloafing if they perceive procedural unfairness to be related to Internet access, the use of the computer at work, or to being expected to work long hours at the computer without a break. Future studies therefore may investigate the influence of procedural fairness on PWU by creating procedural fairness measures with items that show clearer relevance to the characteristics of PWU.

Lim's (2002) findings regarding the efforts individuals make to neutralise their guilt before engaging in cyberloafing add to the knowledge we have about the influences on

PWU. Nevertheless, the apparent importance of neutralisation in explaining differences in personal web use raises another measurement issue that may need addressing in future studies. For her research Lim (2002) had chosen a transactional neutralisation technique, of the ledger metaphor (Hollinger, 1991) and suggesting in the discussion of her study's results that "…employees actually neutralize their questionable actions via the metaphor of the ledger" (p.687). This process is seen to take place immediately prior to the action (Sykes & Matza, 1957), and is conceptualised as distinct from justifying one's action after the fact (Harvey, Weber & Orbuch, 1990). When measuring the 'metaphor of the ledger variable Lim (2002), however, used a scale asking respondents to hypothetically indicate in which situations they think PWU would be acceptable. The use of this scale may measure attitudes towards using the ledger metaphor, or perhaps even solicit recall of justifications given after the fact. However, it does not measure the actual invocation of this neutralisation method which would need to be measured immediately before engaging in PWU.

Future studies, therefore, may want to design a way to capture neutralisation strategies immediately before engaging in PWU. Alternatively, they may want to use the described measure as one of attitudes towards using the ledger strategy rather than as evidence of its actual use. The latter line of argument would still allow the inclusion of the neutralisation strategy in the investigation, but would shift the focus to more accurately reflect an attitude's influence on PWU rather than that of the hypothesised neutralisation thought processes.

In an effort to increase the external validity of her findings, Lim (2002) recruited participants for her research from the Singaporean working population, rather than relying on university students or alumni. Through the use of different media advertisements and the offer of an incentive, Lim (2002) was able to gather responses from a rather diverse group of respondents. Comparing her sample characteristics with those of other Internet user studies in Singapore, Lim (2002) concluded that it was acceptable to generalise her findings to the larger population of Singaporean employees who have Internet access at work. The relatively high number of university-educated respondents is most likely a reflection of Singaporean society and the type of people who hold jobs involving Internet-enabled workstations. On the other hand, because Singapore has a unique culture with a distinct long-term orientation (Hofstede, 1980) one should not generalise the study's results to populations outside of Singapore. Future studies, possibly involving cultural comparisons, may confirm similarities between the Singaporean employees and those in other societies in relation to personal web use.

Lim's (2002) research contributes to our understanding of what influences PWU through the notion that perceptions of organisational fairness can impact on PWU through mediation by the metaphor of the ledger. Lim's (2002) findings suggest that events in the work environment as well as personal characteristics of employees combine to determine why individuals differ in their personal web use.

2.1.5 Different influences for different types of cyberloafing?

The preceding studies indicated that personal web use is influenced by characteristics of the working environment and the individual. Expanding on the aspect of personal characteristics, Blau, Yang and Ward-Cook (2004) investigated whether individuals with certain personal dispositions tend to engage in one type of cyberloafing more than another. Based on their findings as reported in chapter 1, suggesting that cyberloafing is characterised by three distinct activity types (browsing, non-work emails, and interactive cyberloafing), the authors proposed that a high sense of powerlessness would lead to an increase in interactive cyberloafing behaviour in an effort to regain some control over one's work environment. Blau and his team furthermore suggested that a negative attitude of employees towards punctuality and attendance, as one expression of passive work withdrawal and production deviance, is positively correlated with passive cyberloafing. Building on Lim's (2002) work, the authors also proposed that negative organisational justice perceptions would be related to increased overall cyberloafing activities.

Blau, Yang and Ward-Cook (2004) tested their hypotheses, using a sample of 227 recently graduated medical technologists who were participants in a different longitudinal survey study on their career paths conducted in 2001 and 2002 by the Board of Registry of the American Society for Clinical Pathology. These 227 respondents were a sub-sample of the original 451 participants in the longitudinal study who had responded to the cyberloafing items and who had Internet access easily available at work. The median age of the respondents was 31 years, 83% of the respondents were female, 94% had a bachelor's degree and all had had no job changes between the first survey in 2001 and the second in 2002. Unfortunately, the authors collected cyberloafing data only in 2002 and not in 2001, missing out on a rare chance to use a longitudinal research design which would have helped to establish causal direction.

Powerlessness was measured through a three-item scale developed by Ashford, Lee and Bobko (1989) with a four-point response scale eliciting respondent agreement with the statements. Attitude towards punctuality and attendance (labelled 'time abuse') was measured by a five-item scale designed for the original study. Organisational justice was examined through three different measures. Four items developed by Price and Mueller (1986) measured distributive justice, four designed by Niehoff and Moorman (1993) measured procedural justice, and a further four items from Niehoff and Moorman (1993) measured interactional justice. No psychometric information about the organisational justice measures was reported and results were reported as 'organisational justice', presumably a summary variable including data from all three measures.

Cyberloafing was measured through listing sixteen cyberloafing activities, and asking participants how often they engaged in these. Ten of these items were taken from Lim's cyberloafing scale, excluding the browsing of sexually explicit websites. The remaining six items were developed for the study in order to examine the extended view on cyberloafing activities. A four-point scale (1=hardly ever, 4=frequently, at least once a day) was used to measure frequency of engagement in the listed 16 cyberloafing activities.

To test whether the different types of cyberloafing (browsing, non-work emails, and interactive cyberloafing) have the expected different relationships with powerlessness and attitude to punctuality, Blau and his colleagues examined the data for correlations between the variables. These ranged in absolute terms from .15 to .33, and the signs of the correlations were congruent with the hypotheses.

As the authors had expected, individuals with a high degree of powerlessness at work tended to engage more frequently in interactive cyberloafing, while those with a relatively negative attitude towards punctuality and attendance tended to engage more frequently in browsing and email-related cyberloafing activities. A negative perception of organisational justice, in turn, was also associated with increased levels of overall cyberloafing, browsing and email-related cyberloafing, but not with interactive cyberloafing. At the same time, powerlessness and attitude towards time abuse were negatively correlated with the levels of perceived organisational fairness. The results also indicated that increases in powerlessness were related to increases in attitudes towards time abuse.

Blau and his colleagues (2004) interpreted these correlation results as additional support for a three-factor structure of cyberloafing (see chapter 1) and as indications of why people cyberloaf. It is interesting that the authors assert that they have established powerlessness, organisational justice and an attitude to time abuse as determinants of cyberloafing, based solely on correlation analysis, which provides no statistical control over the relationships among the dependent and predictor variables. Multiple regression analysis, for example, would have allowed the authors to examine to what extent the

differences in PWU were due to powerlessness, organisational justice and time abuse attitudes. The lack of such further analyses, however, allows only for interpreting the findings as indicative of some relationship between the investigated variables. Future studies may want to examine the influence that personal dispositions like helplessness or general work-related attitudes (like that to time abuse) have on PWU, using multiple regression analyses or SEM rather than relying solely on correlations.

As we have seen from the discussions, influences on PWU potentially may differ between individuals depending on a number of variables, some within the person's environment and some within the person. All reviewed studies included characteristics of the working environment and of the individual in their investigations. However, no study has been found that specifically investigates the impact that personality traits may have on PWU. The possible reason for this research gap may be the fact that the specific field of PWU research has in the past been explored mainly outside the field of psychology. It appears that only the more general field of Internet use has appealed to psychologists. For future studies, it would therefore be of interest to include aspects of personality in their exploration of the influences of PWU. A number of existing studies on personality and Internet use in general could provide inspiration for such research.

2.2 Personality traits as influences on Internet use and Internet motivation

One frequently investigated aspect in the field of Internet use in general is the role personality traits can play in influencing what individuals do on the Internet. Although Internet use in general is not the topic of this study, some aspects of these personality-focused investigations can inspire future studies, such as the research here presented, examining if personality traits influence PWU. Some of these related theories and research findings are discussed briefly in the following paragraphs.

According to Eysenck and Eysenck (1985), personality traits are "essentially dispositional factors that regularly and persistently determine our conduct in many different types and situations" (p. 17), as opposed to "states which define temporary or singular occurrences" (p. 17). Survey-based investigations previously suggested that people with different personality traits use the Internet for different purposes. People who report themselves to be satisfied with their social life, for example, preferred to use the Internet for information-seeking purposes, while those feeling insecure and less valued in face-to-face conversations used the Internet as a substitute for social interactions (Papacharissi & Rubin, 2000). Similarly, people who scored high on extraversion tended to prefer leisure activities, and those scoring high on neutrocism preferred not to engage in online activities

related to work or study information (Hamburger & Ben-Artzi, 2000). These findings suggest that, as Eysenck and Eysenck proposed, personality traits can determine conduct in different situations, and thus be expressed in online activity preferences.

Based on Eysenck and Eysenck's (1985) propositions, Amiel and Sargent (2004) set out to examine whether Eysenck's personality types can serve as useful discriminators of Internet use. The foci of their research were Internet behaviours and motives of extraverts, neurotics and psychotics as defined by Eysenck and Eysenck (1985) and Zuckerman, Kuhlman and Camac (1988). The information for the research was gathered through a survey questionnaire that explored Internet and computer expertise and sophistication, frequency of specific Internet activities, personality trait through the EPQ-R, and Internet use motivation. Participants in the study were 210 introductory level U.S. college students receiving extra credits for their participation. 60% of these students were male, and about 75% identified as Caucasian. Most of them were either familiar (46%) or very familiar (24%) with computer use.

The data were analysed through stepwise regression, forcing gender into the model to investigate possible gender differences among each personality type. The results indicated that individuals characterised by Eysenck and Eysenck's (1985) three different personality types engaged in different Internet activities and had different motives for using the Internet. Extraverts preferred to let people know what they think, engaged in research and shared music with others, while rejecting the use of the Internet as a substitute for personal contact. Neurotics preferred to engage in communal activities. They had a desire to escape loneliness and to belong to a group, yet rejected text-messaging as a communication tool and showed little interest in online discussion groups. Their interests included alternative news and potential threats. Psychotics showed a general disinterest in interpersonal and communication purposes for using the Internet. They scored high on a diverse range of motives that generally focused on deviant purposes and rejected using it 'for fun'. The results for individuals with extravert and psychotic personality types were as expected. However the result that neurotics wanted to belong to a group yet rejected the popular group communication modes of texting and online discussions was somewhat surprising.

This apparently paradoxical result that neurotics turn to the Internet when lonely, but do not use it as a tool for text messaging was explained by Amiel and Sargent (2004) using social presence theory. The authors argued that individuals will choose the type of medium for their communication that permits the desired level of social presence, which may mean that text messaging has an immediate, individual and close contact that is judged less safe than other online contact options. This argument also fits well with the earlier reported findings by Blau, Yang and Ward-Cook (2004) which suggested that an individual's level of powerlessness is correlated with that person's type of cyberloafing

activities. Individuals with high levels of powerlessness preferred to regain some perception of control through interactive Internet activities, as opposed to more one-sided activities such as emailing or browsing. It appears that specific as well as broad personality traits influence the type of Internet activities an individual prefers.

The notion that personality traits can predict Internet activities has been further supported by Landers and Lounsbury (2006), who found similar relationships when exploring duration and frequency of using the Internet for different activities. Landers and Lounsbury (2006) used the Big Five concept of personality (Costa & McCrae, 1994), a different personality measure (the Adolescent Personal Style Inventory) to Amiel and Sargent (2004), and broader Internet-use categories. The results of their survey-based study of the responses of 117 U.S. undergraduate students, also suggested that personality traits influence what people do on the Internet, how often and for how long. For example, three of the Big Five personality traits – agreeableness, conscientiousness and extraversion - were found to be inversely related to Internet usage. The more introverted, less agreeable and less conscientious the research participants were, the more time they spent on the Internet overall. At the same time, highly conscientious individuals tended to spend less time on Internet leisure activities and more on academic websites.

Together with the findings of Amiel and Sargent (2004) and Blau, Yang and Ward-Cook (2004), Landers and Lounsbury's (2006) results indicate the presence of a clear pattern linking personality traits to Internet motivation and the activities engaged in. It appears that those personality traits that have in the past (e.g. Barrick & Mount, 1991; Salgado, 1997) been identified as predictors of job performance (conscientiousness and emotional stability), could possibly influence the time spent on PWU. Likewise, comparable traits can potentially influence the different personal web use activities that individuals engage in. When examining the influence individual characteristics have on PWU, future studies may, therefore, consider including personality traits in their investigations.

2.3 Conclusions drawn from the reviewed research

The scarcity of academic research into factors influencing PWU suggests that this new field of research is at present a 'work in progress', attractive to a variety of disciplines. The common thread found in the reviewed literature is the notion that PWU is influenced by a combination of personal characteristics and characteristics of the working environment. Theoretical commonalities and differences between the reviewed studies focusing on the determinants of personal web use (Anandarajan, Simmers & Igbaria, 2000; Anandarajan & Simmers, 2002; Blau, Yang & Ward-Cook, 2004; Lee, Lee & Kim, 2004; Lim, 2002), can be found in the theoretical models proposed by the reviewed studies which are summarised in Appendix A.

The five reviewed studies have in common that they proposed environmental and individual characteristics as influences on PWU. The environmental influences in those studies focused on aspects of the individual's work environment and included social aspects (expectations and treatment by colleagues and supervisors, organisational support) as well as practical factors (task characteristics, facilities and resources available). The personal influences ranged from relatively stable dispositions (denial of responsibility, attitudes, playfulness, use of neutralisation techniques, self-efficacy), to perceptual factors (perceived usefulness and enjoyment of the Internet, social pressures), and skill levels (through experience, self-training or formal training). The similarity of these potential influences is to be expected, seeing that an organisational behaviour is under investigation. Although behaviours in general are influenced by a large number of variables and confounds, it is parsimonious for a new line of research to focus first on the influences that theorising logically places close to the behaviour under investigation. In the case of PWU these are influences that have previously been found to determine other organisational behaviours, or influences one can logically associate with PWU, based on examination of existing theoretical frameworks.

One of the influences common to the reviewed studies and deserving closer investigation is the idea that morals and ethics play a role in deciding whether to engage in PWU. The notion of personal morals as an influence on PWU can be found in each of the five reviewed studies. Although only Lim (2002) and Blau with his colleagues (2004) clearly labelled PWU as organisational misbehaviour, Anandarajan and his team (2000, 2002) as well as Lee and colleagues (2004) acknowledged that PWU is generally a behaviour that is not desired by organisations. As such PWU is in most cases determined not only by company policies and procedures but also by individual moral norms.

However, the general understanding that personal web use is partially a moral issue is the point where the commonality between the studies ends. We find that none of the reviewed studies used the same theoretical ethics framework, morality/moral norm definition, or relevant measures as another study. The results are directly conflicting findings (Anandarajan & Simmers, 2002; Lee, Lee & Kim, 2004), and under-discussed theoretical implications (Anandarajan, Simmers & Igbaria, 2000; Blau, Yang & Ward-Cook, 2004; Lee, Lee & Kim, 2004; Lim, 2002). Therefore we are left with the impression that personal ethics can, very likely, differentiate between high and low users of PWU. Future studies, like this research, may therefore wish to tease out moral aspects and processes influencing PWU in more detail.

Teasing out the moral aspects and processes of PWU as well as the need to take other influencing factors into account, means that future research models are likely to become more complex in terms of the numbers of predictor variables included. The

inclusion of multiple determinants in the same model would then require multivariate analysis in order to control for the variables' mutual confounding. This increased model complexity is a logical step following the research models tested by the reviewed studies. A model of direct influences on PWU was tested by Lee and his colleagues (2004; Figure A2.3 in Appendix A) who chose to investigate influences on PWU without interactions between the predictor variables. The other four research models (shown also in Appendix A) described processes leading to PWU, including mediation relationships between variables and blocks of variables proposed to influence PWU. However, none of the reviewed research models included moderator variables.

Including moderator variables in a model allows the examination of why a predictor-criterion relationship is other than expected. According to their level, moderator variables can increase, reduce or even change the interaction between the dependent and the predictor variable (Spicer, 2005). Moderator variables are typically added to a predictor-criterion relationship when the relationship is unexpectedly weak or inconsistent (Baron & Kenny, 1986). Due to the relatively weak relationships between PWU and its proposed influences reported by the above five studies, future research may want to investigate factors influencing PWU through a moderated model. This would be especially advised when choosing to investigate comparatively stable personal and environmental characteristics. Stable characteristics are highly unlikely to operate on their own in influencing PWU, making the question of specifying their joint effects a central theoretical task.

Proposing stable characteristics of the individual and the environment as influences on PWU, and investigating joint effects through the empirical testing of a moderated model, is the aim of this research project. This is an opportunity to contribute to the field of personal web use research by building on and extending some of the findings discussed in this literature review. The following chapter presents theoretical explorations of personal web use, and those personal and environmental characteristics that are, in this research, proposed to influence the behaviour. In doing so, the chapter revisits currently used definitions of PWU, the dimensionality of the PWU concept, and describes how it has been conceptualized for this research project. Following those discussions, the influences on PWU chosen for this project are introduced and their conceptual relationships with the PWU dimensions are examined in some detail. Chapter 4 presents the proposed roles played by the predictor variables when influencing PWU, and describes the theoretical model tested in this research.

Chapter 3

Conceptual exploration of PWU and attributes that can influence the behaviour and explain why individuals vary in their personal web use (PWU)

As the previous chapter highlighted, our knowledge of why individuals vary in their personal web use (PWU) is limited and based on a relatively small number of empirical studies. The consensus within this small field of research appears to be that PWU is influenced by comparatively stable characteristics of the individual and his or her working environment. A number of different theoretical frameworks have been used to identify these characteristics and attempt modelling the processes leading to PWU. Most of the theoretical models tested in previous research proposed mediated relationships between PWU and its suggested determinants. Closer examination of the theories and models previously studied, as well as the results of the reviewed empirical research, suggest that three general categories of characteristics appear to influence PWU.

These categories can broadly be described as: (i) issues of the employee as a moral agent negotiating the rights and wrongs of PWU (Section 3.2.1); (ii) attributes of the job and workplace (Section 3.2.2); and (iii) the employee's history and status with his or her current organisation (Section 3.2.3). All three categories of characteristics contain psychological and/or organisational attributes that can influence PWU. This research project builds on and extends the arguments and findings of the previously reviewed studies by investigating influences from each of these three categories that have either previously been identified, or that are newly introduced as potentially playing a causal role in PWU.

In this chapter the question of what PWU is revisited, and thirteen factors proposed as influences on PWU are discussed. Some of these factors are chosen based on findings presented in the reviewed PWU literature, while others are based on research into different organisational behaviours, or drawn from theories that have not previously been used to investigate influences on PWU. A causal model incorporating the factors proposed as influencing PWU will then be presented in some detail in chapter 4 of this thesis.

3.1 The criterion variable: personal web use (PWU)

3.1.1 Defining PWU

Popular literature tends to define PWU as any Internet activity, engaged in during working time that is not strictly work-task related, and lists the accessing of sports information, news, email, gambling or banking websites, as well as downloading of videos and music as typical PWU activities (e.g. Frauenheim, 2005; Malachowski, 2005). Mahatanankoon, Anandarajan, and Igbaria (2004, p 93), in turn, defined PWU as "voluntary on-line web behaviours during working time using any of the organisation's resources for activities outside current customary job/work requirements". Based on this definition it appears that PWU can be identified in terms of what the individual does when engaging in it (activity), why the activity is engaged in (for personal interest rather than work-related purposes), when it is done, and whose Internet-enabled computer is used. The definition further contains the condition that PWU is a voluntary behaviour rather than an addiction. On-line web behaviours based on addiction, in turn, are be characterised by compulsive use and/or abuse of the Internet at work. Although it would be interesting in principle to also investigate the impact of internet addiction on employees and their workplaces, such an investigation does not fit within the current research with its adopted definition of PWU as "voluntary on-line web behaviours", and is at this point referred to future research. All these aspects of the PWU definition are important components in distinguishing PWU from work-related use of the Internet, or Internet access in response to addiction. They also help to identify the information that needs to be acquired when investigating PWU.

Due to the subjective nature of the PWU definition components, engagement in PWU can be defined with more, or less, specificity. It can be defined through particular activities (e.g. reading the sports news), through categories of activities (e.g. information-seeking activities), and through the behaviour in general. Choosing the degree of specificity can have theoretical and practical implications. In this research project the theoretical reasons are of the most concern. Theoretically, it may be that different psychological and/or organisational attributes influence particular activities or categories of activities differently and lead to different consequences. For example, reading one's personal email at work might be influenced by circumstances in one's family life, while reading the sports news during working time might be influenced by being bored at work. Both instances are examples of PWU that can have different consequences. An organisation might treat reading personal emails as a relatively benign case of organisational misbehaviour, while the same organisation might respond to reading sports news with disciplinary action (Blau, Young, Ward-Cook, 2004). In this research no activity-specific hypotheses about causal

influences were tested. However, PWU was measured at all three levels – particular activities, categories of activities and the behaviour in general - so that it was possible for differential causal patterns to emerge should they be present.

Regardless of the level of specificity, the three components of the PWU definition (what is done, when it is done, whether it is done voluntarily) raise issues for the researcher that cannot be ignored. First of all, it is important that research participants are able to decide whether the activity is personal or work-related. The decision as to whether an activity is personal or work-related cannot be made by the researcher because the same activity may be personal or work-related depending on the context. In their investigation of attitudes towards PWU, Anandarajan and Simmers (2004), and Anandarajan, Paravastu and Simmers (2006) used narrative analyses to interpret the typed responses of 316 US MBA students to one open-ended question("*Do you think it is ok for a person to use the Web for non-work purposes during working hours in the workplace"'* p. 4). Results of content analysis showed that 34 of the respondents (10.8%) indicated that in their view it can depend on the job whether accessing a certain website is an activity to be seen as PWU or not. This is exemplified in the statement made by one participant in this research project: "*Since I'm an ad writer, I'm actually encouraged to use the Internet to find interesting sites and to keep current on world and entertainment events."* Similarly, a university lecturer may network via email with research collaborators who are also personal friends. In both cases it depends on the interpretation of the research participant whether engagement in the activity is for personal or work-related reasons, not on the interpretation of the researcher.

Defining the time component (when it is done) of PWU is also potentially problematic as the notions of 'being at work' and 'working time' have become more elastic. It is not easy to specify working time in such a way that it applies to the general working population. With the blurring of lines between work and personal life, and the increasing flexibility of work time, the identification of working time is, for many occupations, no longer a clear-cut matter. One participant in this research pointed out that he/she is "*at work from 6.30 am to 6.00 pm so a lot of 'life business' (banking, travel planning, etc.) can more easily be done during those [working] hours than when at home"*, while another person stated that his/her "*work hours … are a seamless blend of home and [work] environment. I spend many hours working on my home computer and thus sometimes, when convenient, complete personal tasks (e.g. travel arrangements, email) on my computer at work."* Although the trend of blurring working time and private time may not be applicable to all Internet-using occupations, in general most employees generally have a pretty clear idea when their own personal working time is,

even if it falls outside the conventional times of 9 am to 5 pm. It is therefore reasonable to expect that when PWU is defined in general terms of ‘during working time’, rather than set time frames, a reasonable degree of specificity is possible, and, as with the reason for the online activity, up to the research participants’ interpretation.

Another component of the personal web use definition, deserving brief discussion, is the notion that PWU is a voluntary behaviour. This component raises complex issues about the moral status of PWU, most of which are beyond the scope of this research. If, for example, each PWU act is consciously and freely undertaken and conflicts with organisational rules, it can be framed as illegitimate and deserving of disciplinary action. If, on the other hand, it is an addictive behaviour, it could be argued that the addicted employee bears little moral responsibility, and needs help rather than disciplinary action. Between these two extremes lies that possibility that for many people PWU will be habitual. Habits are situation-behaviour sequences that are or have become automatic, so that they occur without self-instruction (Triandis, 1980). They can be performed as part of volitional and intentional actions as well as being non-volitional (Oulette & Wood, 1998). As a habit, PWU can be a voluntary, but relatively thoughtless activity, a main perspective taken by this researcher. PWU is viewed as a relatively stable behaviour that occurs within a moral context, but is not usually preceded by complex cognitive processes. The focus in this research project, therefore, is in causal influences that are themselves stable attributes of the individual and the workplace, with particular attention to the moral attributes.

3.1.2 Quantifying PWU in terms of time

The natural measure for quantifying PWU is time. As such, PWU can be quantified through looking at how long and how often one engages in it. Duration and frequency of PWU are treated as distinct measures because theoretically they can be influenced by different psychological and organisational attributes, and/or in different directions. For example, one attribute can foster rather frequent but short periods of PWU, while another can predispose a person to long periods of PWU and not significantly affect frequency. Some attempts have been made by organisations and researchers (e.g. Lee, Lee & Kim, 2004) to build a minimum duration time into the definition of PWU. This strategy has the advantage of clearly distinguishing between acceptable and unacceptable personal web use. However, not all workplaces and researchers specify a threshold as acceptable and those that do may choose different thresholds. Additionally, employees may or may not be aware of these specifications or may assume that past employer’s specifications are a uniformly accepted industry standard. This all seems to complicate the assessment of PWU

with little potential gain in the quality of assessment. In this research duration was therefore used as a way to quantify PWU but not as part of its definition.

Quantifying PWU in terms of frequency and duration raises the question of whether the research participants' estimate should be for an actual period of time (e.g. the past two weeks), or for an average or typical period. The 'actual time' approach has the benefit that respondents can consult their memory. On the other hand, that particular period in time might be atypical for the respondents' personal web use and their estimates might then attenuate relationships between variables that would otherwise have appeared. The 'average period' approach reduces this problem by asking the respondents in effect to estimate their modal PWU, while also allowing inclusion of habitual PWU in the investigation. Individuals engaging in PWU out of habit are able to give quite precise indications regarding frequency and duration. Non-habitual users, on the other hand, tend to vary in their PWU and rely on estimates. Averaging the frequency and duration times given by those two groups of individuals enables the researcher to include both sets of information in the investigation. Yet asking respondents to estimate their modal PWU creates a more complex cognitive task that may attenuate relationships due to processing errors. Given the pros and cons, PWU estimates were gathered for both actual and average periods. This strategy also provided the opportunity to explore the habitual nature of PWU since the actual and average estimates should be similar, as should their precursors. Details of these measurement procedures are provided in chapter 5.

3.2 The predictor variables: Psychological and workplace attributes influencing PWU

Based on and expanding on previous research, thirteen factors were identified as psychological and workplace attributes proposed as influences on PWU. These influences are comparatively stable attributes of the individual and of the organisational environment. Although ultimately the attributes work together to influence PWU, in this chapter they are presented one at a time, as theoretically distinct influences. Their joint effects on PWU will be discussed in chapter 4. The influences chosen for this research project are attributes both of the person and of the organisational environment that can be broadly sorted into three categories: (i) issues of the employee as moral agent negotiating the rights and wrongs of PWU; (ii) attributes of the workplace; and (iii) the employee's history and status with his or her current organisation. The influencing attributes are summarised in Table 3.1, and subsequently discussed in some detail. These discussions focus on theoretical and empirical evidence explaining why each might be causally implicated in PWU. A causal model incorporating all of the presented factors is then put forward in chapter 4.

Comments made by participants in an unpublished study by Polzer-Debruyne (2002) are frequently used to illustrate theoretical points made. In this survey-based study the author explored PWU attitudes and behaviours of 103 undergraduate students who were also in full-time or part-time employment. The study is summarised in more detail in Appendix B.

Table 3.1: Summarising psychological and workplace attributes influencing PWU and chosen for this research's investigation

Navigating the rights and wrongs of PWU

- *Personal moral norms or ethical obligations a person might hold regarding PWU (*)*
- *Norms that a person's work group might have in supporting or discouraging PWU (*)*
- *Neutralisation strategies a person might use to explain engagement in PWU in spite of perceiving PWU to be an undesirable behaviour (*)*
- *How sensitive a person is to perceived inequities in the workplace*
- *What a person thinks about the treatment received from his or her supervisor*
- *The attitude a person holds towards the management of PWU by the organisation*
- *The level of a person's certainty about his or her knowledge regarding PWU rules, regulations and consequences*
- *The level of a person's psychological reactance, indicating how he or she tends to react when a perceived freedom or right is being limited*

Characteristics of the job and workplace

- *A person's work load, indicating how much work there is in a typical working day (*)*
- *A person's level of stimulation or boredom resulting from the assigned work*
- *The opportunities provided to engage in PWU, either through secluded work stations (*) or other organisational factors that allow social loafing at work*

The employee's status and history with the organisation

- *The length of time a person has been working in the current job (*)*
- *The status of a person's job within the organisational hierarchy(*)*

Note: The asterisks highlight attributes that had been explored in previous PWU studies

Past research, as discussed in chapter 2, has suggested further attributes of the organisation and the individual that can influence PWU. Closer examination showed that psychological theories suggest that a number of these attributes are possibly reflected in a number of currently investigated attributes. Table 3.2 summarises these attributes not explicitly included in this research project.

Table 3.2: Summarizing previously identified influences on PWU, and indicating where, on theoretical grounds, these influences are seen to be reflected in currently investigated attributes

Previous influences:	Reflected in currently investigated attributes:
Organisational fairness perceptions	Attitude towards supervisor treatment
	Attitude towards PWU control
	General attitude towards work
Denial of responsibility	Attitude to use of neutralisation strategy
Tendency to be late at work	General attitude towards work
Positive attitude towards PWU	Personal moral norms and obligations
Management support / ignoring of PWU	Work group norms
Task structure	Social Loafing Danger Index

Five previously suggested influences of PWU have been excluded from the research project. These influences are: perceived enjoyment of PWU, perceived usefulness of the Internet, Internet skills, Internet playfulness and the personality trait of powerlessness. These influences were excluded from this research project either because, in the original studies, their contribution to explaining variance of PWU was relatively small or their influence was on Internet use in general more than on PWU. An example here would be perceived usefulness of the Internet; it is part of the Technology Acceptance Model (TAM) and had been investigated by Anandarajan and Simmers (2002) as potential influence on PWU, but was found to have a “lack of significant effects on accessing work-related and personal-related Web sites (p 60). Other, previously proposed influences have been excluded if (a) they did not focus on the work situation, and (b) if the correlation reported was less than .25. It is acknowledged that these attributes could potentially operate as unmeasured confounds. However, because of the previously established low correlations between most of the excluded constructs and PWU, this is rather unlikely.

3.2.1 Navigating the 'rights' and 'wrongs' of PWU

3.2.1.1 Personal moral norms

When asking individuals whether they access the Internet at work to surf or email for personal interest, it is not uncommon to hear in reply: "*I know there are people at work who do that, but I don't think that's right. I don't do that, it's just not me*" (Polzer-Debruyne, 2002). This feeling that a behaviour is 'right' or 'wrong' is an individual's personal moral norm. This can be defined as the individual's perception of the moral correctness or incorrectness of performing a behaviour (Conner & Armitage, 1998). Personal moral norms are a person's own, socially determined and socially validated values attached to a particular action (Manstead, 2000). These personal morals are seen as guiding behavioural decisions from the aspect of the individual judging the proposed behaviour as 'right' or 'wrong' (Johns, 2006). Ajzen (1991) as well as Schwartz and Tessler (1972) suggested that in certain contexts personal feelings, moral obligations to perform, or refuse to perform certain activities, need to be considered along with other aspects influencing these actions. Norm-activation theory (NAT; Schwartz, 1977) suggests that individuals adopt specific behaviours out of the conviction that they feel a moral obligation to do so. Therefore, it is also possible that individuals refrain from specific behaviours such as personal web use in response to their own personal norms. Under norm-activation theory a given behaviour is not engaged in because of the expected outcomes (as expectancy theory suggests) but for internalised feelings that are captured by the concept of moral norm (Godin, Conner & Sheeran, 2005).

Previous studies found that the personal moral norm was a significant predictor of a diverse range of computer-related behaviours. For example, Gordon and Qingxiong (2003) reported that a sense of moral obligation had a negative impact on participants' intention to hack into computer systems. Similarly, Banerjee, Cronan and Jones (1998) found that an Information Systems employee's intention to behave ethically or unethically was influenced by the person's moral obligation towards performing the act in question, as well as the ethical climate within the organisation. With their scenario-based survey study, analysing the responses of 21 IS department managers in the U.S., the authors tested an IT ethical behaviour model, proposing that moral judgment, attitudes to ethical behaviour and personal normative beliefs lead to intentions to behave ethically or unethically. The participants indicated how they would react in seven ethical scenarios, presenting situations from using software without paying the usage fee, or sharing copies of programs with friends, to reading emails sent through the company server and passing on marketing data of the employing organisation. Multiple regression analysis suggested that an

individual's personal normative beliefs and the organisational ethical climate were the strongest predictors of the IS managers' intentions to behave either ethically or unethically.

Extending the IT ethical behaviour model to include individual characteristics and belief systems, as well as legal and professional environments, Leonard, Cronan and Kreie (2004) found that the sense of moral obligation was consistently the most significant indicator for participants' hypothetical ethical or unethical behaviours. In their scenario-based survey study, the authors analysed written responses of 423 computing class students of a U.S. university, including scenarios describing the use of the company computer on the weekend to develop personal computer applications. Multiple regression analysis suggested that personal normative beliefs about one's ethical obligations and attitudes towards ethical behaviour explained most of the variance in all five scenarios presented to the participants.

Moral obligation and one's own moral norms have also been investigated as determinants of PWU in two previously reviewed studies; however, with opposite results. Ethical beliefs were, on the one hand, argued to be a strong negative influence on the use of personal websites (Anandarajan & Simmers, 2002); on the other hand, Lee, Lee and Kim (2004) suggested that moral obligations did not significantly influence frequency or duration of PWU. Based on the theoretical and empirical reasoning presented here, personal moral norms regarding PWU can be conceptualized as influences on PWU.

3.2.1.2 Work group norms

When navigating the rights and wrongs of PWU at work, individuals do not rely on their own personal norms alone. Their personal moral norms do not develop in a vacuum, but are formed relative to group norms. They are the consequence of the internalisation of the group norms by the individual. It has been argued (e.g. by Sherif, 1961) that in social contexts group norms are some of the most powerful determinants of one's actions. Work is part of a person's social context, and consequently work group norms are powerful influences on one's work-related behaviours, such as PWU.

A work group is a collection of individuals who have working relationships that make them interdependent to some significant degree (Cartwright & Zander, 1968). Work groups include co-workers as well as supervisors and subordinates. Depending on the job and the organisational culture, these work groups can differ in proximity, and be loosely connected or highly interdependent. Depending on the individual employee's choice and organisational circumstances, different individuals can have different perceptions about what constitutes their work group and thus their social comparison group at work (Festinger, 1954; Goethals, 1986). When asked what they understand to be their 'work group', 27.4% of the participants in this research project identified the immediate group of people they work with as their work group. At the same time 8.7% of participants felt their

whole organisation or division to be their work group. This result demonstrates that to a certain degree individuals choose who they see as their reference group, and whose norms will influence their PWU at work.

Work-group norms are the informal rules or standards that groups adopt to regulate and regularise the behaviour of group members (Feldman, 1984). A norm is an expected or ideal mode of behaviour for group members, and does not necessarily refer to the statistical average of their behaviour (Sherif, 1961). Work-group norms contain expectations and consequences that can be conveyed through explicit group rules, through indirect group member remarks, and implied through group members' behaviours in relation to company rules. For example, Horning (1970), in his qualitative study of blue-collar theft in a U.S. manufacturing plant concluded that informal work-group norms regulated both the type and the amount of property theft. In fact, the work group collectively defined the specific categories of property which could be taken by employees: namely, "property of uncertain ownership". The relative importance that formal and informal norms play in regulating undesired employee behaviours was further investigated by Hollinger and Clark (1982). Participants in their survey study were 9175 employees of 47 organisations in the U.S. These participants were asked to rate the extent to which various types of formal sanctions (e.g. dismissal, warnings) and informal sanctions (e.g. social ostracism) would be effective in deterring theft at work. The respondents indicated that theft would be more restrained by potential ostracism from the work group, than by threats of formal sanctions made by the organisation. These research findings demonstrate the potent power of the influence the work group has when it comes to regulating organisational behaviours.

Work groups, containing co-workers, subordinates and supervisors, exert influence on their members through perceived member approval and through member actions. That perceived co-worker and supervisor approval of PWU can influence one's own personal web use had been suggested by several authors (e.g. Lee, Lee & Kim, 2004; Mahatanankoon & Igbaria, 2004) using a subjective norm measure suggested earlier by Ajzen (2002). The power of work group norms influencing PWU through member actions was in turn demonstrated when 25% of the 103 participants in a recent survey study (Polzer-Debruyne, 2002) indicated that they engage in PWU because everyone else at work does it. That supervisors' PWU can influence employee PWU behaviour was also illustrated by the comment of a participant in this research who stated: *"My supervisor had a high personal internet usage rate, even in a monitored environment…. This opened the door for the whole team to increase personal usage as this made it 'ok' - even to look for new jobs!"* As employees scan their work environment for indicators of what are appropriate behaviours they will likely be influenced by acts of PWU in their social comparison group (Festinger, 1954; Goethals, 1986). If members of the work group engage in PWU, the

message is sent, in the process of comparing their own PWU with that of the work group, that according to the work group's norm it is okay to engage in the activity (Greenberg & Scott, 1996).

Theoretical perspectives, besides social comparison theory (Festinger, 1954) supporting the idea that group norms influence behaviour are the 'social learning' Theory (Bandura, 1977) and 'social information processing' theory (Salancik & Pfeffer, 1978). Social learning theory suggests that in an organisational context individuals typically observe other work group members' behaviours and the consequences of their actions. Their behaviour is then seen as a norm, and the group members serve as role models for the individual planning his or her actions and anticipating consequences (Stajkovic & Luthans, 1998). Social information processing theory posits that individuals use information from their immediate work group to interpret events, develop appropriate behaviours and understand expectations concerning their behaviour and consequences. Integrating these theories and the discussed empirical evidence, it is likely that individuals analyse their work groups' norms regarding the appropriateness of PWU. Individuals then use the observed work-group behaviours, combined with the expectations expressed and consequences noted, as role models for their own personal web use. Thus work-group norms can become influences of PWU.

3.2.1.3 Neutralisation

If individuals have moral norms indicating that personal web use at work is a rather 'wrong' behaviour, and if organisations reaffirm these personal moral norms with rules, regulations and electronic monitoring, the question remains: why do some individuals break their own and the company's rules and engage in PWU at work? Cognitive dissonance theory (Festinger, 1957) suggests that when people behave contrary to how they believe they should, they experience negative emotions caused by the discrepancy between their visible actions and existing norms. These negative emotions motivate the desire to regain a sense of self-consistency and positive self-concept. Maintaining a positive self-concept is one of the most persistent human goals (Hales, 1985). Generally people endeavour to achieve this goal by trying to live up to their internal standards of right and wrong (Baumeister, 1998; Hales, 1985). These standards have developed over time through socialisation and tend to be mostly in line with commonly accepted rules of conduct or misconduct. Breaking these rules and continuing to maintain a positive self-concept is partially possible through the use of neutralisation strategies.

Neutralisation strategies (Sykes & Matza, 1957) are internal strategies that individuals employ before engaging in rule-breaking behaviour, in order to maintain a positive self-concept. Neutralisation differs from justification and rationalisation, both of

which are strategies used after rule-breaking has been enacted. The three strategies, however, have in common the aim of maintaining a positive self-concept when engaging in the rule-breaking behaviours. The existence of neutralisation strategies as ways to maintain a positive self-concept was first proposed by Sykes and Matza (1957) in an effort to explain why delinquent youths appeared to endorse the dominant moral code and yet engage in apparently contradictory behaviour. Researchers (e.g. Marx, 2003) found that people break organisational rules if they regard the organisation or certain regulating procedures as unacceptable, untrustworthy, unnecessary or irrelevant. Neutralisation strategies are proposed to reduce the worth of organisational rules, rendering one's breaking of the same less serious.

Different neutralisation strategies are likely to be used in different organisational settings, for different deviant acts and by different people (Robinson & Kraatz, 1998; Sykes & Matza, 1957). It is argued that people will prefer the strategy that requires the least amount of cognitive and behavioural effort and is the least risky one given their organisational environment (Aquino & Becker, 2005). In the case of PWU, Lim (2002) therefore proposed that the metaphor of the ledger (Klockars, 1974) is the neutralisation strategy most likely to be drawn upon by employees. This strategy, as already discussed in chapter 2, appears to be based in the reciprocity principle (Gouldner, 1960) which describes the unwritten but powerful norm found in all cultures that one should reciprocate if given something. Therefore, when individuals utilize the ledger strategy, they argue that their engagement in PWU is reciprocity for the numerous examples of their good organisational behaviour contained in their ledger (Hollinger, 1991).

In spite of the numerous studies supporting the existence of neutralisation strategies, the problem of how to measure the degree of neutralisation has not been solved. The reason for this problem is the point in time when an individual proposes to use the strategy, namely immediately before the action. This point is distinct from rationalization, which happens after the action. Hirschi (1969), however, argued that rationalization after the action may serve as pre-action neutralisation the next time a similar action is contemplated, indicating that the time gap between the two can be rather substantial. The lack of certainty about how far in advance of the action neutralisation occurs, and the practical difficulty of distinguishing between rationalization and neutralisation, make the accurately ascertain of whether an individual has engaged in the ledger strategy before PWU very difficult. It is especially impossible using typical methods of asking questions about the use of neutralisation strategies some time after PWU, when rationalization is typically seen to take place. What is possible, however, is measurement of an individual's attitude to using the strategy. This attitude can then, in turn, be seen as an indicator for an individual's willingness or likelihood to actually use that strategy in the future (Ajzen, 1991; Fishbein & Ajzen, 1975). In summary, the argument in this research is

that although Lim suggested to have measured use of the ledger strategy as such, it is more likely that the measure assessed an attitude of acceptance towards the use of the strategy. Accounting for the here mentioned difficulties in accurately assessing ledger strategy use, in this research project, when the term 'Ledger strategy of neutralisation' is defined as an individuals' attitude towards using that strategy.

3.2.1.4 Equity sensitivity

Lim (2002) and her colleagues (Lim&Teo, 2005) suggested that individuals who feel treated unfairly in their workplace either through procedures, supervisors or reward systems. What the authors, however, did not investigate are personality differences that might explain why one person interpreted a situation as unfair, leading to increased personal web use. This threat is picked up in this study by including the concept of equity sensitivity as one of the thirteen variables expected to predispose individuals to engage more or to engage less in personal web use.

Most people have a basic attitude towards work efforts. They look at what they gained from their organisation, and what efforts they had to put in to receive it. People also evaluate whether the ratio between their outcomes and related inputs matches the ratio of others in similar situations, or is comparable one's own previously experienced situations. The process of comparison is often used in deciding what is right and what is wrong through the evaluation of outcomes received for work given. These outcomes can include rewards, benefits and perks over and above the money one is paid. Some people's attitude towards work efforts is characterised by a focus on what they can get out of the relationship: what they feel they are entitled to receive in response to certain levels of effort they put in. Other people's attitude towards work effort, however, is more characterised by what they can contribute towards their employment relationship; and then there are people who are a bit of both on occasion. Traditionally this notion of output-input comparison has been described by equity theory.

Equity theory (Adams, 1963, 1965) holds that perceived inequity creates tension within individuals and this tension motivates the person to restore equity. Equity exists whenever the perceived ratio of a person's outcomes to inputs equals that of relevant others. For example, an individual may not feel properly paid in terms of what he or she puts into a job, compared to what other employees in similar positions get for their inputs. The strength of the effort put into restoration will vary directly with the magnitude of the perceived inequity, which exists when the perceived ratios of outcomes and inputs are unequal. Based on the original equity theory it was assumed that the comparison of output

and input ratios formed peoples' attitudes towards work, and therefore they would react to perceived inequities in a like manner.

The perception of and subsequent reactions to inequity, however, depend to a large degree on individual differences, especially one's equity sensitivity (Vecchio, 1981). Equity sensitivity is held to be a psychological individual difference variable that measures individuals' cognitive orientation towards social exchange (King & Hinson, 1994; King, Miles & Day, 1993), and moderates individual responses to inequity. Based on the notion that people differ in their equity sensitivity, Huseman, Hatfield and Miles (1987) proposed three types of individuals: 'benevolents' or 'givers' (more focused on what they can give in an exchange relationship), 'entitleds' or 'takers' (more focused on what they can get out of an exchange relationship), and 'equity sensitives' (who prefer a balance between input and outcomes). For each type of individual the dominant equity focus is seen as a stable part of a person's personality. Later studies (e.g. Conner, 2002; Miles, Hatfield & Huseman, 1994) have suggested that both, benevolents and entitleds are focused on outcomes, but on different types of outcomes. Benevolents, for example, in addition to focus what they can bring into the working relationship, when it comes to outcomes they prefer focusing on intrinsic outcomes such as sense of accomplishment and competence, and doing challenging and meaningful work. Entitleds, however, firmly keeping an eye on how to gain an advantage from the working relationship, are seen to prefer extrinsic outcomes like pay, fringe benefits, job security and general working conditions (Conner, 2002).

From the standpoint of an 'entitled' person engaging in PWU may be an extrinsic outcome of the job and as thus considered okay and right. For a 'benevolent' person, however, the outcome focus of PWU may be considered as being 'wrong' not only because the behaviour contradicts the giving preference of the individual, but also because it lacks the intrinsic value desired in work outcomes. The degree to which a person's characteristics lean more towards those of an 'entitled' or towards those of a 'benevolent' can, therefore, be seen as an influence on PWU.

3.2.1.5 Attitude towards supervisor treatment

The relationship to one's supervisor and the perception of how the supervisor is interacting with oneself at work are important aspects of working life. The importance and effects of the interactions between supervisor and subordinate are emphasised by the leader-member exchange model (Danserau, Graen & Haga, 1975; Graen & Cashman, 1975). The model proposes that the social exchanges occurring between that particular vertical dyad in an organisation determine the roles, attitudes, behaviours and outcomes of both parties. If, for example, one perceives that the interactions do not fulfil one's needs and expectations, negative attitudes towards the partner in the exchange can be expected; these can be expressed in dissatisfaction and can lead to undesired behavioural outcomes.

Social exchange theory (Blau, 1964; Homans, 1958), research into organisational fairness (e.g. Folger & Greenberg, 1985), as well as leadership theories and models (e.g. Fiedler, 1966; House, 1971; Yukl, 1971) can explain this link between supervisor behaviour towards the employee, and subsequent employee attitude and behaviour.

Social exchange theory (Blau, 1964; Homans, 1958) posits that a norm of reciprocity develops between individuals in an organisation. According to this norm, a pattern of reciprocal obligations develops when one individual provides another with a benefit. In general it is expected that employees are likely to reciprocate with attitudes and behaviour beneficial to their organisation when they perceive the treatment received from the organisation, and the supervisor as its representative, to be favourable. Following this theoretical approach, supervisor behaviour partially determines how employees behave towards their organisation.

Past theoretical and survey-based research into the relationships between supervisor behaviour and perceptions of organisational fairness (e.g. Folger & Greenberg, 1985; Greenberg & Scott, 1996; van den Bos, Lind, Vermunt & Wilke, 1997), suggests that supervisor behaviour towards subordinates will, over time, affect subordinates' perception of organisational fairness, and subsequent attitudes and behaviours. The perception of interactional fairness within the supervisor-subordinate relationship has been identified as a powerful driver of employee attitudes and organisational behaviours. Positive attitudes towards the supervisor and the supervisor-employee relationship have been associated not only with job performance, but also with organisational citizenship behaviour (Shore, Sy & Strauss, 2006). At the same time, if people feel treated badly by their supervisors, they tend to perceive their workplace as treating them unfairly (Mikula, Petrik & Tanzer, 1990), and react to this perceived unfairness with actions aimed at restoring a sense of fairness. Greenberg (1990, 1990a) and Greenberg and Scott (1996), for example, argued that employees begin to steal from their organisation because they feel they are being treated unfairly by their employer or supervisor. Although in this research PWU is not conceptualised as necessarily equivalent to stealing, one can assume that for a number of individuals PWU is an expression of retaliation or retribution for perceived unfair treatment.

The notion of a causal link between supervisor behaviour and employee attitudes is also supported by Yukl's (1971) discrepancy model, Fiedler's leader-situation match theory (1966), and House's (1971) path-goal theory. These three leadership theories address the impact that supervisors' behaviour has on subordinate satisfaction with the supervisor and the supervisor-employee relationship. In essence all three theories suggest that employees may develop negative attitudes towards supervisors in response to perceived negative treatment by them. The discrepancy model (Yukl, 1971) for example, proposes that

employees evaluate supervisor behaviour by comparing it to their own preference for certain leadership types. A large discrepancy between what is experienced and what is preferred is seen to lead to a negative attitude towards the relationships and dissatisfaction. Fiedler (1966), in turn, suggested that employees prefer different leadership styles in different work situations. If the work is clear and structured, a considerate leader will be preferred and fulfilment of this preference will lead to a positive attitude towards the supervisor. If, however, the work is unstructured and relatively ambiguous, a leader who initiates task structures will better satisfy employee needs, leading to a positive attitude towards treatment received from the supervisor. House's (1971) path-goal theory considers the motivation of subordinates to be an important part of the leader's role. As part of their role, leaders are expected to know the goals of their subordinates and to assist them along effective paths to reach these goals, and align them with those of the organisation. If the subordinates feel that the supervisor is unaware of their goals and/or does not lead them on paths to reach personal goals, employees are likely to have a negative attitude towards those leaders who do not meet their expectations.

Common to all three leadership theories is the proposal that as a consequence of negative attitudes towards their supervisors' treatment of themselves, employees can engage in undesired behaviours like excessive personal web use in the work place. Based on the propositions made by social exchange theory, organisational fairness research and leadership theories, the attitude an employee holds towards treatment by supervisor(s) can be understood as having an influence on PWU.

3.2.1.6 Attitude towards PWU control

When deciding whether their behaviours are right or wrong, employees not only look at how their supervisor treats them, but also how relevant aspects of their work are managed by the organisation through its policies and procedures. If these work-related aspects are managed in a way that is perceived to be fair, employees tend to have a positive attitude towards the relevant policies and procedures. Raven's (1992, 1993) power interaction model suggests that people act rationally and take into account effectiveness and/or acceptability of the requests expressed by power sources. The result of evaluating the effectiveness and acceptability of organisational PWU control then gives rise to an overall attitude towards PWU control by the organisation. For organisations to function effectively and efficiently, it is therefore crucial that they establish positive attitudes to and voluntary acceptance of their decisions through their employees (Tyler & DeGoey, 1996). The establishment of the desired positive attitudes and decision acceptance has previously been associated with perceptions of procedural fairness (Tyler, Boeckman, Smith & Huo, 1997; Tyler & Lind, 1992). Employees are more likely to accept responsibility for their problems and actions in the presence of fair procedures than their absence (Skarlicki &

Folger, 1997), suggesting a strong link between procedural fairness and organisational citizenship behaviour (Farh, Podsakoff & Organ, 1990; van den Bos, Wilke & Lind,1998).

An organisation perceived to have a high degree of fairness is one where procedures leading to an outcome (e.g. dismissal) or a decision (e.g. change of work protocol) are perceived to be fair, regardless of whether one likes the outcome or not (Greenberg, 1990a). The perception of this general aspect of procedural fairness, leads in turn to a general attitude of positive acceptance of the organisation's policies and processes by the employee (Greenberg, 1990a). Procedural fairness has traditionally been conceptualised as permeating all organisational procedures and decision making processes. For example, traditional measures of organisational fairness (e.g. Moorman, 1991) examine the fairness of decision making with questions about how the respondents feel about the way decisions are usually made in their organisation or department.

In this research project, however, the focus is not on the influences of general attitudes of acceptance or positive evaluations of procedural fairness. The focus is on how the organisation is perceived to manage PWU through its policies, procedures and consequences, and the resulting employee attitude towards this PWU control. The argument for such specificity is based on the notion that if one examines psychological and workplace attributes that can influence a very specific organisational behaviour, namely PWU, one is best advised to look for specific attributes. Employee attitude towards PWU control is one such specific attribute that can influence personal web use.

3.2.1.7 Certainty about PWU rules

Close linked to one's attitude towards PWU rules is how certain one is about one's knowledge of these rules. If organisational rules and policies regarding PWU exist, are communicated, and consistent behavioural consequences are visible, employees can be certain to what degree PWU is right and wrong. If this is not the case, however, employees are uncertain about what is expected of them and what permissible levels of personal web use are. Uncertainty about organisational rules and controls regarding personal web use is frequently due not to their absence, but to executive staff assuming that codes of conduct once written in manuals will automatically be adhered to at every level and in everyday working situations (Darley, 2001). However, without publishing the relevant rules, actively using the procedures to manage PWU and making consequences of PWU known, an element of uncertainty regarding PWU is maintained.

Uncertainty, in turn, is a contextual variable that affects individual information processing and decision making (Lind & van den Bos, 2002). Uncertainty is the subjective sense of the number of alternative predictions available when thinking about someone else's future behaviour (Berger & Calabrese, 1975), for example, in response to one's own personal web use. Although individuals differ in their tolerance to uncertainty in their

environment, reducing the tension stemming from uncertainty and increasing the predictability of behaviours is a basic human drive (Berger & Calabrese, 1975). Differences in uncertainty avoidance lead to different levels of desire for and acceptance of rules, norms and behavioural standards (Hofstede, 1980, 2001; House et al., 2004). In an effort to reduce the tension caused by uncertainty, individuals engage in information seeking (Bradac, 2001). Information can be gained through asking questions, observing others, or engaging in other behaviours aimed at reducing uncertainty in some way. The engagement in risky and sometimes unethical behaviours is a strategy to reduce the anxiety caused by uncertainty about rules and structures governing these behaviours (Hofstede, 1997). For example, if one acts in a certain way, sooner or later one will elicit a clear reaction removing this uncertainty. Understandably, if one is uncertain about rules, controls and consequences concerning a specific behaviour, one is also more likely to err on the side of one's own benefit until clarity is perceived. If employees are uncertain about PWU rules, they feel a sense of insecurity about what is expected of them, leading to idiosyncratic interpretations of what is 'okay' regarding PWU. These subjective interpretations depend on the moral norms of individuals. As such, the subjective interpretations caused by uncertainty about PWU rules can be a part of shaping group norms and their influence on personal web use. It is therefore possible that individuals engage in the activity to reduce the anxiety caused by subjective uncertainty about PWU rules and consequences, and interpret their own level of PWU as 'right until proven otherwise'.

3.2.1.8 Psychological reactance

While rules and regulations regarding PWU can be fair and give certainty about the rights and wrongs of the behaviour, they can also be seen as limiting the choices and freedom employees might desire regarding PWU. Individuals tend to react differently to rules and regulations, depending on the level of their reactance. 'Reactance' is a term used to reflect an individual's response to social influences. It is a counterforce that is aroused when a person's freedom is threatened or eliminated (Brehm, 1966).This counterforce seeks to maintain or re-establish the threatened freedom and control that are important to individuals (Hellman & McMillin, 1997). In the past, psychological reactance has been studied mainly in the fields of psychiatry (e.g. Dowd & Sanders, 1994; Dowd & Wallbrown, 1993), criminology (e.g. Poorman, 1999), and sports psychology (e.g. Carter & Kelly, 1997). To date, no study has been published that investigated psychological reactance as an influence on personal web use.

Reactance was originally conceived by Brehm (1966) as a situational variable (state reactance) with little emphasis on individual differences (trait reactance). In more recent years, researchers and theorists have agreed that the disinclination to accept limitations of freedom and choice has both state and trait properties (Beutler, Sandowicz,

Fisher & Albanese, 1996; Dowd & Walbrown, 1993). Threats to freedom and control can be objectively present or they can be in the perception of the individual. Reactions to threats that are objectively present in the environment are based in state reactance, while those that follow individual perceptions of threats are based on trait reactance. Reactance theory (Brehm & Brehm, 1981) holds that a threat to freedom and control motivates the person to restore that freedom. In their effort to restore threatened freedom and control people may increase the use of the threatened resource or behaviour, or they may engage in alternative behaviours that allow them to experience a restored, compensatory sense of freedom or control. In the case of PWU this may mean that employees who feel the organisation is limiting their freedom to engage in PWU are likely to react to this limitation. The degree of this reaction will depend on the degree of their trait reactance.

Past research (Kelly & Nauta, 1997) has suggested that high reactance participants tried to resist the authority of the experimenter, attempting to restore a sense of freedom by doing exactly the opposite of whatever the experimenter asked them to do. Similar results were reported by Sachau, Houlihan and Gilbertson (1999) in a survey study of 306 part-time employees from a variety of U.S. service, retail and manufacturing organisations. The authors found that participants with higher levels of reactance were less likely to comply with supervisory requests than those with lower levels of reactance. Equally, the higher the levels of reactance, the more likely the participants were to complain in response to supervisors' requests. Sachau, Houlihan and Gilbertson (1999) argued that their research demonstrated the existence of a moderate relationship between the personality trait of psychological reactance and employee compliance. This could potentially mean that employee compliance to PWU rules and regulations can, in part, be linked to the level of trait reactance of individual employees.

3.2.2 Characteristics of the job and workplace

3.2.2.1 Work Load

Individuals' personal web use (PWU) may vary depending on the amount of work they have to do. Using the Internet at work for personal interest is an activity engaged in outside the normal job requirements, and thus in addition to, or instead of, accomplishing the regular workload associated with the job. The way workload can influence PWU theoretically depends on the actual and perceptual attributes of the workload. Objectively, the actual volume and characteristics of workload can influence the opportunity to engage in PWU. For example, high workloads with tight deadlines allow for fewer PWU opportunities than high workloads with more lenient completion requirements. At the same time, differences in how workload is perceived can influence how apparent become PWU opportunities. For example, from two individuals with the same actual workload, one may

interpret it as relatively light and the other as relatively heavy, depending on their personality, skills, experience, and situational circumstances. The individual who perceives the workload to be high may subsequently find fewer opportunities to engage in PWU than the person who perceives the same workload as light. Self-reported workload, as examined in most self-report survey studies, generally contains elements of the actual and the perceptual attributes of workload (Spector & Jex, 1998).

The impact of workload on PWU can be twofold; on the one hand it can impede PWU, on the other it can foster it. Similar to Bellman, Lohse and Johnson (1999), Lee, Lee and Kim (2004) in their previously discussed study found high workload to be a barrier to PWU frequency and duration. The finding that high workload impedes PWU makes intuitive sense. From a time and opportunity perspective, a high workload tends to make it harder to frequently engage in PWU, or to do so for long periods of time. On the other hand, individuals might engage in PWU as result of perceived high workloads in an effort to either 'take care of' personal tasks, to take a mini-break, or to achieve the restoring of pay equity for perceived excessive work.

Previous studies suggested that individuals engage in PWU in spite of or because of high workloads. Mahatanankoon and Igbaria (2004) for example, found in an online self-report survey of 271 employees with Internet access at work, that engagement in ecommerce (personal shopping, banking) in periods of high workload increased employee productivity and job satisfaction. Additionally, in a recent survey (Polzer-Debruyne, 2002) 40% of the 103 participants indicated that it would be acceptable to engage in PWU if they had a high workload. The participants would then see PWU as a type of compensation, because they felt treated unfairly with regard to money earned, or because they felt unhappy in their work. The link between high workload and high PWU due to a feeling of inequity was suggested by Lim (2002), and can be explained with equity theory and the principles of organisational fairness.

At the heart of the field of organisational justice (e.g. Folger, 1987, Greenberg, 1990, 1990a; Skarlicki & Folger, 1997), or organisational fairness as it has been re-labelled by Lind and van den Bos (2002), is the prediction that if employees perceive organisational and managerial actions and decisions to be unfair or unjust, they will experience feelings of anger, outrage and resentment. This distress caused by unfair treatment drives the individual to some action (cognitive or physical) to relieve the tension (Conner, 2002). The release of that tension can elicit a desire for retribution, and the employee may engage in counter-productive behaviours to retaliate or punish the organisation. Throughout history, the unauthorized use or abuse of another's property for one's own interest has been a popular means of redressing grievances and expressing attitudes of dissatisfaction in response to perceived unfairness (Tucker, 1989). These restoration attempts can conceptually include the use of the company's Internet resources for personal interest.

Alternative explanations to those based on organisational fairness and explaining why and how workload can influence PWU can be found in the difference between job enrichment and job enlargement, and in the literature of stress. Workload has previously been identified as a potential job stressor in a number of occupations, ranging from air traffic controllers to nurses and managers (e.g. Beehr & Newman, 1978; Motowidlo, Packard & Manning, 1986; Spector, 1987)**.** Work underload and work overload have both been suggested as causes of work-related stress leading to behaviour disturbances, physical illness or the employment of coping mechanisms. Engagement in PWU can possibly be one of those coping mechanisms, where employees take mini breaks from work in order to relieve the experienced stress, but feel unable to leave their work station to do so.

One of the reasons for experiencing one's workload as stressful can be that one's job has been enlarged rather than enriched. Following from Herzberg's two-factor theory (Herzberg, Mausner & Snyderman, 1959), jobs are enriched when they are redesigned so that work is been made more interesting, or challenging, and offers increased responsibilities and opportunities for advancement. Enrichment may include increased workloads. However, when enriching a job the focus is to cater for peoples' motivators (e.g. personal growth and development) rather than for job hygiene factors (e.g. pay, job security). Subsequently, the increased workloads are rarely perceived to be stressful. Job enrichment has frequently been linked to higher performance, job satisfaction and commitment to the organisation. Has a job only been enlarged, however, the workload may have been increased with little regard for a person's motivators, and may be associated predominantly with hygiene factors (e.g. increase in pay, provision of car park). The result may be an increase in negative stress levels for the individual employee. Although it is advisable not to neglect job hygiene factors when redesigning a job, too strong a focus on these can result in employees feeling overwhelmed by their workload, and not seeing 'the point' of it for the furtherance of their own aspirations and goals. Disengagement can then be the result, and high levels of personal web use can be one expression of this disengagement.

Irrespective of job enrichment, employees can find themselves in low or high workload jobs, either as part of the job or dependent on outside influences, such as seasonal demand. Similar to consistently high workloads, prolonged periods of low workloads can also be causes of stress to employees. It may sound tempting to be in a job where there is little to do. For many people, however, especially those in Western industrialized countries who subscribe to a Protestant work ethic, work forms part of the meaning of life and a low workload may be interpreted as spending one's day in

meaningless pursuit with little value to self and society. Individuals who feel thus 'under-stressed' may engage in PWU to create meaning or to search for alternatives. On the other hand, some employees may just welcome a low workload as allowing them to pursue online activities that are of more interest and value to them than their current job. In either case, a low workload can also be one reason why individuals engage in PWU.

The relationship between workload and PWU can be understood similar to that summarized in the performance–arousal curve. In the shape of an inverted U this curve demonstrates that having no arousal, or too much, results in poor work performance. Applied to the context of this research, workloads perceived as being too high or too low can potentially influence PWU in a similar way.

3.2.2.2 Boredom at work

Job design applies not only to workload. As suggested by the notion of job enrichment versus job enlargement, job design can also influence a person's feeling of boredom on the job, independent of the workload to be dealt with. Boredom is not, contrary to popular belief, a result of having nothing to do. It is very hard to come up with a situation where a person's options are so limited that he or she can literally do nothing. Boredom occurs in situations where none of the possible things that a person can do appeal realistically or give meaning to his or her activities (Svendsen, 2005). In an era in which many people are bombarded by too much information to make sense of, in which they may spend endless hours undertaking tedious tasks or stuck in traffic jams, some may have lost faith that their actions possess any kind of meaning. This perception, in turn, may render some individuals inactive, and generally unhappy. Boredom occurs when stimulation is construed as subjectively monotonous and relatively few stimuli are perceived to be present that might satisfy an individual's need for stimulation. In general, boredom leads to experiencing a high level of frustration (Hill & Perkins, 1985). Sensory deprivation studies (e.g. Solomon, 1961) indicated that the experience of monotony is frustrating to most people, and that when monotony is subjectively experienced they will seek additional or alternative stimulation. Personal web use can provide such alternative stimulation. In a survey study asking why individuals engage in personal web use, 19% of respondents stated that in their opinion they engage in PWU because they are bored or because their work lacks interest and stimulation (Polzer-Debruyne, 2002).

The meaning of boredom, however, is not limited to the experience of monotony. Barbalet (1999), for example, suggested that individuals experience boredom when they feel their actions or circumstances are without purpose or meaning. A particular characteristic of boredom is the associated feeling of timelessness. The absence of meaning of an activity promotes consciousness of time as an empty interval, regardless of

how ‘busy’ one is. The subsequently perceived discrepancy between the work being seen as slow and irksome, and the mind wanting to be somewhere else, leads to boredom (Fraisse, 1963). As such, boredom not only registers meaninglessness; it is seen as an emotional safeguard against meaninglessness (Barbalet, 1999).

In its role as safeguard, boredom is not a passive feeling of acceptance of a situation, or a resignation toward a state of indifference. On the contrary, boredom contains elements of restlessness, irritability and expression of dissatisfaction (Gaylin, 1979). Therefore, risk-taking behaviours and intergroup conflicts have been seen as outward expressions of and reaction to boredom. These actions provide meaning where there was none by averting or overcoming boredom (Barbalet, 1999).

Employees experiencing boredom with their work task, regardless of the existing workload, will abandon the task and dispel the boredom by literally or figuratively leaving the situation in order to find desired levels of stimulation and meaning (Hill & Perkins, 1985). Engagement in PWU can be one way of leaving a work situation perceived to be boring, and in that case would most likely be seen as ‘okay’ by employees rather than a ‘wrong’ behaviour. Boredom can therefore potentially influence PWU either as means to pass the time, to create meaning in a meaningless work day, or to provide excitement.

3.2.2.3 Social loafing risk factors as influences on PWU

In Section Two of this thesis, the concept of ‘social loafing’ was introduced and associated to the present study into personal web use. Social loafing is a group-induced reduction in individual output when performers’ efforts are pooled and thus cannot be individually judged (Kravitz & Martin, 1986; Ringelmann, 1913). Social loafing is not only restricted to physical behaviours (such as the traditionally tested shouting and rope pulling), but also takes place when people perform cognitive tasks (Weldon & Gargano, 1988). Social loafing has been found in electronic work groups (Suleiman, 2003), and is therefore conceptually not limited to traditional work situations. It appears that social loafers in any situation do not pull their weight and tend to sneak off whenever they feel they can do so undetected.

In the context of personal web use the concept of social loafing can be applied to the extent that employees may judge their Internet activities as indiscernible from their work task as well as from the Internet activities of other employees. Some (e.g. Lim, 2002; Lim & Teo, 2005) have argued that to engage in PWU employees do not need to visibly leave their workplace. This lack of discernment and visibility then is assumed to make it impossible for the employer to judge individual computer and Internet behaviour. The mostly false perception of ‘invisible’ computer actions may exist either because the use of electronic monitoring systems is not present in the workplace, because the employees are

not aware of these systems being in place, or because in the past there have been no negative consequences for employees engaging in PWU.

The idea of visibility on a computer is interesting when exploring influences on PWU, not only with regard to electronic monitoring. Lee, Lee and Kim (2004), for example, suggested that employees whose workstations are somewhat secluded have higher intentions of engaging in personal web use than those with highly visible work stations. Reflecting their philosophical stance on PWU as a 'deviant' behaviour, the authors used general deterrence theory (GDT) to explain the link between PWU and highly visible workstations. Within the framework of GDT it is expected that a person can make a 'criminal' decision when the expected benefits caused by the criminal action exceed the cost of punishment. The theory especially focuses on the cost factors of deterring such behaviour through means such as policies, systems and awareness programs (e.g. Loch & Conger, 1996; Straub & Welke, 1998). Subsequently Lee, Lee and Kim (2004) argued that highly visible workstations may increase the possibility of getting caught engaging in PWU and thus can act as deterrents. Behind the GDT's notion of punishment and getting caught one can see the principle of social loafing: "If my activities cannot be identified and I cannot be held accountable, I can engage in the activities I desire, even if they are unwelcome by the workgroup/society/the organisation."

Traditionally the presence of social loafing is examined through questionnaires answered by supervisors and/or colleagues of the target employee. This method requires that researchers approach two sets of research participants, often limiting the number of willing participants, and potentially causing discomfort in participants who may worry about what their peers and supervisors say about them. For the present study it was impractical and undesirable to approach employees and their supervisors at the same time. Therefore the author relied on participants' description of their work environment. Descriptions of characteristics in a person's work environment can allow the researcher to estimate the relative social loafing risk to which the individual is exposed.

The presence of social loafing risk factors alone does not necessarily suggest that an individual engages in social loafing. However, the social loafing literature suggests that, on average, a positive relationship exists between increased levels of characteristics in the environment that are identified as risk factors and actual social loafing behaviours. The environmental characteristics that are traditionally seen as enhancing social loafing and that are included in this research's social loafing risk assessment are:

- *Type of task* – Social loafing is a reduction in individual efforts when working on a collective task (in which one's outputs are pooled with those of other group

members) compared to working either alone or co-actively (Suleiman, 2003; Williams, Karau, Borugeois, 1993).

- *Lack of being identified/reduced accountability* – Being unidentifiable and anonymous provides cover for people who are not motivated on a task (Gagne & Zuckerman, 1999; Kerr & Bruun, 1981; Williams, Harkins & Latane, 1981). Interestingly, however, Suleiman (2003) found that in electronic work groups identifiability may lack observable effects on social loafing.

- *Visibility* – Linked to accountability is the issue of being visible when working, being able to be seen by supervisors and/or the peer group to pull one's weight and not to 'slack off' (George, 1992). This visibility is different to Lim's (2002) argument that cyberloafers do not need to worry about being seen, or Suleiman's (2003) suggestion that working in front of a computer may make one less aware of one's surroundings and what others are doing. It is more akin to the visibility of work stations investigated by Lee, Lee and Kim (2004) and briefly mentioned earlier in this chapter. In an open-plan office environment it is more likely that one is interrupted when Internet surfing and that a colleague or supervisor passing by can have a glance at one's computer screen and identify the web address or the type of web address one is visiting.

- *Group Size* – Although group size is linked to social loafing, increasing its size does not mean that with each additional group member the effort decreases in the same way. The range within which group size seems to have a significant impact is about one to eight members (Latane, Williams & Harkins, 1979).

- *Perceived dispensability of effort* – People are inclined to loaf if they perceive their work efforts are not really important either to their work group, the end product or themselves (Comer, 1995).

- *Lack of control* – In addition to the perceived low importance of one's own task, a perception of low control over the combined outcome of a work groups' task to which one contributes can also increase the tendency to loaf (Franzoi, 1996).

Social loafing risk is therefore defined as the degree to which the above mentioned contributors to social loafing are present within the working situations of individuals. The more of these organisational risk factors that exist in the organisational environment, the higher is the social loafing risk. In work situations enabling employees

to access the Internet during working time, PWU can possibly be an expression of social loafing, and thus can be influenced by the degree of social loafing risk present.

3.2.3 The employee's status and history with the organisation

3.2.3.1 Tenure in the job

"My son just started in his job three weeks ago, and I am sure he does not surf on the Internet at work at the moment. But in his old job, the one he was in for just over a year, he knew the ins and outs so well that he did most of his assignment research on the work computers." This comment of a participant in this research project reflects one direction the influence of tenure in a job can have on an individual's personal web use. Yet, contradictory findings were reported by Lee, Lee and Kim (2004). The authors suggested that job tenure is negatively related to PWU frequency and duration. Results of Lee, Lee and Kim's (2004) study indicated strongly that employees with few years in their current position tended to engage more in PWU than employees who have been on the job for longer. Although it is not advisable to draw conclusions about the influence job tenure has on PWU based on one participant's comment and one empirical study without detailed measurement description, it appears that tenure in the job can influence PWU in two ways: increased tenure can decrease or increase PWU.

Two different theories can support both ways of influence. One can draw on organisational socialisation processes to find support for a decrease in PWU with tenure, and on equity theory to explain how, with increased tenure, PWU might increase. Organisational socialisation concerns the ways in which newcomers change and adapt. Newcomers learn the norms and values of their new role as well as what is acceptable behaviour (Van Maanen, 1976). Organisational socialisation aims to achieve conformity of new employees to important organisational values and norms (Schein, 1968). Socialisation is an interpersonal process (Reichers, 1987) that can occur on two levels. On one level it happens directly through statements made about values, norms and expected behaviours, and that are directed to the new employee. On another level, the group norms can be transmitted indirectly through being implied by the actions of the existing employees (Argyris, 1971). The transmission and learning of organisational norms, for example regarding the use of the company Internet facilities for personal interest, is suggested to occur in four stages (Wanous, 1992).

The characteristics of the four stages of organisational socialisation (Wanous, 1992) can explain why and how employee tenure in a job can influence PWU. It is suggested that in each of those stages the new employee changes his or her attitude towards, and behaviour within the organisation, its culture and its regulations. Within those

four stages employees are expected to experiment with PWU in order to clarify the limits of organisational permissiveness regarding PWU. The theoretical result of such experimenting is suggested to be a sense of organisational dependability and commitment achieved in stage four of the socialisation process. Consequently one might expect that employees' PWU is at a level that is accepted by their organisation and does not interfere with their work performance. This can potentially result in less PWU than in the earlier stages of employment where the limits had been tested. Theories on organisational socialisation processes can thus possibly explain why longer-serving employees would have decreased PWU frequency and duration compared to less tenured employees.

On the other hand it is possible to argue that, with increasing tenure, employees not only become increasingly familiar with PWU opportunities, but also that they increasingly perceive inequities in their relationship with the organisation. They may start to perceive that their inputs into the relationship have to date been greater than their outcomes. It is then possible that, enhanced by an increased awareness of opportunities, more frequent and/or longer PWU is one way to restore the perceived inequity. Therefore, equity theory can possibly explain why longer-serving employees would have increased PWU frequency and duration. Depending on the theoretical view taken, long tenure can generally be associated with both increased PWU and decreased PWU, and is thus an organisational attribute of interest in this research.

3.2.3.2 Job level

The level of an employee's job within the organisational hierarchy can also potentially influence the employee's personal web use (Lee, Lee & Kim, 2004). In order to engage in PWU one has to have the opportunity to do so. In an organisational context this means not only resource availability (e.g. access to an Internet-linked computer), but also the degree of freedom allowed for individuals to intentionally engage in certain behaviours. In general, the level that a job has within a hierarchy indicates the degree of behavioural freedom or autonomy of the job incumbent.

The degree of prescribed job autonomy, linked to the job level, can therefore influence organisational behaviours. Job design theories in particular propose that autonomy as part of job enrichment will positively influence an employee's attitudes and actions (Lee, Ashford & Bobko, 1990; Pines, 1987). However, the influence of autonomy and higher job levels on employee behaviour does not necessarily lead to exemplary employee actions. Previous studies, on the one hand, suggested that people with low formal status tend to be more inclined to engage in workplace deviance than those higher in status (Aquino, Galperin & Bennett, 2004). On the other hand, there are also studies suggesting that personal web use, perceived by management as deviant behaviour,

appears to be primarily an issue for middle- and upper-level employees, where Internet access and freedom of online use cannot be removed without compromising work efficiency (Snider 2001). The job characteristics model, general deterrence theory and the tendency to interpret situations in one's favour, can be used to examine the influence exerted by the level of an individual's job in the organisational hierarchy on personal web use.

The job characteristics model (Hackman & Oldham, 1976) is one of the best-known job design models. According to this model, autonomy is assumed to create an experience of responsibility for the results of one's work, which in turn may contribute to high internal work motivation, high job satisfaction, high-quality work performance, low absenteeism and low turnover. The model further proposes that the relationship between autonomy and these desired outcomes is moderated by an employee's growth-need-strength. This moderator effect can mean that for employees with comparatively low growth needs, increasing levels of autonomy, together with the associated increasing expectations of employees' initiative taking and decision making can result in adverse outcomes. Based on the link between autonomy and desirable outcomes, researchers and practitioners alike tend to expect that increased job autonomy leads to an increased sense of responsibility (Salancik, 1977), an increase in identification with organisational core values (Steers & Spencer, 1977), and an increased sense of being behavioural role models (Westman, 1992). Thus employees in higher-level jobs may have more opportunity to engage in personal web use, but because of their levels of responsibility, authority and adoption of organisational values, these individuals should engage less in PWU than employees at lower job levels (Vardi & Weitz, 2004).

Taking an alternative view, the relatively high level of autonomy that higher-level employees tend to enjoy may lead to a tendency to take aspects of their jobs for granted ('perks of the job') without explicit permission to do so. It is therefore possible that managers take the liberty to behave in certain ways because they perceive that such behaviour is their right, although it is generally forbidden or frowned upon. Higher level employees often perceive their job as allowing them to enjoy more privileges than their lower level colleagues. This behavioural latitude can range from offering free drinks and meals to acquaintances (Vardi & Weitz, 2004), to coming later to work, taking longer lunch breaks or engaging in personal web use. As one participant (sales manager) in a recent survey argued: "*I work hard for…(the company). I make a lot of money for…(the company) and spend many evenings in functions for the company. So I think [sic] me reading the news online, emailing my friends or searching for information about model building for my son should not be an issue for … (the company);* Polzer-Debruyne, 2002)." At the same

time, however, in the ensuing conversation the sales manager did not give similar privileges to his secretary. He expected her to "…*get on with her job, she can surf the net at home*". Higher level employees apparently perceive that their job allows them to enjoy the privilege of engaging in activities that in their subordinates they interpret as organisational misbehaviours (Vardi & Weitz, 2004). It is therefore possible that higher level employees see their own PWU as privilege, while that of their subordinates is seen as misbehaviour. Subsequently one might not be surprised to find that higher level employees engage more in PWU than lower level employees.

Independently from hierarchical differences in autonomy, rights and responsibilities, employees at different hierarchy levels may perceive the cost of their personal web use differently. General deterrence theory in criminology, for example, asserts that individuals make rational decisions in order to maximise their benefits and minimise their costs. Knowledge of costs, in turn, can deter individuals from intending to engage in criminal behaviours. If these costs are perceived to be different at different hierarchy levels, it is expected that employees on different job levels engage in different behaviours (Straub & Welke, 1998). In some studies, contrary to expectations under the job enrichment notion, supervisory and management employees have reported more instances of organisational misbehaviour than lower level employees (Vardi & Weitz, 2004). This was possibly due to their work generally being less supervised and controlled, their having easier and less controlled access to information, material and outside contacts than lower level employees, or their perception that due to greater organisational tolerance towards their actions, the costs of their engaging in undesired behaviours were low. On the other hand, disciplinary action taken against high level employees can have harsher and more career-damaging consequences than for lower level employees.

Depending on the theoretical view taken, one's job status in the organisational hierarchy can theoretically be associated with both increased and decreased PWU, and is thus an organisational attribute of interest to this research project.

3.3 Summary

Personal web use (PWU) has been defined as “voluntary on-line web behaviours during working time using any of the organisation’s resources for activities outside current customary job/work requirements” (Mahatanankoon, Anandarajan & Igbaria, 2004, p. 93). PWU is typically identified through online activities, and quantified through average frequency and duration.

Examining the influences on PWU, thirteen psychological and organisational attributes have been discussed in this chapter. The presented attributes were loosely placed into three categories (navigating the rights and wrongs of PWU, characteristics of the job and workplace, employee status and tenure with the organisation). Some of these attributes had previously been linked to PWU, others had not. The discussions in this chapter centred on presenting theoretical and empirical evidence supporting the notion that each of the selected attributes can be causally implicated in PWU. Following this discursive treatment of each attribute individually, we are now moving in chapter 4 to specifying hypotheses about how these attributes can influence PWU, placing an emphasis on joint influences.

Chapter 4

A theoretical model of psychological and workplace attributes influencing PWU

In chapter 1 PWU was identified as an organisational behaviour of interest to researchers and practitioners alike, followed, in chapter 2, by a critical review of the current literature on what influences personal web use (PWU). In the process of this review it became clear that at the present time no theoretical model exists that can sufficiently explain why individuals differ in their PWU. Subsequently, in chapter 3, thirteen attributes of the individual and the workplace that can, theoretically, influence differences in PWU, are discussed in some detail. In this chapter, arguments for a theoretical mode are presented. The theoretical model proposed is a heavily moderated, causal model consisting of twelve two-way interactions. The model attempts to explain PWU behaviour of individuals and (sub) groups of individuals, and it captures how the chosen attributes can be theorised to work together in predisposing an individual to engage more, or engage less in PWU.

The description of the theoretical model is followed by detailed discussions of the nature of the eleven two-way interactions and a presentation of the associated interaction hypotheses. The discussions concerning the theoretical aspects of the proposed interactions are described from the perspective of PWU differences between individuals. The associated hypotheses, in turn, are formulated in terms of relationships and changes that link the discussed differences to the regression procedures that will be used to examine the hypotheses. Specifically, the increases and decreases described in the hypotheses refer to changes in relationship patterns, and not to changes in the attributes themselves.

4.1 Description of the theoretical model

The proposed model (see Figure 4.1) contains thirteen relatively stable psychological and workplace attributes (described in chapter 3). These thirteen attributes are arranged into four interaction clusters (C1 – C4, colour coded in the model, Figure 4.1) encompassing eleven two-way interactions. To serve as guidelines, in the absence of existing theoretical models, each interaction cluster consists of one attribute thought of as the ‘driver’ variable (personal moral norms, work group norms, workload, and boredom), and one or more attributes that conceptualised as moderating the relationship between the

driver influence and PWU. The driver variables in each of the four clusters were chosen to allow description of the proposed interactions in a thematic way.

The cluster themes are based on factors suggested earlier (chapter 3), with the driver influences setting the tone for each cluster (i.e. the question of morality, the question of approval from others, the question of opportunities provided by the work situation, and the issue of quality of working life). Furthermore, the driver variables are the only ones that theoretically interact with every variable in their respective clusters. Together the four interaction clusters (C1 – C4) combine into a theoretical model of psychological and workplace attributes (Figure 4.1) that may help to account for PWU differences between individuals.

The proposed model is seen as an initial way to examine what predisposes individuals to engage more, or less, in PWU. The choices of attributes, interactions and clusters made in the development of the current model may change in future models, based on the results of the current investigation.

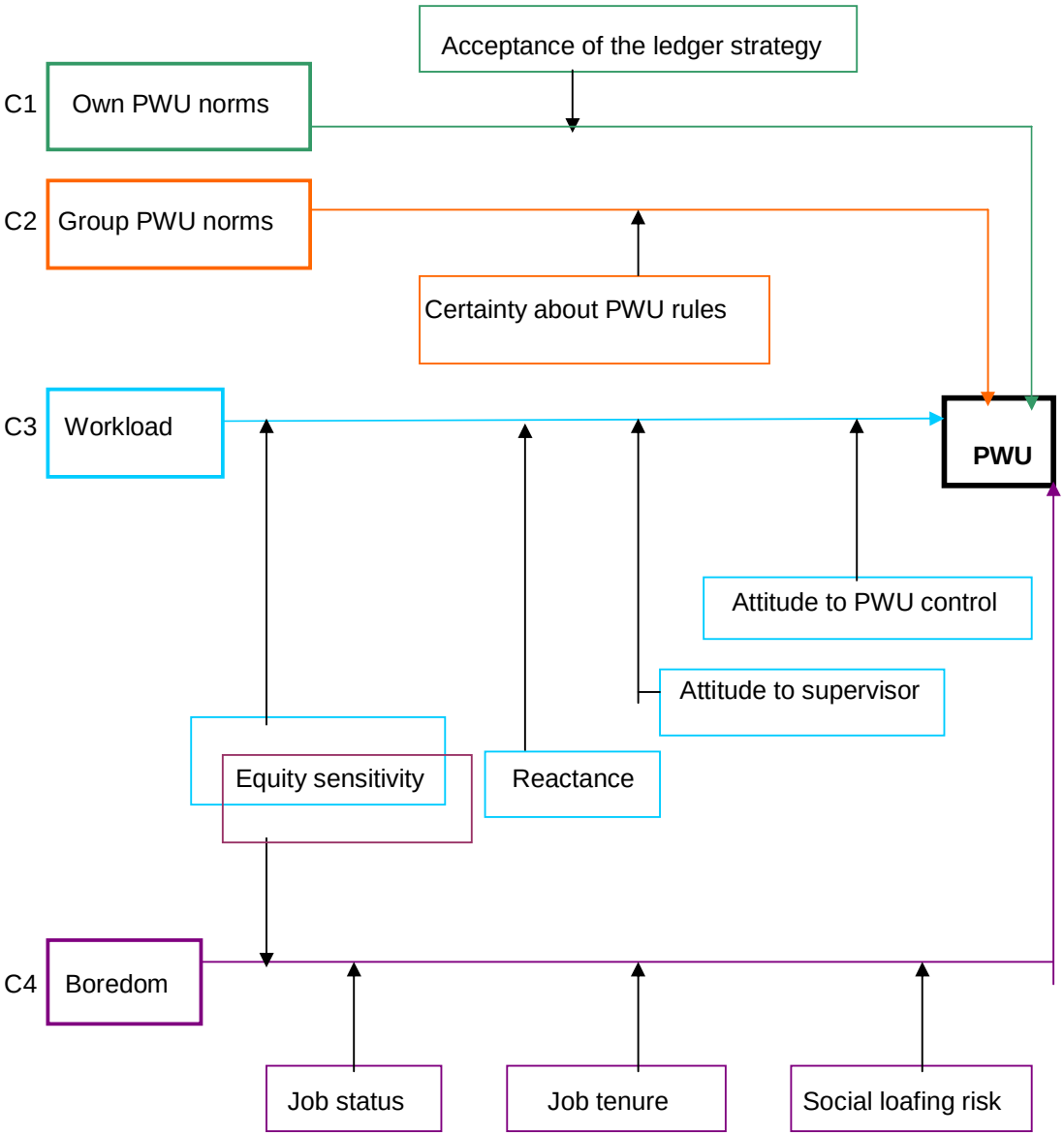


Figure 4.1: Model of psychological and workplace attributes, including moderator relationships, which are expected to explain individuals' differences in personal web use (PWU). The four interaction clusters (C1 – C4) are colour-coded for ease of recognition.

After deciding on the thirteen attributes that theoretically can influence PWU, the task was to present those attributes in a model that characterises their part in predisposing individuals to engage more, or engage less in PWU. Based on the arguments presented in chapter 3, which provided theoretical support for the influence each attribute individually can have on PWU, it would have been possible to create a main-effects-only model where each attribute had an independent effect on PWU. Such a model would be similar to the 'organisational misbehaviour model' (Vardi & Weitz, 2004), where twenty-four antecedents directly influence the intention to misbehave. A main-effects-only model would have required testing for confounding among the attributes to establish whether each of them indeed has an effect on PWU when its relationship with the remaining attributes is statistically controlled. While statistically and abstractly possible, the suggestion that each of the stable attributes operates in isolation from all the others appears to be highly unlikely. It is, in contrast, more likely that the profile of a personal web user is characterised by interlocking attributes. To put it another way, the probability of certain attributes leading to PWU is most likely to be conditional on the presence of other attributes. This line of thinking led to focusing on a model of interactions. The advantage of an interaction-based model is that, when statistically testing such a model with all chosen attributes, the main effects are automatically tested as well. Therefore, although the flowchart of Figure 4.1 does not make it explicit, the full main-effects model is implied by the present model, and the here-assumed independence of the four driver attributes can also be examined.

The theoretical model proposed in this study (see Figure 4.1) consists of four distinct groupings of variables with each one hypothesised main influence and a number of theoretically possible variables acting as moderators of that relationship. These groupings of variables are described here as "interaction clusters (C1 – C4)", which theoretically act independently from each other. The conceptualisation of independence is helpful in the context of this research project aiming at identifying the primary and most powerful determinants of why individuals differ in their PWU. At the same time, however, it needs to be acknowledged that there are possible links between clusters, and their variables. For example, it is possible that individuals are attracted to work groups and organisations with norms and values similar to themselves, resulting in their being influenced by the expectations of others similar to their own. The first two interaction clusters (C1 and C2) in the theoretical model (Figure 4.1) would then no longer be as independent of each other as the model proposes. Similarly, it is possible that workload and the level of boredom on the job are linked. Common experience would suggest, for example, that many people tend to perceive being bored at work when they have 'nothing to do'. In such a case, their workload and their work-life-quality interaction clusters would not be as independent from each other as this model proposes. It is also possible that a relationship exists between certainty about

PWU rules and attitude towards organisational PWU control. In this research such possibilities are treated as potential confounds and will be controlled statistically. The focus of this research project is firmly set on investigating the possibility that the proposed, and theoretically feasible, interactions combine to help explain why individuals differ in PWU.

Since the model contains thirteen predictor variables there is potential for a dauntingly large number of two- to fourteen-way interactions, which could be linear or non-linear, and could potentially represent a high number of influence clusters. Choosing the subsets of interactions that define the present model was guided by four criteria. First, in the absence of much existing theory and evidence on the determinants of PWU, only two-way interactions were selected. Aside from the theoretical challenge of selecting particular higher-order interactions, going beyond two-way interactions would have led to a need for rather large numbers of research participants to generate sufficient statistical powers at the analysis stage.

Second, in the absence of much guidance from existing work, only linear interactions were included in the model. This decision does not lead to the ignoring of non-linear relationships. Although these effects are not hypothesised and tested, any evidence for non-linear relationships should be detected in the assumption checking phase of the statistical analysis.

Thirdly, within the set of all possible two-way linear interactions, the chosen subsets comprise those two-way interactions that thematically represent four influences on workplace behaviours with moral connotations. These influences are one's own morals, the expectations of others on how to behave, the level of satisfaction with one's working conditions and relationships, and the desire to lead a high quality working life.

Fourthly, in this model, with the exception of equity sensitivity, moderators are conceptualised to operate in only one interaction cluster. It is, of course, possible to establish theoretical links between the moderators and clusters other than the currently proposed ones. For example, job status, job tenure, and attitude towards the supervisor–employee relationship can theoretically affect the work group norm–PWU relationship and the workload–PWU relationship as well. At the same time, it is also possible that attitudes towards the ledger strategy of neutralisation affect the boredom–PWU relationship and that between workload and PWU. In this research project, however, the focus is on those relationships that make the most intuitive and theoretical sense in the context of explaining individual differences in PWU. In the absence of previous research identifying likely clusters of interactions that characterise individual differences in PWU, the proposed relationships should be seen as one possible set of logically coherent and theory-based relationships. The findings of this research project may then serve as a guide to future studies examining other theoretical relationships.

The proposed model is also characterised by an absence of mediating effects, in contrast to other models reviewed in chapters 2 and 3. There are a general, and a specific reason for the absence of mediating effects. In general terms, the attributes in the model are seen as relatively stable attributes of the person or their workplace. This stability means that the change in any one attribute is unlikely to bring about change in another, as mediated relationships suggest. Additionally, mediating effects generally fit more comfortably with process models where causal chains describe the ways in which factors influence each other. The present model, however, does not seek to explain processes by which PWU is triggered. The proposed theoretical model tries to characterise the attributes of the individual and the workplace that predispose a person to engage more, or less, in PWU. Therefore, in the proposed model the focus is on moderator influences and possible mediating effects are not considered.

In addition to these general arguments, there is also a specific reason for the absence of mediating effects. The main difference between the majority of existing theoretical models explaining processes that lead to behaviours (such as the previously discussed theory of planned behaviour and the technology acceptance model) and the theoretical model in this study, is that existing models in this area focus on how intention to engage in PWU links attitudes, and workplace attributes, to the actual behaviour. The focus of the here presented model, however, is on characteristics that could explain differences in the actual behaviour of PWU, quantified in average and absolute frequency and duration within a given period in the past. Intentions are parts of the processes that lead to PWU, but they do not explain which attributes of the person and / or the environment predispose to engaging in PWU more, or less: The latter are the focus of the theoretical model, which therefore does not contain the aspect of intention to engage in PWU.

With the theoretical model summarised in Figure 4.1 it is proposed that four interaction clusters characterise the attributes that predispose a person to engage more, or engage less in PWU. These clusters encompass the influence that personal norms, group norms, work situation, and work quality can have on organisational behaviour. As such, the proposed model is an ‘individual-differences-type’ model that may eventually assist in developing profiles of different personal web user characteristics.

4.2 The hypothesised interactions

4.2.1 Personal moral norms and acceptance of the ledger strategy (C1)

Personal web use (PWU) is a behaviour that can theoretically raise questions of moral ‘right’ and ‘wrong’. Based on previously reviewed research (chapter 3) into the impact moral norms and moral judgement have on ethical behaviour of Information Systems (IS)

employees (e.g. Banerjee, Cronan & Jones, 1998), it can be said that individuals may engage more, or engage less in PWU, depending on whether or not their moral norms suggest it is acceptable to do so. In particular, individuals whose moral norms suggest that PWU is acceptable are expected, on average, to engage more in PWU than individuals whose moral norms suggest the opposite (Trevino, 1986).

Individuals may act in full accordance with their moral norms, they may not do so at all, or they may do so only partially. The use of the ledger strategy of neutralisation allows individuals to reinterpret their moral norms through focusing on their previous good behaviour at work, and giving themselves permission to engage in PWU in light of a perceived positive ledger balance. Individuals who use this neutralisation strategy are expected, on average, to engage in higher levels of PWU than individuals who prefer not to use it.

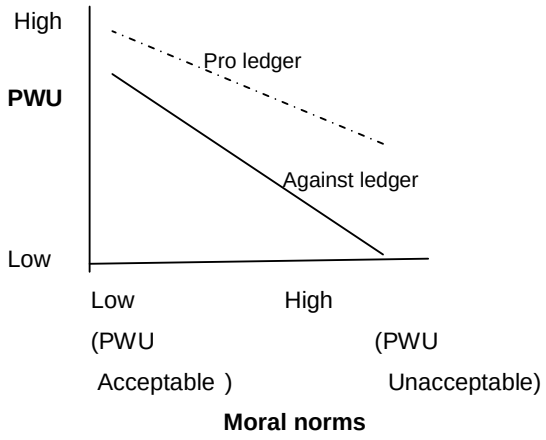


Figure 4.2: Depicting how acceptance of the ledger strategy of neutralisation is hypothesised to moderate the relationship between moral norms regarding PWU and PWU levels.

For individuals whose moral norms reject PWU, and who also do not accept that the ledger strategy is a valid tool for giving themselves permission to engage in morally debatable behaviours, their moral norms are the guide to their behaviour. As these moral norms find PWU unacceptable, the level of their PWU is expected to be relatively low (Figure 4.2). On the other hand, individuals whose moral norms find PWU unacceptable, yet who advocate the use of the ledger strategy, have a cognitive tool that allows them to reinterpret their moral norms before engaging in PWU. The apparent discrepancy between their moral norm not to engage in PWU and their use of the ledger strategy giving permission to engage in PWU leads to a state of aversive arousal (Kiesler & Pallak, 1976). According to dissonance theory (Festinger, 1957), this state of aversive arousal motivates

individuals to engage in PWU to a level that balances the two incongruent cognitions. Dissonance most often arises in situations where individuals are in decision-making situations where cognition, alternatives, and opinions direct them in different directions (Soutar & Sweeney, 2003). The greatest dissonance is created when the two alternatives are equally attractive. On the one hand, the alternative as suggested by their moral norms is not to engage in PWU. On the other hand, use of the ledger strategy offers a permitted way of engaging in the 'forbidden fruit' of PWU. As a result of this dissonance, the PWU level of these individuals is likely to be higher than that of people who disapprove of PWU and do not use the strategy (Figure 4.2). Although Festinger (1957) maintained that dissonance was a post-decision phenomenon, a large number of researchers have challenged this view (e.g. Jecker, 1968; Phillips, 2002; Tyszka, 1986). Recent empirical work examining consumer decision-making processes (Koller & Salzberger, 2006), for example, suggests that cognitive dissonance may also be present in the decision-making phase when weighing up alternatives and competing information. Thus when moral norms suggest not engaging in PWU, and the ledger strategy suggests the alternative of relatively high levels of PWU being acceptable, the balance would lie in the middle range of PWU levels, about halfway up the scale from 'no PWU' (Figure 4.2).

Dissonance and its associated aversive arousal are not found in low choice settings (Fazio, Zanna & Cooper, 1977), such as those existing for individuals whose moral norms find PWU acceptable and who do not approve of using the ledger strategy. Dissonance in those circumstances is not expected, because essentially there is no need to use a permission-giving strategy before engaging in PWU. Due to their moral norms embracing personal web use, the PWU levels of these individuals are expected to be comparatively high (Figure 4.2). The tenets of self-perception theory (Bem, 1972) then suggest that individuals whose moral norms find PWU acceptable, and who also advocate the use of the ledger strategy, will display exaggerated behaviour congruent with both their attitudes (Fazio, Zanna & Cooper, 1977). Similarly, impression management theory (Rosenfeld, Giacalone & Tedeschi, 1983) suggests that the desire to foster positive self-presentation to others will lead to an enhancement of PWU levels for those individuals. It is thus expected that PWU levels of individuals whose moral norms approve PWU, and who tend to use the ledger strategy will be amplified to a relatively higher level than those of their PWU approving and 'non-Ledger' using counterparts (Figure 4.2).

The described difference in PWU levels within the group of individuals who find PWU morally acceptable and who differ in their acceptance of the ledger strategy, however, is expected to be smaller than that between the PWU levels of individuals who find the practice unacceptable and who differ in their acceptance of using the strategy (Figure 4.2).

The main reason for this expectation is that according to virtually all psychological theories of motivation, organisms strive to increase pleasurable stimulation and to decrease aversive experiences. There is a universal desire to avoid negatively assessed activities and stimuli (Weiner, 1992). Incongruent attitudes, such as finding PWU unacceptable and yet advocating the use of the ledger strategy, lead to dissonance. In the presence of dissonance, individuals experience aversive arousal. This in turn is a powerful motivator for humans to recreate balance and alleviate the experienced negative state, leading to relatively high levels of PWU for people experiencing the described dissonance between their moral norms and their ledger strategy use. Due to the effort to reduce dissonance, the distance between PWU level of individuals using the strategy and those who do not, when both groups hold moral norms rejecting PWU, is expected to be relatively large.

Dissonance, however, does not exist in the absence of competing alternatives. Therefore, if, in response to asking oneself the question whether or not to engage in PWU, the moral norm-based answer is affirmative, there is no moral dilemma, regardless of one's attitude towards using the ledger strategy. In the absence of dissonance and aversive arousal there is also little motivation to alter the existing balance. The position taken in this study, however, is that within the group of individuals with norms approving PWU, a small difference exists depending on their use of the ledger strategy. The reason for the expected amplification of PWU levels for those individuals who use the ledger strategy lies in their desire to increase pleasurable experiences, and to reaffirm their balance between PWU behaviour and attitude. This amplification effect, however, is expected to be relatively small, because any large alterations to the achieved, balanced and congruent state are likely to create dissonance, and thus lead to aversive arousal, which is usually avoided.

In general, increasing acceptance of PWU by one's personal moral norms is linked to increases in PWU, and differences in the attitude towards using the ledger strategy of neutralisation explain individual differences in the strength of this relationship.

Hypothesis 1: The attitude individuals hold towards using the ledger strategy moderates the relationship between their moral norms regarding PWU and their PWU levels. Specifically it is expected that negative attitudes towards using the ledger strategy enhance the influence moral norms have on PWU, while pro-ledger attitudes have the opposite effect.

4.2.2 Work group norms and certainty about organisational PWU regulations (C2)

In order to be certain about making an acceptable decision, individuals refer to the PWU-related expectations held by their work group and by the organisation. The second

interaction cluster (C2) in the proposed model (see Figure 4.1) represents the joint influences on PWU of work group norms regarding PWU, and the degree of certainty individuals have regarding their knowledge of organisational PWU rules. Based on previously discussed (see chapter 3) empirical evidence, it can generally be expected that members of work groups with norms against PWU will, on average, engage less in PWU than members of work groups seeing PWU as acceptable (Lee, Lee & Kim, 2004).

Individuals are aware that, in addition to their work group, the organisation as such also has relatively formal norms regarding PWU. Typically, in the majority of organisations, these formal norms express the expectation that employees refrain from or limit their PWU to some degree. If employees are certain about the PWU rules of their organisation, on average, they are likely to adhere to them and have relatively low PWU levels. In turn, if they are uncertain about the PWU levels of their organisation, they may assume the company is relatively permissive regarding PWU and engage in PWU, on average, at relatively higher levels.

Because working individuals want to meet the expectations of both their work group and their organisation (Dunphy & Dick, 1981), it is theoretically possible that certainty about the organisation's PWU norms influences the impact the work group's norms have on the degree of individuals' PWU. Those whose work group norms find PWU unacceptable, and who are certain about their organisation's PWU rules, experience an environment of certainty regarding acceptable PWU levels. These individuals are expected to have relatively low levels of PWU, assuming that in general, organisational PWU rules advocate lower levels of PWU (Figure 4.3).

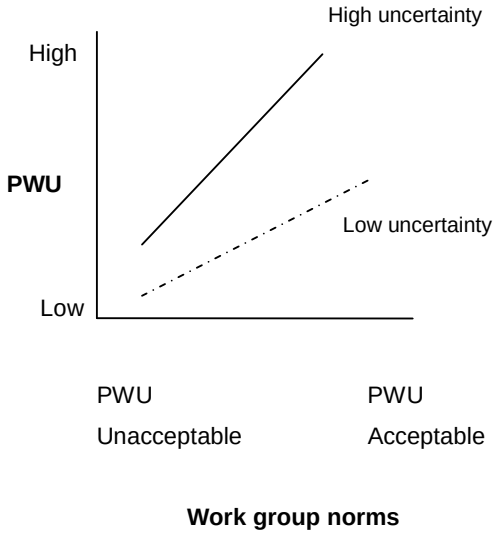


Figure 4.3: Depicting how certainty about organisational PWU rules is hypothesised to moderate the relationship between work group norms and PWU levels.

Employees whose work group finds PWU unacceptable, but who are not certain about their organisation's formal PWU rules, are likely to engage in comparatively higher levels of PWU than those of their counterparts who are certain about these rules (Figure 4.3). In this situation, engagement in PWU to a certain degree would be a somewhat risky behaviour that may be used to 'force' the hand of the organisation to more clearly communicate its PWU expectations and formal rules (Hofstede, 1997).

Employees, whose work group norms portray PWU as acceptable behaviour and who are certain about their organisation's PWU rules, are expected to attempt to satisfy the expectations of both the organisation and their work group by engaging in relative mid-levels of PWU (Festinger, 1957); (Figure 4.3). In the absence of certainty about organisational PWU rules, members of work groups approving PWU can theoretically assume that their work group's norms are a reflection of relatively permissive organisational PWU expectations. After all, if other work group members 'get away with it', and the group's consensus is that PWU is acceptable, following the work group norms and engaging in relatively high levels of PWU is perceived to be advantageous to the individual (Figure 4.3). In such situations, high levels of PWU can demonstrate a close association with one's work group, and reflect a self-serving interpretation of the organisational PWU expectations about which one feels relatively in the dark.

The difference in PWU levels within the group of individuals whose work group norms find PWU acceptable, yet who differ in their level of certainty regarding organisational PWU rules, however, is expected to be greater than the difference between the PWU levels of those in work groups with norms finding it unacceptable, and who differ in their certainty about formal PWU rules (Figure 4.3). The reason for this difference lies in the strong desire humans have to experience certainty in their environment. Certainty enables predictions about the future, and allows the assessing of behavioural consequences, thus giving a feeling of security and belonging (Bradac, 2001). If individuals are certain about their work groups' and the company's expectations regarding PWU, and if these are aligned with each other, people will meet these expectations. If the possibility exists that these expectations conflict with each other, individuals will attempt to balance them in an effort to be accepted members of the work group as well as 'the organisation'.

In the presence of uncertainty regarding formal organisational PWU expectations, individuals tend to interpret situations to their advantage, and show a stronger reliance on work group norms in an effort to alleviate feelings of uncertainty, ambiguity, and fears of doing something 'wrong' (Dunphy & Dick, 1981; Sherif, 1961). This strong reliance will then prevent members of work groups who find PWU unacceptable to engage in higher PWU levels, even if these members are uncertain about the organisational PWU rules.

Therefore, the expected difference in PWU levels between individuals who differ in their certainty will be smaller.

At the same time, in the absence of certainty about organisational PWU rules, the strong reliance on work group norms (Dunphy, 1972; Dunphy & Dick, 1981) gives members of work groups that find PWU acceptable almost carte blanche to engage in high levels of PWU (Morton, Brookes, Smart, Backhouse & Burns, 2004). The difference between these carte blanche-based high PWU levels and the balancing medium-level of those who are certain about their company's PWU rules is expected to be comparatively wide, due to the strength of the work group norm's influence compared to that of organisational norms.

In general, increases in work group norm's acceptance of PWU are linked to increases in group member's individual PWU, and differences in the degree of certainty about organisational PWU rules explain individual differences in the strength of this relationship. *Hypothesis 2:* The degree to which individuals are certain about their organisational PWU rules moderates the relationship between their work groups' norms and their PWU. Specifically it is expected that high levels of uncertainty enhance the influence of work group norms on PWU, while low levels of uncertainty have the opposite effect.

4.2.3 Workload, equity sensitivity, reactance, and attitudes towards treatment by the supervisor and PWU control by the organisation (C3)

Using the Internet at work for personal interest is an activity engaged in outside the normal job requirements, and thus in addition to or instead of accomplishing the regular workload associated with the job. Based on past empirical evidence it can usually be expected that, on average, employees reporting to have a higher workload engage less in PWU than employees reporting to have a lower workload (Lee, Lee & Kim, 2004).

However, not all employees whose reported workload allows them similar opportunities to engage in PWU do so to the same degree. Whether individuals take up the objective or perceived opportunities to participate in non-work activities such as PWU depends to a certain degree on the motivation to do so. This motivation can come from attitudes as well as personality traits. The attitudes and trait of interest here are those depicted in the third interaction cluster in the proposed theoretical model (Figure 4.1): equity sensitivity, the level of trait reactance, the attitude towards organisational management of PWU, and the attitude towards the treatment received by one's supervisor. The expected relationships between these potential motivating forces, workload and PWU levels are described separately in the following paragraphs.

4.2.3.1 Workload and equity sensitivity

As previously argued (see Chapter 3) differences in equity sensitivity can theoretically explain individuals' differences in PWU via two avenues. One avenue can be the equity sensitivity depended differences in focusing on giving on being a giver (being committed to giving high levels of work effort), and that of being a taker (focusing on putting in the least possible effort, and on what one can take from the working relationship). This focus on giving and taking in the working relationship can theoretically moderate the workload – PWU relationship through different uses of the different opportunities given by relatively high or relatively low workloads. The second avenue through which equity sensitivity potentially impacts on PWU can be through differences in what are preferred work outcomes. When examining moderators of workload, it is reasonable to expect that a match or mismatch between expected and actual types of rewards for the completion of a given workload plays a moderating role in the workload – PWU relationship.

Individuals whose equity sensitivity leans relatively strongly towards the benevolent end of the concept are more likely to prefer intrinsic rewards such as challenging work and less likely on extrinsic rewards such as PWU. Individuals whose equity sensitivity leans more strongly towards the entitled end of the spectrum, in turn, prefer extrinsic rewards and opportunities, and engaging in personal web use may potentially be such a work outcome. These individuals are expected to engage, on average, in more PWU than those whose equity sensitivity characterises them as relatively benevolent.

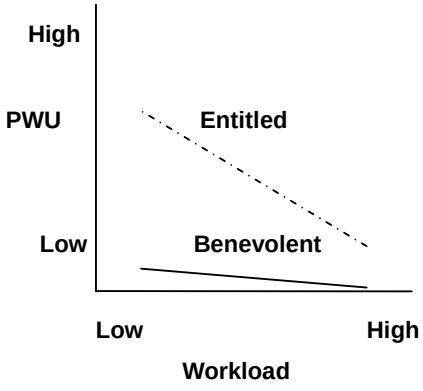


Figure 4.4: Depicting how level of equity sensitivity is hypothesised to moderate the relationship between workload and PWU levels.

Low workloads generally provide ample opportunities to engage in PWU. In these situations, individuals at the benevolent end of the spectrum would be expected to seek further work-related tasks before they feel able to engage in PWU. The level of PWU for these high givers is therefore expected to be relatively low (Figure 4.4). At the same time, individuals at the entitled end of the spectrum are likely to have a less strong commitment to work-related tasks. These low givers are likely to be more amenable to taking advantage of opportunities to engage in the higher levels of PWU that a low workload provides (Figure 4.4).

In situations of high workload, benevolents are expected to focus their efforts fully on completion of their tasks, and to abstain from PWU. In high workload situations, opportunities for PWU are nearly non-existent, and at the same time, the motivation to look for those opportunities is not present either (Figure 4.4). The situation is slightly different for entitleds. Again, the high workload provides little opportunity to concentrate on anything other than on work tasks. Nevertheless, entitleds will take the few opportunities that arise and engage in PWU, perhaps in the form of a mini break from work. Therefore, it is expected that the PWU levels of entitleds are higher than those of benevolents, who have higher levels of work effort commitment (Figure 4.4).

On average, it is expected that when the workload is high the opportunities to engage in PWU are limited, and because the characteristics of benevolents is a focus on what one can do for the organisation, differences in this attitude will not translate into large differences in PWU levels in situations of high workload. In contrast, PWU opportunities given by situations of low workloads will allow differences in equity sensitivity to be translated into differences in PWU levels, leading to potentially wide PWU differences between benevolents and entitleds (Figure 4.4).

Due to the differences in the focus on either extrinsic or intrinsic work outcomes between benevolents and entitleds, the differences in PWU levels between these two groups are expected to be greater than in situations of low workload (Figure 4.5). In situations of high workload, there are fewer opportunities to pursue personal interests, yet motivated by their attitude's characteristics entitleds will focus on their own advantage. Due to the external constraints that high workloads place on the practicalities of engaging in PWU, the difference between the PWU levels of benevolents and entitleds will be proportionally small. Dissonance theory (Festinger, 1957) would suggest that entitleds, when faced with a lack of PWU opportunities due to high workloads, might actually shift their attitude, and see it advantageous to complete their workload without too many interruptions. This attitude shift would then make lower PWU levels congruent and acceptable for entitleds, leading to a reduction in the difference between entitleds' and

benevolents' PWU levels in periods of high workload (Figure 4.5). For low takers cognitive dissonance would not exist, because their proportionally weaker focus on advantages in work relationships would allow them to accept periods of high workloads without experiencing aversive arousal and requiring attitude or behaviour changes.

In general, decreases in workload can be theorised to be linked to increases in PWU, and differences in the levels of giver attitude towards work effort explain individual differences in the strength of this relationship. *Hypothesis 3a:* Equity sensitivity is hypothesised to moderate the relationship between workload and PWU. Specifically it is expected that in at all workload levels entitleds engage more in PWU than benevolents.

4.2.3.2 Workload and trait reactance

Another attribute theoretically explaining differences between individuals in the workload–PWU relationship is trait reactance (see Figure 4.1). Individuals with strongly developed levels of trait reactance are more sensitive to curtailment of freedom, and react more strongly to it, than those with less strongly developed trait reactance characteristics (Hellman & McMillin, 1997). Due to this difference in sensitivity and strength of reaction, it is reasonable to assume that, on average, individuals with high trait reactance engage more in PWU than those with low levels.

In situations of low workload, individuals with low trait reactance perceive no reason to hold on to a threatened freedom. In order to ensure that the low workload really does not impinge on their freedom to engage in PWU, they may engage in lower levels of PWU (Figure 4.5). Individuals with high trait reactance, however, are extremely sensitive to any potential limits to their freedom, and even in low workload situations are expected to engage in relatively higher levels of PWU than their low trait reactance counterparts (Figure 4.5). For these individuals it is possible that they engage in these PWU levels not only because of perceived restrictions in Internet
access for personal interest, but also as a somewhat displaced reaction to restrictions of other freedoms in their working environment that cannot easily be restored.

Situations of high workload are perceived by individuals with high trait reactance as a clear and strong limitation of their freedom to access the Internet for personal reasons. In these situations, high reactance individuals will react strongly to recapture the threatened freedom and engage in relatively high levels of PWU, possibly even at the expense of work performance (Figure 4.5). In contrast, individuals with low trait reactance lack this level of sensitivity and desire to react, and their PWU levels will be lower, due to the external restrictions high workloads tend to place on PWU opportunities (Figure 4.5).

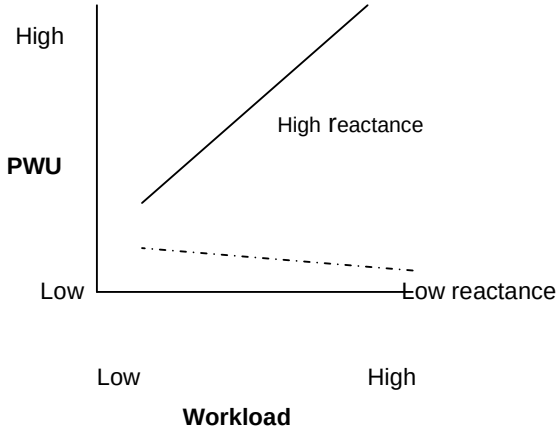


Figure 4.5: Depicting how level of trait reactance is hypothesised to moderate the relationship between workload and PWU levels.

Because individuals high in trait reactance will most likely interpret high workloads as limitations of their freedom to engage in PWU, they will react strongly to recapture that freedom and create situations to engage in it. The difference between their PWU levels and those of individuals low in reactance is expected to be comparatively wide, because the PWU of low reactance individuals is most likely to be hampered by the lack of opportunities inherent in high workloads (Figure 4.5). The difference between high and low reactance individuals' PWU in situations of low workload, however, is expected to be less pronounced (Figure 4.5). Although high reactance individuals, with their sensitivity to even the smallest loss of freedom will engage in higher PWU levels than their low reactance counterparts, the difference between the two groups will be relatively small, as low workloads give similar opportunities to both, and the perceived limitations to freedom are likely to be few.

Hypothesis 3b: Individuals' level of trait reactance moderates the relationship between their workloads and their PWU levels. Specifically it is expected that high levels of trait reactance will enhance the influence of high workloads on PWU, whereas low levels of trait reactance have the opposite effect.

4.2.3.3 Workload and attitude towards PWU control

Most organisations have policies, procedures, and consequences in place to manage the PWU of their employees. The attitude towards the efforts made by an organisation to manage PWU is also part of the third interaction cluster in the proposed theoretical model (Figure 4.1). The theory of planned behaviour (Ajzen, 1991) sees

attitudes towards a specific behaviour as one of the predictors for intention to engage in this behaviour, and subsequently acting on this intention. Assuming that the processes of organisational PWU control aim at reducing the level of PWU, we can expect that, on average, employees who are satisfied with the PWU control efforts by their organisation, have a positive attitude towards lowered levels of PWU and engage in it less in than those who are dissatisfied with PWU control efforts.

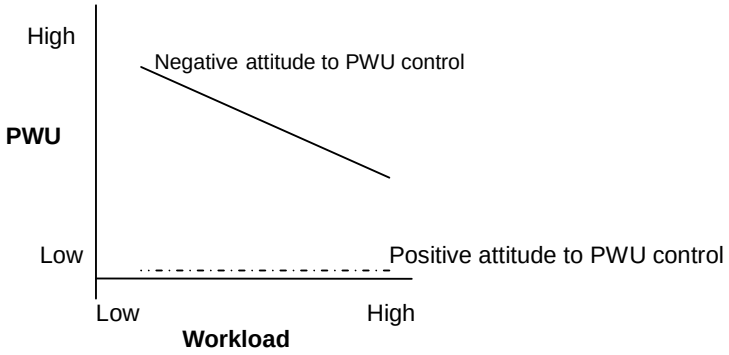


Figure 4.6: Depicting how the attitude towards organisational PWU control efforts is hypothesised to moderate the relationship between workload and PWU levels.

Employees who are satisfied with the measures aimed at reducing PWU, however, are generally expected to adhere to the relevant regulations, and to have proportionally lower levels of personal web use, regardless of workload (Figure 4.6).

Low workload situations allow plenty of opportunities to engage in PWU. For individuals with a negative attitude towards organisational efforts to manage PWU, situations with little work to do are suitable occasions for demonstrating the low regard held towards their appropriateness and effectiveness by engaging in high levels of PWU. In contrast, those who are more satisfied with the PWU control may not see the need to make this point, and subsequently engage less in PWU than their negative attitude counterparts. Employees who are dissatisfied with the PWU control measures of their organisation are expected to seize the opportunities given by lower workloads, and subsequently engage in PWU levels that are relatively higher than those of individuals who have a positive attitude towards their organisation's PWU control (Figure 4.6).

In low workload situations, the difference between the two groups holding opposing attitudes towards PWU control is expected to be relatively greater because of a lack of external constraints on expressing negative attitude through PWU. In situations of high workload, people with negative attitudes may experience the restrictions of PWU control stronger, and with less understanding than their more accepting counterparts. Although

these individuals with a negative attitude will engage in higher levels of PWU, the difference between them and people with a more positive attitude towards PWU control is not expected to be great due to the external limitations placed upon individuals by a high workload (Figure 4.6).

In general, decreases in workload are linked to increases in PWU, and differences in attitude towards organisational PWU control efforts explain individual differences in the strength of this relationship. *Hypothesis 3c:* The attitude individuals hold towards their organisations' PWU control efforts moderates the relationship between workload and PWU levels. Specifically it is expected that negative attitude towards PWU control efforts enhances the influence workload has on PWU, while a positive attitude has no affect on the workload – PWU relationship.

4.2.3.4 Workload and attitude towards supervisor

Workloads are typically assigned by supervisors, who are seen as representing the organisational goals and objectives. It is therefore appropriate to include aspects of the supervisor–employee relationship in this, the third interaction cluster of the theoretical model (Figure 4.1). The perception of positive treatment by the supervisor can give rise to a more positive attitude towards that relationship with the supervisor, translating into lower levels of PWU. Equally, treatment to be perceived as negative is likely lead to a negative attitude towards this relationship, translating, on average, into higher levels of PWU.

Individuals with a negative attitude towards their supervisor are expected to be inclined to 'get even' and seek opportunities to engage in PWU. Situations of low workload provide plenty of opportunity to do so, and individuals with a negative attitude towards their supervisor are expected to engage in comparatively high levels of PWU (Figure 4.7). A positive attitude towards the supervisor, however, can theoretically operate in two opposing directions. In situations of low workload, the PWU levels of individuals with a positive attitude towards the supervisor may remain relatively low, because of the desire not to jeopardise the existing good relationship (Positive attitude (1), Figure 4.7). It is also possible that in situations of low workload, individuals with a positive attitude towards the relationship will engage in relatively high levels of PWU (Positive attitude 2, Figure 4.7). The reason here may be the perception that due to their good relationship supervisors will 'cut them some slack' or 'turn the other way' when there is little work that needs to be accomplished.

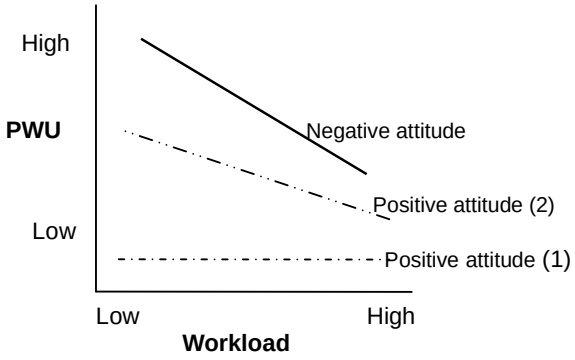


Figure 4.7: Depicting how the attitude towards treatment received from the supervisor is hypothesised to moderate the relationship between workload and PWU levels.

Employees with a more negative attitude towards their supervisor are likely to see a high workload as additional evidence of the overall unfavourable treatment received from that supervisor. In those cases, it is expected that individuals make greater use of PWU within the limited opportunities high workloads tend to provide (Figure 4.7).

In high workload situations, individuals with a positive attitude towards their supervisor have, again, two theoretical possibilities. They may interpret their high workload as tolerable in light of generally acceptable treatment received from their supervisors. These individuals will then practice less PWU due to limited time and opportunities, and because they lack the desire to seek these opportunities (Positive attitude 1, Figure 4.7). It is also theoretically possible that individuals with a positive attitude towards their supervisor will engage in relatively medium levels of PWU, in the assumption that their supervisor will show understanding and tolerate PWU mini breaks (Positive attitude 2, Figure 4.7).

When looking at the PWU differences between positive and negative attitudes towards the supervisor within low and high workload situations, the nature of the respective attitudes can explain some of these differences. In low workload situations, individuals with a positive attitude may engage very little in PWU out of respect for their supervisor and in reciprocity for beneficial treatment received (Blau, 1964; Homans, 1958). At the same time, individuals with a negative attitude may engage in high levels of PWU in order to take advantage of the opportunity given to retaliate against perceived unfairness (Greenberg & Scott, 1996). In this case, the differences in PWU levels between those two groups of individuals are expected to be relatively large (Figure 4.7).

As pointed out, it is also possible that individuals with a positive attitude engage in higher levels of PWU under the assumption that this is part of their idiosyncrasy credits of

being in a mutually beneficial relationship with their supervisor. Nevertheless, the PWU levels of this group of people are expected to be lower than those of individuals with a negative attitude. The reason for this is that even when one assumes that the supervisor will tolerate PWU to a certain degree, one is generally still aware of the fact that the organisation will tend to frown upon excessive PWU. In order to avoid getting the supervisor into trouble, one therefore voluntarily curbs one's PWU to some degree. In reality, however, on average the difference between these positively thinking individuals and those with a negative attitude is expected to be relatively narrow (Figure 4.7).

In general, decreases in workload are linked with increases in PWU, and differences in attitude towards the treatment received by supervisors explain individual differences in the strength of this relationship. *Hypothesis 3d:* The attitude individuals hold moderate the relationship between their workload and their PWU levels. Specifically it is expected that a negative attitude will enhance the influence workload has on PWU levels.

4.2.4 Boredom, equity sensitivity, job status, job tenure, and social loafing risk (C4)

Boredom at work (as well as outside of work) is an unwelcome sensation, and people usually take measures to avoid or alleviate it (Barbalet, 1999; Solomon, 1961). The relief from boredom provided by PWU can include distraction (e.g. reading something about one's hobby rather than work), creation of meaning (e.g. searching for information on how to achieve a personal goal), companionship (e.g. chat rooms or emails), and excitement (e.g. will I be caught?). One would expect that individuals who perceive their work would be boring to engage more in PWU than those who perceive the opposite (Rotunda, Kass, Sutton & Leon, 2003).

Yet, individuals experiencing the same degrees of boredom at work do not necessarily engage in PWU to the same degree. The effect boredom has on PWU can depend on how individuals interpret their level of boredom, and on the opportunities that present themselves to alleviate it.

4.2.4.1 Boredom and equity sensitivity

One attribute that can be taken into account here is the previously discussed equity sensitivity (Figure 4.1). In this study it is suggested that individuals who can be described, in equity sensitivity terms, as benevolents, focus more on intrinsic work outcomes such as challenging work than those described as entitleds, who tend to prefer extrinsic outcomes like increased pay. At the same time, benevolents are more likely to focus on giving in the work relationship, and entitleds on taking. It is therefore possible, that equity sensitivity

moderates the boredom – PWU relationship. In situations of high workplace boredom it is argued that benevolents are more tolerant of boredom at work than entitleds, because they have a stronger preference to focus on what they can do for the company – and if that includes tolerating boredom at work, so be it. From that perspective it is expected that benevolents have, on average, to have lower PWU levels than entitleds. At the same time, however, in very boring work situations benevolents are not expected to completely refrain from PWU. In these situations benevolents may perceive a mismatch between what they expect as work outcome (i.e. challenging and meaningful work). In order to rectify this discrepancy, they may engage in PWU in the hope to reduce feelings of boredom through distraction and creating meaning via using the Internet.

In situations where workplace boredom is low, neither benevolent nor entitled individuals have the need to engage in PWU, because there is little or nothing to alleviate. It is therefore expected that the PWU levels of benevolents and entitleds are both comparatively low in situations of low workplace boredom (Figure 4.8).

There is, however, a bigger difference expected between the PWU levels of benevolents and entitleds in situations of high workplace boredom. Benevolents, experiencing high levels of boredom, may engage in PWU in an attempt to alleviate the worst bouts of boredom, but because of their overall preference to give to the organisation, their levels of PWU can generally be expected to be low (Figure 4.8).

In contrast, entitleds are expected to have less tolerance towards boredom than benevolents, and to focus more on extrinsic work outcomes. Consequently, it is expected that entitleds respond to high workplace boredom with higher levels of PWU in an attempt to stave off the unwelcome sensation, and to gain a more valued and tangible work outcome (Figure 4.8).

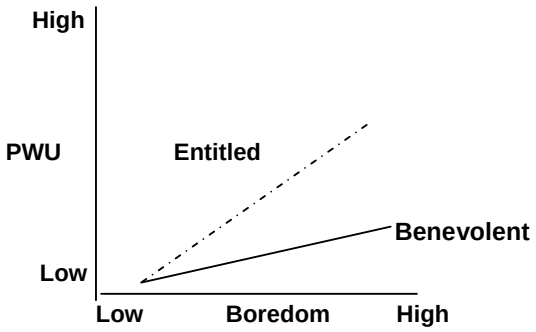


Figure 4.8: Depicting how equity sensitivity is hypothesised to moderate the relationship between workplace boredom and PWU levels

If we see PWU as a measure to relieve boredom, and to create an environment that can be meaningful for the individual, then there is, from the perspective of the benevolent, as well as that of the entitled generally no need to engage in PWU in situations of low boredom. In contrast, in situations of high boredom, differences in equity sensitivity are expected to result in widely differing levels of PWU. In such situations, the differences in tolerance of boredom as part of 'giving' one's work effort will be the deciding factor in determining to what level one engages in PWU (Figure 4.8).

In general, increases in boredom are linked with increases in PWU, and differences in the levels of giver attitude towards work effort explain individual differences in the strength of this relationship. *Hypothesis 4a:* Equity sensitivity is expected to moderate the relationship between workplace boredom and PWU. Specifically it is expected that the impact boredom has on PWU is significantly stronger for entitleds than for benevolents.

4.2.4.2 Boredom and job status

Different job status levels are, in most organisations, associated with differences in behavioural expectations and in power. Individuals in high status positions are generally looked upon as role models and representatives of the organisational goals. Under that assumption we would expect that, on average, the PWU levels of high status employees to be lower than those of low status employees. At the same time, high status employees are generally in situations of power. The experience of power can theoretically lead to exploitive and inequitable behaviours, such as relatively high levels of PWU.

As previously argued, in situations of low workplace boredom the motivation to engage in PWU as a means of distraction is likely to be very small. Therefore, it is expected that in such situations, individuals in low and high status jobs have similar, relatively low PWU levels (Figure 4.9). In situations of high workplace boredom, however, job status can lead to two possible ways that PWU levels can differ.

On the one hand, it can be expected that individuals with high status jobs have more opportunity to engage in PWU without being criticised, because the power associated with their positions seems to set them above the PWU expectations that organisations have from their 'normal' employees. The old sayings that 'power corrupts' and provides the power holder with temptation and opportunity to 'line his or her pocket' have repeatedly found scientific support (e.g. Kipnis, 1972; Sampson, 1965). The control given by power to individuals may then lead to exploitive and inequitable behaviours, such as higher levels of PWU.

The difference in position power, for example, between high and low status jobs can give holders of high status jobs greater latitude of PWU freedom than employees with lower status jobs. Based on these theoretical contingencies, it is expected that in high boredom situations, employees with high status jobs engage in higher PWU levels than employees with low status jobs (High Status (1), Figure 4.9). Consequently low status jobholders enjoy less behavioural latitude than their high status counterparts. Therefore, in high boredom situations, low status jobholders are expected to resort to PWU in response to boredom at lower levels than individuals in high status jobs (Low Status 1, Figure 4.9).

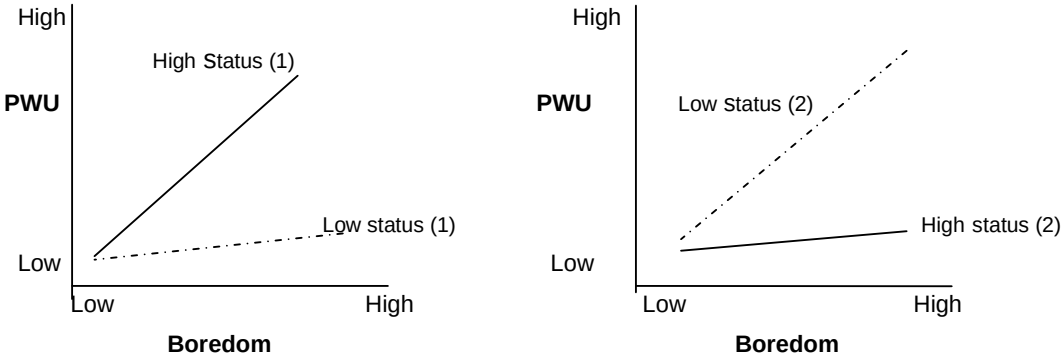


Figure 4.9: Depicting the alternative ways (1, 2) job status within the organisation is hypothesised to moderate the relationship between workplace boredom and PWU levels.

On the other hand, one can also expect high status jobholders to have greater loyalty and commitment towards the organisation, and see themselves more as role models than do low status jobholders. Many leadership experts, for example, suggest that leaders are effective in managing their subordinates only if they behave in ethical, moral and exemplary ways, showing personal integrity (Hellriegel & Slocum, 2007). Furthermore, the burdens and responsibilities of power can produce compassionate rather than exploitive behaviours in power holders (Cartwright & Zander, 1968). Based on those theoretical possibilities, it is expected that employees with high status jobs respond to boredom with relatively low levels of PWU (High Status 2, Figure 4.99). Low status jobholders, however, may see no necessity to be behavioural role models, may have little organisational loyalty, and because of lower pay may be less tolerant to an unfavourable quality of work life (e.g.' For that kind of money I don't need to put up with that.') Based on this theoretical view, it is expected that low status jobholders engage in higher levels of PWU in response to high levels of workplace boredom than their high status counterparts (Low Status 2, Figure 4.9).

In general, increases in the levels of workplace boredom are linked to increases in PWU, and differences in job status explain the strength of this relationship. This relationship can be expressed in two, alternative hypotheses:

Hypothesis 4b1: Individuals' job status within an organisation moderates the relationship between their boredom and their PWU levels. Specifically it is expected that the impact of boredom on PWU is significantly stronger for high status jobs than low status jobs.

Hypothesis 4b2: Individuals' job status within an organisation moderates the relationship between their boredom and their PWU levels. Specifically it is expected that the impact of boredom on PWU is significantly stronger for low status jobs than for high status jobs.

4.2.4.3 Boredom and job tenure

While job status is associated with position power and role model expectations, job tenure is associated with knowing about opportunities to engage in PWU without negative consequences, the loyalty and commitment one feels towards the organisation, and the latitude one is given to engage in PWU (either due to seniority, or because one is not yet fully socialised). In general, it is reasonable to assume that individuals with long tenure are more familiar than their short-tenured colleagues with the degree to which PWU is acceptable behaviour, how to create opportunities to engage in PWU, and how to 'get away with it'. It can be expected that, on average, long-tenured employees engage in higher PWU levels than short-tenured employees. It is also possible that short-tenured employees engage, on average, in higher PWU levels than long-tenured employees, because the former are not yet completely socialised into the organisation, and assume that relatively high PWU levels, advantageous to them, are acceptable.

There are no differences expected between the relatively low PWU levels of employees with long, and those with short tenure, in situations of low workplace boredom. As previously argued, in the absence of boredom employees find meaning and excitement in their work, and have little reason to engage in PWU to create meaning (Figure 4.10).

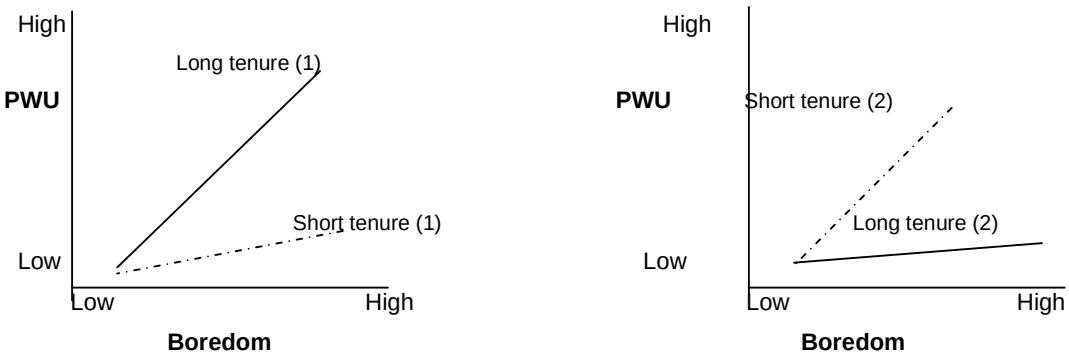


Figure 4.10: Depicting the alternative ways (1, 2) job tenure is hypothesised to moderate the relationship between workplace boredom and PWU levels.

There are, however, relatively large differences expected between the PWU levels of long- and short-tenured employees in situations of high workplace boredom. On the one hand, it is possible that the PWU levels of long tenured employees are higher, when compared to the PWU levels of short-tenured employees (Long tenure 1, Figure 4.10). Thanks to their insider knowledge and experience, long-tenured employees may see PWU as a readily available and convenient way to alleviate workplace boredom. In contrast, employees with short tenure in their jobs will have less knowledge about how to engage in PWU safely (Short tenure 1, Figure 4.10). This lack of knowledge would then translate into using PWU to alleviate high levels of boredom to a lesser degree than their long-tenured colleagues.

It is also theoretically possible that employees with short tenure may engage more in PWU than their long-tenured counterparts, due to the shorter time spent being socialised into the organisation (Short tenure 2, Figure 4.10). This lack of socialisation can bring with it a lack of experiencing existing expectations and consequences regarding PWU. Having worked out opportunities for PWU, and not yet having experienced relevant consequences, such employees may engage more in PWU than long-tenured colleagues who are more socialised into the organisation (Long tenure 2, Figure 4.10). Based on this theoretical possibility, one would expect that when short-tenured employees are faced with high levels of boredom, they engage in higher levels of PWU to counter the undesired sensation than their long-tenured colleagues. Long-tenured employees, being more socialised into the organisation and aware of consequences and expectations, would be expected to engage in lower levels of PWU when trying to counter high levels of boredom.

The relationship between boredom and tenure can be expressed in two, alternative hypotheses:

Hypothesis 4c1: Individuals' job tenure with an organisation moderates the relationship between their boredom and their PWU levels. Specifically it is expected that the impact of boredom on PWU is significantly stronger for long tenure than for short tenure.

Hypothesis 4c2: Individuals' job tenure with an organisation moderates the relationship between their boredom and their PWU levels. Specifically it is expected that the impact of boredom on PWU is significantly stronger for short tenure than for long tenure.

4.2.4.4 Boredom and social loafing risk

There is an old saying in German, which roughly translated suggests that,: 'opportunity creates thieves'. Although in the current research PWU is not equated with theft, previous research suggested that PWU is for many situations involving work on Internet-enabled workstations the most convenient and least detectable way to avoid pulling one's weight (Lim, 2002; Lim, Teo & Loo, 2002). In this research social loafing risk is defined as the degree to which the above mentioned contributors to social loafing are present within the working situations of individuals. Work situations high in social loafing risk are characterised by lacking the possibilities for individuals to be detected and reprimanded for not pulling their weight at work. It is thus reasonable to assume that, on average, individuals who are in work situations characterised by a high social loafing risk, engage more in PWU than individuals in a low social loafing risk work situation.

Previously the argument in this study was that in situations of low workplace boredom individuals would not engage in PWU because there is no reason to do so. In high social loafing risk situations, however, I would expect that even when their boredom levels are low, individuals do engage in PWU to some degree, because the opportunities to do so are so obviously there. The obvious presence of opportunity means that even relatively low levels of boredom do not need to be tolerated (Figure 4.11). Individuals with little workplace boredom, who are working in low social loafing risk situations, however, have fewer opportunities to be off task without being reprimanded. Consequently, they can be expected to engage in PWU levels that are lower than those of their less bored colleagues working in high social loafing risk situations (Figure 4.11).

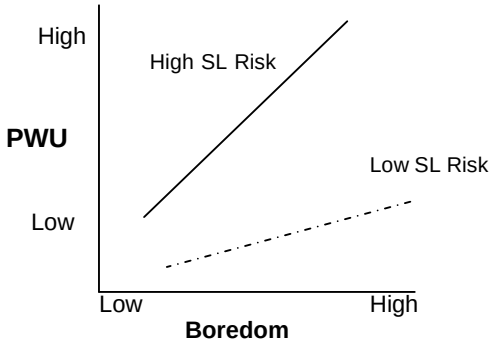


Figure 4.11: Depicting how social loafing (SL) risk in the workplace is hypothesised to moderate the relationship between workplace boredom and PWU levels.

In turn, faced with high levels of workplace boredom individuals in work situations where they can engage in PWU as part of social loafing activities with little risk of being detected and reprimanded for not pulling their weight (high social loafing risk) are expected to engage in high levels of PWU (Figure 4.11). At the same time, employees in low social loafing risk environments have little opportunity to avoid pulling their weight without being detected. It is therefore expected that in those working environments the employee response to high levels of boredom is limited to relatively low levels of PWU (Figure 4.11).

In high boredom situations, the difference between high and low SL situations will be relatively wide. The need to relieve the undesired boredom is high, and high SL risk situations offer plenty opportunities to do so, while low SL risk situations offer fewer opportunities (Figure 4.11). In low boredom situations, the difference will be smaller due to the reduced need to relieve boredom. High SL risk situations will still carry with them a higher level of PWU, because even when boredom is not pronounced, if the opportunity to slack off and surf the net is there without being detected, individuals may take it up anyway (Figure 4.11).

In general, increases in boredom are linked to increases in PWU, and differences in the social loafing risk situations of workplaces explain individual differences in the strength of this relationship. *Hypothesis 4d*: The level of social loafing risk present in individuals' working environment moderates the relationship between their boredom and their PWU levels. Specifically it is expected that increasing levels of social loafing risk enhance the influence boredom has on PWU.

4.3 Summary of the hypothesised interactions

The model proposed in this dissertation (see Figure 4.1) suggests that thirteen relatively stable psychological and workplace attributes predispose individuals to engage more, or engage less in personal web use (PWU). These thirteen attributes are arranged into four clusters encompassing eleven two-way interactions. Each of the interaction clusters represents a theme of influences on PWU which are conceptualised to be independent from each other, and which lead to twelve interaction hypotheses. These hypotheses lead to expectations regarding the relationships between PWU and the variables in the interaction clusters presented theoretical model (Figure 4.1), which are summarised below:.

- The PWU levels of individuals who do not approve of using the ledger strategy of neutralisation will be more influenced by changes in moral acceptance of PWU, than the PWU levels of those who do approve of its use. (C1)
- The PWU levels of individuals who are uncertain about their organisation's expectations regarding PWU will be more influenced by their work groups' norms regarding PWU than those of individuals who are certain about organisational PWU rules. (C2)
- The PWU levels of individuals with whose equity sensitivity levels are towards the entitleds end of the spectrum will be more influenced by changes in workload than the PWU levels of individuals whose levels are more towards the benvolents end. (C3)
- The PWU levels of individuals high in trait reactance will rise sharply in response to increasing workload, while the PWU levels of individuals low in trait reactance will be less strongly affected by changes in workload, and may even decrease with increasing workload. (C3)
- The PWU levels of individuals with a negative attitude towards PWU control of their organisation will be more influenced by changes in their workload than the PWU levels of those who have a positive attitude. (C3)
- The influence that workload has on the PWU levels of individuals with a negative attitude towards the treatment they receive from their manager will differ from the influence it has on the PWU levels of those with a positive expression of that attitude, and two alternative explanations for this are expressed. (C3)
- The PWU levels of entitleds are expected to be more affected by changing levels of boredom, than the PWU levels of benevolents. (C4).

- The influence that workplace boredom has on the PWU levels of individuals holding high status jobs will differ from the influence boredom has on the PWU levels of those holding low status jobs, and two alternative explanations for this difference are expressed. (C4)
- The impact that workplace boredom ahs on the PWU levels of individuals with relatively long tenure will differ from the influence boredom has on the PWU levels of those with relatively short tenure, and two alternative explanations for this difference are expressed. (C4)
- The PWU of individuals in situations with high social loafing will be affected strongly by changing levels of boredom, whereas the PWU levels of individuals in situations with little social loafing risk will be less affected by changes in boredom. (C4)

In this chapter, a fully moderated theoretical model of individual differences in psychological and workplace attributes predisposing individuals to engage more, or less, in PWU has been presented and discussed. The rationale for the style of model chosen has also been presented, and explanations for the hypothesised interaction were given. Moving on to chapter 5, the research design, measures and data analysis methods chosen to examine the theoretical model will be presented.

Chapter 5

Research Method

Data for this research project were gathered through an Interne- based self-report survey. This survey consisted of an online questionnaire administered in two steps, one week apart. The questionnaire contained 136 questions (for a copy of the questionnaire, please refer to Appendix C). Although reliance on a single cross-sectional survey does carry some pitfalls in terms of results interpretation (further discussed in the limitations of this study), it was not seen practical to spread the collection of the main data over more surveys. The main concern here was a loss of participants – a concern that was not unfounded, as the relatively low response rate to the already existing follow-up survey showed. One week after completion of that questionnaire a second, shorter online follow-up was distributed to participants who had agreed to be contacted again. The main purpose for the follow-up questionnaire was to capture any changes regarding PWU that might have occurred over that week (for a copy of this survey, please refer to Appendix D). However, since fewer than 10% of respondents reported any changes, the information gathered in the follow-up questionnaire does not form part of this research, and will not be discussed in this dissertation.

5.1 Research design - an Internet-based survey

The increasingly common use of an Internet-based survey, as chosen for this research project, has several advantages and disadvantages. Relevant to the research were the advantages found in four areas: the level of anonymity that activities on the Internet are perceived to guarantee, the potential for the online survey to screen potential participants for their suitability to this study, the convenience of access for participants, and the ease of administration for the researcher.

Previous research into the advantages and disadvantages of online surveys suggests that the use of an Internet-based questionnaire takes advantage of the frequently reported feeling of anonymity when engaging in Internet activities (Couper, 2000; Joinson, 1999; Kiesler & Sproull, 1986; Sproull & Kiesler, 1991; Tourangeau, Couper & Steiger, 2003), reducing socially desirable responding and impression management, when compared to anonymous paper-and-pencil surveys (Couper, 2000; Joinson, 1999; Sproull & Kiesler, 1991). ‘Socially desirable responding’ refers to the tendency of individuals to stretch the truth in an effort to make a good (socially desirable) impression on the researchers (Martin & Nagao, 1989). In impression management, respondents tend to put

up a façade, but are largely unaware of this (Anastasi & Urbina, 1997). It is proposed that the main reason for the reduction of social desirability and impression management found in online surveys, lies in the effect the perceived anonymity of the Internet has on reducing social anxiety and social desirability for respondents, leading to an increased degree of disinhibition (Matheson & Zanna, 1988). This effect is especially found when surveys include highly sensitive topics (Tourangeau, Couper & Steiger, 2003), such as drug use (Joinson, 1999) or unauthorized copying of software (Kiesler & Sproull, 1986). Participants in surveys, particularly those involving sensitive topics, have an understandable desire to maintain high degrees of anonymity towards the researcher (D'Ambra & Rice, 2001; Ranganathan & Ganapathy, 2002), and the Internet offers the opportunity for a largely anonymous communication environment (Kling, Lee, Teich & Frankel, 1999).

These characteristics of the Internet are valuable for the research here documented which by its very nature (personal web use) explores a behaviour that can present individuals with a moral dilemma. Being asked to admit engaging in PWU, and reporting rather personal details about such a behaviour, often triggers socially acceptable responses by participants, either through the processes of social desirability or impression management. Using the Internet to collect data for the current research is seen as one way to reduce the effects of social desirability and impression management.

Another argument for the use of an Internet-based questionnaire is that the online survey method in itself allows screening and self-selection of the targeted population. The targeted population for this research were those people who use the Internet at work, either for work-related reasons only, or for a mixture of work and personal interest. Past research has indeed suggested that Internet-based surveys attract distinctly different respondents from print surveys and therefore their results may not be generalisable to the general population (e.g. Liaw, 2002; Pitkow, 1997). Because the target population is individuals using the Internet at work, generalisability to other populations was not required, and the use of the Internet as a participant screening tool was desirable. For individuals to use the Internet at work on a fairly regular basis, it is necessary to have a certain degree of familiarity with, attitude towards, and knowledge about its use (Klaus, Gyries & Wen, 2003). These skills, knowledge, and attitudes are seen as parts of the processes that can lead to PWU in the workplace (Anandarajan, Simmers & Igbaria, 2000). Therefore, approaching potential participants via email and requesting participation in an Internet-based survey was seen as allowing those individuals with little or nor familiarity with the Internet to self-select out of the research. It was, therefore, expected that those individuals who participated in the survey have at least the minimum levels of familiarity with and skills to use the Internet that are seen as precursors to PWU by Anandarajan, Simmers and Igbaria (2000). Consequently it is expected that the analysis of the responses given by

these participants will allow the drawing of valid conclusions as to why individuals differ in their PWU.

A further argument for the use of an Internet-based questionnaire, rather than paper-and-pencil questionnaires or interviews, was the convenience and flexibility it gives to participants. The flexibility of where and when to respond to the survey allowed respondents to choose a time and location convenient for them rather than being limited as they would have been with telephone interviews, for example. In the past, studies have suggested that Internet surveys increasingly reach 'busy people' who systematically repel or ignore cold callers, but are willing to answer questions posted on their computer screen (Kellner, 2004). Admittedly, paper-and-pencil surveys can give the convenience of choosing when to respond, as long as one does not misplace the survey paper (Duffy, Smith, Terhanian & Bremer, 2005). However, as argued above, the target population's characteristics suggest that for those individuals the use of an online survey provided more convenience and familiarity than a paper-and-pencil survey might have.

The fourth and final reason for using an Internet-based questionnaire was the ease of administration an online questionnaire can provide. Once the initial work of developing and programming the survey website is completed, data collection and transfer to a statistical data analysis software program is relatively easy and automated. The ease of use reduces the chances of human error in coding, data input, and parts of data screening. Additionally, it is administratively easier to alert potential participants via email to an online survey, than it is to administer paper-and-pencil surveys all over the world in response to emailed invitations.

The length of the survey and the extended time it took for people to fully respond to it were expected to lead to a rather low level of interest and a low completion rate. Using emailed links to an Internet-based survey was the best way to reach a large number of desired, potential participants. As a result of using Internet-based technology the collected data set is reasonably complete, stems from a good sized sample, whose characteristics are in line with the research aim, and is seen as reasonably honest reflections of the respondents' psychological and workplace attributes.

5.2 Participants – recruitment and characteristics

5.2.1 Desired sample

When exploring the research model and examining the expected psychological and workplace influences on PWU, the decision was made that the most appropriate sample would come from a population of adults who are in employment, have Internet access at work and use it. Additionally it was desirable that individuals not identify themselves predominantly as tertiary students. University students, although possibly in paid employment, were not seen as a typical representation of the working population with access to the Internet at work. At this stage it was not found appropriate to limit the population with regards to ethnicity, culture, or nationality, because the Internet and its use in workplaces is a phenomenon found in nearly all industrial societies. Additionally, the focus of the current research is on exploring conceptual relationships rather than investigating their cross-cultural applicability. Investigations of cultural or national differences, however, may be of interest at a later stage.

5.2.2 Recruitment of participants

In an effort to reach the desired population, the online questionnaires were posted for ten weeks on the Internet via a Massey University-hosted research website. Not all parts of these questionnaires were subsequently used in the present research, and the excluded parts are not discussed in this document.

Participants were recruited through what is traditionally called the snowball method (Goodman, 1961; Sudman, 1976). This involves contacting potential participants, inviting their research participation and asking them, in turn, to pass along the invitation email to people they know who might fit the participant profile. In the context of emails and on-line surveys the tendency of email recipients to forward/pass along emails that contain invitations to participate in surveys was recently termed the ‘pass-along effect’ (Kaye & Johnson, 1999; Phelps, Lewis, Mobilio, Perry & Raman, 2004; Witte, Amoroso & Howard, 2000). The use of pass-along data collection is consistent with the research of other authors in this area (e.g. Anandarajan & Simmers, 2004; Stanton & Weiss, 2000).

During the initial stage of recruitment, invitations to participate were emailed to three groups of. The first approach reached 80 individuals listed in the researchers email address book who were known to have Internet access at work. These people live in New Zealand, the United States and several European countries. Secondly, the invitation emails

were sent (with permission of the respective Webmasters), in four fortnightly waves, to individuals who were subscribers to four different professional and academic networking lists of which the researcher is a member (Emonet, I/Onet, HRINZ, Psychwatch). The third, initial group of potential participants was approached via work email addresses posted on the Internet in the areas of politics and the media, as well as international commercial organisations. Each contacted person was also asked to forward the web link and invitation email to other individuals they know and who were using the Internet at work, thus getting the pass-along process to gain momentum.

At the start of the survey the participants were asked if they have, or had, Internet access at work during the last two weeks, were thanked for their interest in the study if this was not the case, and were advised that they did not qualify for the survey. Qualifying participants were than asked to continue with the survey questions.

At the completion of the initial survey the respondents were requested to indicate their interest in participating in a short follow-up survey one week later, by ticking the appropriate box. Interested respondents supplied their email address and received a second invitation letter by email with the web link to the second survey and their code number. This step was organised by the university's Webmaster, who kept the email addresses secure and private, organised in such a way that the researcher could not trace responses back to any individual.

5.2.3 Characteristics of participants

During the ten weeks that the questionnaires were posted on the Internet, 325 people responded and attempted to complete the first questionnaire. However, 41 respondents either did not complete the survey, or provided data that showed extreme or systematic response patterns. These response patterns showed either all responses in the survey marked at the lowest level, or responses appearing in a diagonal pattern across each survey page. Their data was excluded from the survey. The majority of the remaining 284 respondents were employees with a certain level of experience in their jobs (34.7%, response option "experienced employee"), followed by middle management level employees (21.4%), entrance level employees (10.9%), and supervisor level employees (9.5%).

Because the objective of this research was to investigate personal web use at work, information from the 17 respondents who identified themselves as being primarily tertiary students (6%) was excluded from the subsequent data analysis, bringing the total of

participants with valid responses to 267. The demographic characteristics of these participants are summarised in Table 5.1.

Of the 267 participants, the majority of 160 (59.9%) participants were women, and 107 (40.1%) participants were men. About half (52%) were under the age of 40 (mean age 39.7), with the majority being between 26 and 35 years old. As can be expected with the characteristics of the target population, participants older than 60 were in the minority.

A summary of the written responses to an open-ended question enquiring about the cultural backgrounds of the participants suggested that the majority (44.1%) saw themselves as New Zealand Europeans. A further 27.7 % identified with the culture of a European country (Germany, Finland, Denmark, Czech Republic, Sweden, Belgium, and Italy), and 10.5 % wrote ‘New Zealander’ in response to the question. The remaining 17.7 % indicated that they identified with a wide variety of cultures (in alphabetical order: Australian, Asian, Canadian, Chinese, Indian, Maori, Native American, US American, Pacific Islands, and South African). A total of 54 respondents declined to write their cultural backgrounds in the space provided.

Table 5.1: Demographics of Respondents

Variable		*Frequency (n)*	*Valid percent (%)*
Gender	(0 missing)		
	Males	107	40.1
	Females	160	59.9
Age	(5 missing)		
	20-25	23	8.8
	26-30	44	16.8
	31-35	43	16.4
	36-40	27	10.3
	41-45	34	13.0
	46-50	31	11.8
	51-55	26	9.9
	56-60	26	9.9
	60+	8	3.1
Ethnicity	(54 missing)		
	NZ European	94	44.1
	European	59	27.7
	New Zealander	29	10.5
	NZ Maori	5	1.9
	Asian	4	1.5
	Indian	4	1.5
	Others (individually identified)	18	12.6
Place of work	(9 missing)		
	University	92	35.7
	Professional services	23	8.9
	Government	23	8.9
	IT/ Telecommunication	18	7
	Education / Training	16	6.2
	Healthcare	12	4.7
	Hospitality / Tourism	13	5
	Community services	7	2.7
	Media	8	3.1
	Banking / Finance	16	6.2
	Legal professions	6	2.2
	Engineering	5	1.9
	Research institutes	4	1.5
	Real estate	5	1.9
	Retail	5	1.9
	Insurance	3	1.1
	General Administration	2	0.7
Tenure	(1 missing)		
	3 months and under	15	5.6
	4-6 months	16	6
	7-12 months	23	8.6
	13-30 months	71	26.7
	31-60 months	66	24.8
	61-96 months	22	8.3
	97-180 months	34	12.8
	< 180 months	19	7.1

A majority of just over one third of the participants worked in some capacity for a university (35.7%). At the time of survey completion the participants had held their current positions for an average of 61 months (5.1 years). The range for tenure in the job was wide, from the shortest time of one month to the longest of just over 31 years. The median time in the current position was 2.8 years for this sample.

The vast majority of participants (68.1%) filled the survey out at work, while 29.5% did so at home, and 2.5% at an unspecified location elsewhere.

Of the 267 participants, 73% (196) said that they would like to receive the link for the follow-up survey one week after completion of the main survey. Of those 196 individuals invited to participate, 77.5% (152) completed the brief follow-up questionnaire.

5.3 The measures

A summary of the variables that were examined as part of this research project, the measures exploring those variables and the corresponding survey questions can be found in Table 5.2. The table presents first the criterion variables with the respective measures used and corresponding question numbers. The criterion variables are then followed by a listing of the predictor variables with their measure descriptions and question numbers. The predictor variables are presented in the order of the interaction clusters described in chapter 4. The description of each influence identified as a ‘driver influence’ in that chapter, is followed by those of the associated, hypothesised moderator variables. For the complete wording and actual placement of the survey questions please refer to a copy of the survey in Appendix C.

Table 5.2: Variables, measures and corresponding survey questions

Variable	*Measure*	*Question numbers*
Criterion variables		
Personal Web Use (PWU)		
Past frequency of PWU	Frequency past 2 weeks	1
Habitual use	Average weekly habit	2
Average duration of PWU	Average weekly duration	3
Activity Type	Contact-related (CPWU)	4, 5, 6, 9, 12
	Information-seeking (IPWU)	7, 10, 13, 14
Predictor variables		
Participant's moral norms regarding PWU	Moral norm	34, 35, 36
Acceptance of the ledger strategy of neutralisation	Neutralisation acceptance	79, 80, 81, 82, 83, 84
Work group's norm regarding PWU	Work group norm	39, 40, 41, 42
Knowledge of PWU rules and procedures	Rules knowledge	50, 54, 55, 56, 89, 90
Perceived workload	Quantitative Workload Inventory	69-73
Attitude towards work effort in general	Equity Preference Questionnaire	91-106
	'taker' Scale	91, 92, 93, 94, 95, 96
	'giver' Scale	102, 103, 104, 105, 106
Trait reactance	Part of Merz's Trait Reactance Scale	107-123
Perceptions of supervisor treatment	Parts of Lim's interactional fairness measure	85, 86, 87, 88
Attitude towards control of PWU	Attitude to PWU procedures	51, 52, 57, 58
Boredom at work	Boredom at Work Scale	59-66
Job status	Current occupational level	133
Tenure in the current job	Length of service	130
Social loafing risk	Social loafing risk Index	55, 56, 74, 75, 76, 77, 78, 131, 134
Items additional to the proposed model (As discussed in chapter 8)		
Consequences of PWU in situations of PWU control	Critical incidents – positive outcome	135
	Critical incidents – negative outcome	136

5.3.1 The criterion variables

5.3.1.1 Frequency of PWU in the two weeks prior to completion of the questionnaire (Q1)

How often the participant estimated he or she engaged in PWU in the two weeks before completion of the survey, was explored through one multiple choice question. ("Can you please give an estimate how often you have accessed the Internet for persona interest during work time over the past 2 weeks?"). This question offered the respondents 11 answer options ranging from 'never' to 'over 30 times'. A similar question asking respondents to estimate their Internet access has been used by Anandarajan, Simmers and Igbaria (2000), however with less detailed answer options. In this research the choice to give respondents more response options was made in an effort to encourage them to focus on details of their PWU right from the beginning of the survey.

The period of two weeks prior to completion of the survey was chosen as a reasonable timeframe for which one can estimate the frequency of a behaviour one might have engaged in. Because it is expected that PWU is a behaviour some people engage in frequently, it was perceived it to be too arduous for participants to estimate actual frequencies of their PWU for periods of one to twelve months in the past, as is typical for surveys exploring past behaviour within the model of the theory of planned behaviour (e.g. Conner & McMillan, 1999; Perugini & Bagozzi, 2001).

Examination of the measure's skewness statistic and normality plots indicated that it was desirable to recode the data for this measure into four categories, rather than the original 11 categories suggested by the 11 answer options. These new categories were labelled almost never (1&2), low frequency (3&4), high frequency (5-9) and very high frequency (10+) of use. The recoding increased the degree of normality in the data distribution of the measure as is required for the criterion variables in the intended data analyses. High scores in this recoded measure indicated high frequency of PWU; low scores indicated low frequency of PWU. The recoded measure was used in the data analyses described later in this chapter.

The use of single-item questions in surveys is frequently debated in psychometrics (e.g. Braithwaite & Scott, 1991). In spite of the disadvantages that tend to be associated with them, single-item measures are regularly utilised, for example, as measures of job satisfaction (Nagy, 2002). These measures can, when used appropriately, reduce ambiguity and the need for second guessing for the respondent, without having appreciable measurement loss (Barrett, 2002). Several comments made by participants in the pilot phases of the survey development showed that respondents of the lengthy survey had little patience for questions that appeared to repeatedly ask the same question, but in different

ways. As one respondent put it even in the final version of the survey: "*Although I support your need for data and wanted to participate, I got fed up with your repeated questions asking very nearly the same thing, and which require a very careful (and therefore slow) reading of the question to discern the appropriate answer. I do not have the time to dredge through this kind of minutia [sic]. Sorry."* Therefore, it was judged it to be appropriate to measure frequency and duration of PWU, as well as PWU out of habit, with single items.

5.3.1.2. Habitual frequency of PWU in an average week prior to completion of the survey (Q2)

How often the participant engaged in personal web use (PWU) during an average week out of habit, was explored with a single item ("In an average week, how often do you access the Internet at work for personal interest during work time, just out of habit?"). This question gave the respondents 11 answer options ranging from 'never' to 'over 30 times'.

The question posed in this survey is a modified version of a similar question used as habit indicator by Conner and McMillan (1999). The authors did not specify a timeframe in their habit-assessing question, assuming that once the habit is formed (in their case marihuana use), regular and consistent frequencies of engaging in it are achieved. The choice made in my research of asking about habitual PWU in a typical week, rather than a typical day, was made based on the notion that PWU habits can conceivably differ depending on the day of the week, which may in turn influence the weekly habitual average.

The frequency steps in the response options used matched those of Q1 to allow for comparison and validity checks, as well as to retain participant focus on PWU details.

Examination of the habitual PWU measure's skewness statistic and normality plots indicated that it was desirable to recode the data for this measure into six frequency categories of habitual use (1, 2, 3, 4&5, 6-8, 9+), rather than the original 11 frequency categories of the answer options. These six categories were chosen to allow the habitual frequency data to retain its character, while at the same time increasing the normality of the distribution, as it is necessary for the criterion variables in the intended data analyses. This collapsing of the categories also acknowledges that individuals may not be very precise in their frequency estimations, and therefore probably increased the reliability of the measure. High scores in this recoded measure indicated high frequency of use; low scores indicated low frequency of PWU. The recoded measure was used in the data analyses described later in this chapter.

5.3.1.3. Average duration of PWU in one week (Q3)

The participants' estimate of how long, in an average week, they engage in PWU was explored through a single-item measure. Respondents were prompted to fill in their estimate of the average weekly PWU duration in hours and minutes. For ease of use in further analyses involving the measure of the average PWU duration, these responses were subsequently recalculated into minutes only (" Can you please give an estimate of how much time, on average, you spend accessing the Internet for personal Interest during work time in one week?"). The question was designed especially for this project. Anandarajan, Simmers and Igbaria (2000) used a similar measure of time spent on the Internet, as did Lee, Lee and Kim (2004) for PWU duration. Anandarajan and his team, however, used a six-point duration scale (from 'almost never' to 'more than three hours per day'). Because of the repeated media reports about excessive PWU duration in organisations, the aim was to avoid reinforcing the impression that a particular duration is 'a lot' through placing it at one end of a fixed-point scale. This impression could possibly have encouraged social desirability biases or a central tendency bias of responding. Therefore, the decision to give respondents an open-ended response option was made, allowing each person to estimate his or her PWU duration without being forced to compare it to a perceived norm.

The respondents were asked to estimate the average duration of their PWU in one week, based on similar arguments to those mentioned already. Estimation of PWU duration for one day would possibly have been more accurate, especially if one had asked for estimation of PWU duration the previous day, due to ease of recall. However, it is questionable if this specific day had been representative of typical PWU duration. Although asking participants to estimate the duration of their PWU in an average/typical week may not result in the most accurate time estimate possible, it may be a more realistic estimation of their average PWU duration than reporting that of a single day. Additionally, past research has suggested that individuals tend to be quite accurate in their estimation of average Internet use, when compared to data gathered through electronic monitoring of their work stations (e.g. Stanton, 1998).

For the intended data analyses it was necessary to achieve a reasonably high degree of normality in the data distribution of the criterion variables. Therefore the data obtained through this measure was recoded into five categories (virtually no use, up to half hour use, up to one hour, up to two hours and over two hours) which increased the normality of distribution while maintaining the character of the information contained in the data. High scores in this recoded measure indicated longer periods of use; low scores

indicated a shorter duration of PWU. The recoded measure was used in the data analyses described later in this chapter.

5.3.1.4. Activity type while engaging in PWU in the two weeks prior to completion of the survey (Qs 4-14)

The activities engage in by participants while using the Internet at work for personal interest were explored through the listing of ten possible online activities. The list of online activities was based on similar lists presented in previous research studies (e.g. Blau, Young, Ward-Cook, 2004; Mahatanankoon, Anandarajan and Igbaria, 2004; Polzer-Debruyne, 2002; Rotunda, Kass, Sutton & Leon, 2003), and in popular publications (e.g. Malachowski 2005; Malachowski & Simonini, 2007; MSNBC.com, 2006). On a five-point Likert scale the participants were asked to indicate how often they had engaged in each of these activities on a computer at work during the two weeks prior to completion of the survey. For example: “Please indicate for each activity below, how often during the last two (2) weeks you engaged in these activities on a computer at work: used personal web-based email such as hotmail, yahoo, etc… conducted personal, external business. The frequency response options ranged from ‘never’ to ‘very frequently’ and did not require the detail of frequency estimation that was requested in the answers to Q1 and Q2. This was consistent with previous research (e.g. Lim, 2002; Mahatanankoon, Anandarajan & Igbaria, 2004). While it may be possible to estimate precise frequencies for PWU in general, it is not reasonable to expect survey respondents to be able to estimate engagement in specific activities to a similar degree, without having asked them to keep a diary of their activities.

Again the timeframe of two weeks was chosen (as in Q1) to avoid capturing possible extreme circumstances in the single week prior to completion of the survey.

The item exploring the frequency of scanning through adult-oriented (sexually explicit) websites was subsequently eliminated from further analysis due to the relatively low number of responses (174 / 284) to this activity option. This exclusion of sexually explicit websites from an Internet activity list has previously been practised by Mahatanankoon, Anandarajan, and Igbaria (2004), and is therefore not seen as problematic in the context of this research.

The results of principal component analysis (PCA) with direct oblimin rotation suggested that the remaining nine listed activities fell into two separate components explaining 36.6% and 11.4% respectively of the total variance. The first component encompassed activities that are related to interpersonal communication (CPWU). Six items loaded onto this factor with loadings between .79 and .50. The second component described activities that involve the seeking and viewing of information (IPWU). Four questions loaded onto this factor with factor loadings between .83 and .43. The two factors of communication-related PWU (CPWU) and information-seeking PWU (IPWU) were moderately correlated (r = .407) and are similar to those reported by Mahatanankoon,

Anandarajan and Igbaria (2004). For the protocol for the PWU investigations please refer to Appendix E. A summary of the factor loadings can be found in Table E5.2.1, in Appendix E.

Two new variables (CPWU and IPWU) were created through adding the scores of the questions loading highly onto each of these two factors and then creating the mean score. Higher values represented higher frequencies of engagement; lower values represented lesser frequencies of engagement in the respective activity types.

The reliability of the variable CPWU was acceptable with an alpha coefficient of .698, as well as for the variable IPWU which had an alpha coefficient of .635.

To address the skewness of CPWU (1.114) the data was recoded to regroup the lower end values, resulting in six frequency categories (0-1.2, 1.21-1.4, 1.6-1.8, 2-2.8, 3-3.8, 4+). Higher values represented higher frequencies of access; lower values represented lower frequencies of access. This recoded measure was used in the data analyses described later in this chapter.

To address the skewness of IPWU (.841) the data was also recoded to regroup the lower end values, resulting in six frequency categories (0-1.24, 1.25-1.33, 1.5-1.99, 2-2.99, 3-3.99, 4+). This recoded measure was used in the data analyses described later in this chapter.

In subsequent analyses the online activities that participants engaged in during personal web use were explored through two separate measures: that of communication-related PWU (CPWU) and that of information-seeking PWU (IPWU).

5.3.2. The predictor variables

5.3.2.1 Moral norms regarding PWU (Qs 34, 35, 36)

The research model depicts the moral norms a person holds regarding PWU as the driver influence of the first described interaction cluster influencing PWU. The moral norms include the degree to which the participant perceives PWU being morally wrong, as going against his or her principles, and how guilty he or she feels when engaging in it. Three questions, exploring these three aspects of moral norms, asked the participants to indicate on seven-point Likert scales their agreement with different statements concerning PWU. The three questions were modified versions of similar questions used to measure moral norms in previous studies (Beck & Ajzen, 1991; Conner & McMillan, 1999), accounting for the topic area of PWU (e.g. “I intend to access the Internet at work for personal interest during work time in the next week.”) High scores indicated a high degree of personal norms against PWU; low scores indicated a low degree of personal norms against PWU.

PCA showed that all three questions loaded highly onto one single factor (factor loadings .93 to .92) and explain 85% of variance. For a summary of the factor loadings please refer to Appendix E, Table E5.2.2.

The scores of the measure were calculated by adding the scores of the three individual items and creating the mean.

The coefficient alpha of this measure in the current study was .912, indicating the measure's high reliability.

Closer examination showed the variable skewed (.253) with a relatively high number of low values, indicating that personal norms for a high number of people (22.1%) suggest that there is nothing wrong with PWU in the workplace. In an effort to regroup the lower end scores and to normalise the distribution, the data were recoded into seven categories (0-1, 1.33-1.99, 2-2.99, 3-3.99, 4-4.99, 5-5.99, 6+). This recoded measure was used in the data analyses described later in this chapter.

5.3.2.2 Acceptance of ledger neutralisation strategy (Q's 79-84)

The research model suggests that the relationship between personal norm and the PWU criteria is moderated by the degree to which a person accepts the use of the ledger neutralisation strategy when engaging in PWU. For example: "In my opinion it is fair for me to use the Internet for non-job related reasons if I have put in extra work because I do not receive enough help and equipment." The degree of the ledger strategy acceptance was measured through six questions, asking the participants to indicate on seven-point Likert scales their agreement with six statements concerning situations in which they perceive PWU to be fair and acceptable.

These questions were taken from Lim (2002), who adapted a measure developed by Hollinger (1991) to assess participants' degree of neutralisation when engaging in PWU. The original measure assessing the use of the ledger strategy (Hollinger, 1991) had been altered by Lim (2002), and in this research project, through the addition of a conditional sentence: "In my opinion it is alright for me to use the Internet for non-job related reasons if …" The addition of this sentence resulted in the measure being one of principal acceptance of using the ledger strategy if one is in a described situation, rather than being a measure of actual use of the strategy in PWU situations. This alteration was seen as appropriate to accurately reflect the fact that unless the person is currently in a situation requiring neutralisation, statements made in hindsight tend to reflect rationalization rather than neutralisation. As previously argued (see chapter 3) using a measure of the principle acceptance of the ledger neutralisation strategy is the closest one can come to measuring its use of after the fact.

Principal component analysis, requesting a one-factor solution, indicated that one factor explained 56.1% of the variance. All six items of the scale had factor loadings above .40. The four items with the highest factor loadings (.89 to .76) represent the idea that one would be positively inclined to use the ledger strategy if one feels that a lot of time and effort has been given to the company without adequate rewards or because of some

perceived shortcomings from the side of the organisation. The two lower loading items (.69, .49) represent the notion that one would have a positive attitude towards using the strategy if either stressed or bored at work, and had thus apparently paid one's dues to the company and contributed to the plus side of one's ledger. The fact that all six items loaded satisfactorily onto one single factor, although they may appear to address different issues, indicated that the theoretical assumption of one underlying single concept was supported. For a summary of the factor loadings please refer to Appendix E, Table E5.2.3.

The scores of the measure were calculated by adding those of the six individual items and creating the mean, with high scores indicating a strong acceptance of using the strategy when engaging in PWU.

The distribution of the scores of the measure was reasonably close to a normal distribution and therefore no recoding of the scores was necessary.

The coefficient alpha of the six-item scale was .836, indicating an acceptable degree of reliability for this measure.

5.3.2.3 Work group norm regarding PWU (Qs 39-42)

The research model presents the norm of the participant's work group with regards to PWU as the driver influence of the second interaction cluster influencing PWU. The norms regarding PWU that are perceived by participants to exist in their respective work groups were originally examined through six questions.

Three of these questions asked the participants to indicate on a seven-point Likert scale their agreement with statements regarding acceptance of their own PWU by their supervisors, colleagues, and subordinates.

These questions were modified versions of items traditionally used in research examining the theory of planned behaviour (e.g. Anandarajan, Simmers & Igbaria, 2000; Beck & Ajzen, 1991). Ajzen (2002) described the development and phrasing of these questions as a measure of subjective norms. Traditionally this measure focuses on "people who are important to me" in the widest sense, whereas in the present study the focus was specifically on work group norms. Therefore, the three different, work-related reference groups of supervisors, colleagues and subordinates were chosen to represent norms of the participants' work groups, replacing the traditional phrase "people who are important to me" in the measure items. For example, instead of the traditional question: "People in my live whose opinion I value think it would be okay for me to access the Internet for personal interest during working time in the next week", the relevant question was:" My colleagues at work would approve if I access the Internet for personal interest during work time in the next week."

The remaining three questions asked about the level of agreement with similarly worded statements about whether said supervisors, colleagues and subordinates themselves engage in PWU. These questions were included to reflect that work group

norms are perceived not only through approval of one's behaviour but also through the apparent PWU behaviour of one's work group members.

It appeared that a high number of participants (125 / 284) did not have subordinates as part of their work groups or chose not to answer the two questions concerning subordinates. Consequently these two items were eliminated from further analyses.

PCA showed the remaining four questions loading highly onto one single factor (factor loadings .80 to .66) explaining 57.8% of the variance. For a summary of the factor loadings please refer to Appendix E, Table E5.2.4.

The scores of the measure were calculated by adding the scores of the six individual items and creating the mean, with high scores indicating group norms favourable towards PWU and low scores representing group norms inclined to look unfavourably upon it.

The distribution of this variable's scores was not really normal. There were five distinct outliers. However, if these outliers are removed, the distribution looks graphically closer to normal, but the skewness value increases from .021 to .310. It was therefore decided to leave the variable as it is in its current form, and to consider its distribution during data interpretation.

The coefficient alpha for this four-item measure was .756 indicating the measures acceptable level of reliability.

5.3.2.4 Certainty about PWU rules (Qs 50, 54, 55, 56, 89, 90)

The research model indicates that one moderator of the relationship between group norms regarding PWU and its criteria is the degree to which one is certain about one's knowledge of the rules and procedures concerning PWU in one's organisation. None of the reviewed PWU research had included a similar measure. Nevertheless, it was seen as important to ascertain not only a person's attitudes towards the policies and procedures regarding PWU that exist in a company (as measured in a separate measure), but also the degree to which a person is aware of them. It is, for example, possible to have a generally negative attitude towards electronic monitoring of work stations, but not be aware of any such practice at work. The consequences of possible gaps between this perception and organisational policy reality may be of interest to future studies, but are not part of this research.

The certainty that participants have about PWU rules in their company were assessed through six items. One of these assessed one's level of certainty about rules, while the remaining five examined one's certainty about different levels of organisational control with regards to PWU. One example for these questions is: "At your place of work, are there clear guidelines regarding the use of the Internet (including its email facilities) for

personal interest? These control-focused items included organisational controls through supervisors, electronic monitoring and the gathering and reporting of user-identifying statistics. In the questionnaire the information was originally collected on different Likert scales. Certainty about the presence or absence of PWU guidelines and electronic monitoring processes were measured on three-point scales (yes, no, I am not sure). Whether the supervisor actually monitors computer activities and receives reports of these was examined on seven-point scales of agreement with the presented statements. The point of interest in this research was the exploration whether the participants were certain that they knew about their organisations' PWU control strategies or not. Therefore, the different measurement items with their different scales were dichotomously recoded into being not sure about the mentioned practice (uncertain), and being sure about it, regardless of the level of agreement or whether it was actually present in the company (certain).

The scores of the recoded, dichotomous measure were calculated by adding the scores of the six individual items and creating the mean. High scores indicated that the respondent perceives him/herself to be fairly knowledgeable about organisational rules and control mechanisms regarding PWU.

The distribution of this variable's scores was reasonably normal with the exception of a large proportion (25%) of respondents being very uncertain about their organisations' PWU rules. Possible reasons for this are potentially interesting and important, but their examination would exceed the framework of this project. The skewness of the measure was 0.457. The removal of the large number of very uncertain respondents would have significantly changed the characteristics of the sample, and that was not desirable. It is also questionable whether statistical transformations would increase the normality of distribution in view of such a large group of "uncertain" responses (25%). Therefore, the decision was made to leave the variable as it is in its current form, and to consider its distribution during data interpretation and discussion.

The coefficient alpha of the recoded six-item scale was.723 and being over the recommended threshold of .7 it represents an acceptable degree of reliability of the measure.

5.3.2.5 Perceived workload (Qs 69-73)

The research model presents one's perceived workload as the driver influence in the third described interaction cluster influencing PWU. The perceived workload of the participants in this research was explored through the quantitative qorkload inventory (QWI) developed by Spector and Jex (1998) and adopted for this research in its original form. The five-item scale assessed the perceived quantity of work in a job (e.g. "How often does your job leave you little time to get things done?"), and asked respondents to indicate how often

each statement occurred in five response choices (“less than once per month” – “several times per day”). High scores represented a high level of workload, with a possible range from 5 to 25.

PCA showed that one factor explained 67% of variance with all items loading highly onto this factor (between .88 and .74). For a summary of the factor loadings please refer to Appendix E Table E5.2.5.

The scores of the measure were calculated by adding the scores of the five individual items and creating the mean, with high scores representing high levels of workload.

The data showed five outliers - people who appear to have very little to do at work. Although deleting those responses would have increased the normality of the data slightly, it was decided to retain them.

Spector and Jex (1998) reported an average internal consistency of .82 over 15 studies. In the present study the coefficient alpha for the QWI was .874.

5.3.2.6 Equity sensitivity (Qs 91-106)

The research model proposes that equity sensitivity acts as moderator in the relationship between perceived workload and PWU. The nature of participants’ equity sensitivity was explored through the 16 item Equity Preference Questionnaire (Saulay & Bedeian, 2000). On a five-point Likert scale respondents were asked to indicate their level of agreement with statements designed to assess their equity sensitivity. For example: “When I am at my job, I think of ways to get out of work,” or “When I have completed my task for the day, I help out other employees who have yet to complete theirs.” Eight of the 16 items were reverse coded. The Equity Preference Questionnaire (EPQ) was reported to be a measure of equity sensitivity developed in response to several shortcomings in the commonly used Equity Sensitivity Inventory (ESI; Huseman, Hatfield & Miles, 1985, 1987).Validation studies reported by Sauley and Bedeian suggested that their measure (the EPQ) was psychometrically sound with high reliability and acceptable construct validity.

One question, “Employees who are more concerned about what they can get from their employer, rather than what they can give to their employer, are the wise ones”, received only 99 responses and was therefore eliminated from further analysis.

PCA with direct oblimin rotation was then performed with the remaining 15 items, requesting two factors, as suggested by the theory underlying the development of the measure. Two items were removed from further analysis due to their low factor loadings (<.40). The final PCA with the remaining 13 items showed the emergence of two clear, opposing factors, explaining 32.8% and 17.8% of variance respectively. Both factors had a

low, negative correlational relationship (r = -.250), suggesting that they possibly captured two different underlying concepts rather than two ends of one concept as expected.

Assessment of the content validity of the measure (Haynes, Richard & Kubany, 1995) however, did not necessarily agree with the findings that all the items measure equity sensitivity. Such a measure would need to make it clear that the person compares his or her input in a given situation with the outcome he or she receives as a result. However, only seven of the 16 questions follow this principle; for example: “I prefer to do as little as possible at work while getting as much as I can from my employer.” The remaining nine questions explore more general attitudes towards one’s input into work, without reference to received or expected outcomes; for example: “At work my greatest concern is whether or not I am doing the best job I can.” The attitudes expressed are those of a giver (comparable to the ‘benevolent’ in equity sensitivity theory) and of a taker (comparable to the ‘entitled’ in equity sensitivity theory). In general, based on content analysis I am proposing that the questions of the ESI appear to measure two types of attitudes towards work effort, rather than equity sensitivity. To fully re-investigate the content and construct validity of the ESI was beyond the scope of the current research. Based on these observations, in this research the sixteen-item measure was more likely a measure of general attitude to work effort.

Furthermore, considering the emergence of two clearly separate two factors suggested that, at least in relationship to PWU, the issue was less one of equity sensitivity and more likely one of attitude towards work effort. These two different work attitudes were subsequently labelled ‘taker attitude towards work effort’ (six items with factor loadings from .74 to .57) and ‘giver attitude towards work effort’ (five items with factor loadings from .82 to .58). For a summary of the factor loadings please refer to Appendix E, Table E5.2.6.

Drawing on the concept of equity sensitivity described earlier in this thesis, it is proposed that a person’s attitude towards work efforts is in part formed by the level of equity sensitivity. Although using the vocabulary of ‘giver’ and ‘taker’, attitudes towards work are conceptualised as being different from the equity sensitivity construct. The differences lie in the conceptual differentiation between attitudes and personality traits with regard to their stability and specificity. Personality traits are generally seen as stable throughout a person’s life, and change is difficult and generally possible only on a long-term basis. Attitudes, however, are less stable and can be changed through events or cognitive re-evaluation of situations. At this point it needs to be reiterated that the theoretical model at the heart of this study (Figure 4.1) assumes relative stability of the variables included. If this is true, there are grounds for freezing the action at one point in time while retaining the ability to assert causal directions.

The theoretical changeability of the attitude towards work effort, when compared to the personality trait of equity sensitivity, however is not seen as undermining this assumption. In adults, the attitude towards work effort is most likely the result of long years of up-bringing, formal education and experiences with paid work as well as voluntary work. Although theoretically possible, it is relatively unlikely that a person who has developed a high level of giver attitude towards work will develop relatively low giver attitude levels when moving to another job, for example. It is more likely, that the person will retain the level of their giver attitude and find ways to compensate for discrepancies between their outcome expectation, for example, and the reward system present in the organisation.

Conceptually the giver and taker attitudes towards work are both linked to equity sensitivity. It is proposed that differences between individuals' attitudes towards work effort depend, in part, on their differences in equity sensitivity. As such the attitude towards work effort can have elements of the giver as well as of the taker. People can have attitudes towards work effort focusing on getting more out of work than they put in: the typical taker attitude. They can also have attitudes towards work effort focusing on what they can do for the company, sometimes at cost to their own personal lives: the typical giver attitude. In both cases attitudes towards work in general are an expression of an individual's equity sensitivity. The results of the factor analysis of the EPQ strongly suggest that individuals can hold attitudes towards work effort that have components of giver and of taker attitudes at the same time. This may look like a contradiction. Yet human nature is rarely a straightforward case of 'either-or', and conceptualising attitudes towards work effort along a giver and a taker dimension makes theoretical and intuitive sense. Based on the notion that attitudes are influences on behaviour as for example proposed in the theory of planned behaviour (Ajzen, 1988; Ajzen & Fishbein, 1980), attitudes towards work effort can be seen as influencing work-related behaviours such as personal web use.

To capture the bi-dimensionality of the attitude towards work effort, two scales were created. One taker scale comprising the six items loading onto factor one, and one giver scale encompassing the five items loading onto factor two. For each scale the scores were created by calculating the mean of each scales' items, and retaining the reverse coding of eight items suggested by the original scale. As a result of the reverse coding and how the items loaded onto the two factors, low scores on the taker scale indicated high levels of taker attitude towards work effort. Low scores on the giver scale indicated low levels of giver attitude towards work effort.

In light of the strong evidence that, at least in this research, giver and taker attitudes take the place of the originally hypothesised equity sensitivity, hypotheses 3a) and

4a) were reformulated. With regards to the relationship between workload, PWU and the giver attitude towards work effort, it was now expected that the relationship between workload and PWU is moderated by giver attitude. As shown in Figure 5.1., it was specifically expected that the PWU levels of individuals with low levels of giver attitude towards work effort are more influenced by changes in workload than the PWU levels of individuals with high giver attitude (H3a1).

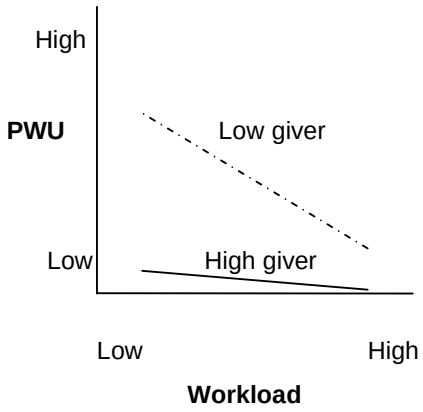


Figure 5.1: Depicting how level of giver attitude is hypothesised to moderate the relationship between workload and PWU levels.

At the same time it is expected that the taker attitude towards work effort also acts as moderator of the PWU – workload relationship. Here it was expected that the PWU levels of individuals with high levels of taker attitude towards work effort are more influenced by changes in workload, than the PWU levels of those with low levels of taker attitude, as shown in Figure 5.2 (H3a2).

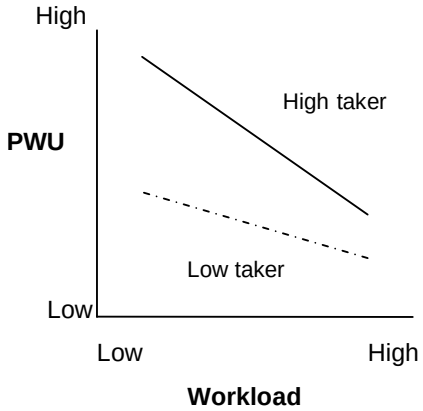


Figure 5.2: Depicting how level of taker attitude is hypothesised to moderate the relationship between workload and PWU levels.

With regards to the relationship between boredom, PWU and the giver attitude towards work effort, it was expected that giver attitude moderates the relationship between boredom and PWU (see Figure 5.3).

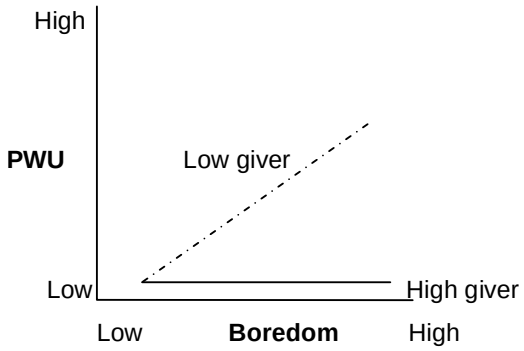


Figure 5.3: Depicting how giver attitude towards work effort is hypothesised to moderate the relationship between workplace boredom and PWU levels.

Specifically, it was expected that the PWU levels of individuals with low levels of giver attitude towards work effort are affected by changing levels of boredom, whereas PWU levels of individuals with high levels of giver attitude are not affected by changes in boredom levels (H4a1).

It was furthermore expected that the taker attitude towards work effort also acts as moderator on the relationship between boredom and PWU (see Figure 5.4).

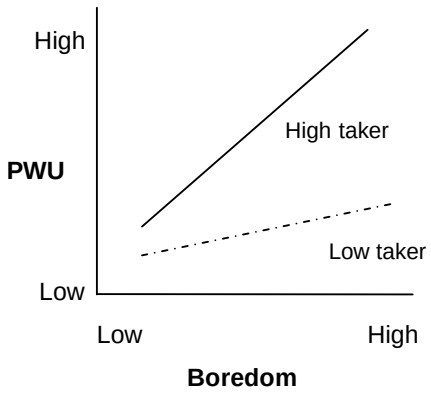


Figure 5.4: Depicting how taker attitude towards work effort is hypothesised to moderate the relationship between workplace boredom and PWU levels.

It was specifically expected that the PWU levels of individuals with high levels of taker attitude towards work effort will be more affected by changing levels of boredom than the PWU levels of individuals with low levels of taker attitude (H4a2).

The giver attitude scores were distributed relatively skewed (skewness -.99) with a large group of people scoring high on giver attitude. The taker attitude scores were distributed relatively skewed (skewness -1.53), with a large group of people scoring low on taker attitude. The score distribution characterised the group of research participants as having a comparatively strong giver attitude towards work effort, and also a reasonably low level of taker attitude. The found combination of attitudes makes intuitive sense as describing individuals in employment. Although it is also possible that the score distribution indicates that social desirability bias and impression management were present, one can argue that to a certain degree both are to be expected when exploring attitudes towards work effort through self-report questionnaires. Analysis of the outliers on the low end of both scales showed that no individual scored very low on both scales, suggesting that their removal from the data would result not in normalisation of the distribution but in loss of valuable information. Similarly, statistical transformations and recoding procedures were unlikely to normalise the distribution on the giver and taker scales with their large 'lumps' of data at their high score ends. Therefore, I decided to retain the giver and taker variables for further data analysis, and to revisit their score distribution at the time of result interpretation and discussion.

The reliability of both scales was acceptable with the coefficient alpha of the taker scale in this study being .788, and that of the giver scale being .801.

5.3.2.7 Trait reactance (Qs 107-123)

The research model indicates that the trait–based response to restrictions and demands of others is a moderator in the relationship between perceived workload and PWU. One of the currently most widely used measures of trait reactance is the one described by Merz (1983), investigated in an English translation by Tucker and Byers (1987), and validated by Herzberg (2002). The Merz scale, like most reactance measures, was developed for use in clinical settings, assessing a person's possible reactance to interventions of clinical nature. No trait reactance scale specifically developed for use in organisational or work settings could be found. In this research the Merz scale was given preference over the Hong reactance scale (Hong & Ostini, 1989) and the therapeutic reactance scale (Dowd, Milne & Wise, 1991) because of its brevity and the psychometric problems reported with the Hong reactance scale (Thomas, Donnell & Buboltz, 2001). For this study the original German Merz scale was translated by the researcher into English, translated back by a native English speaker, and compared with the Tucker and Byers

(1987) translation. Following comments of participants in the trial run of the survey, one question was dropped and some wording was changed to increase the clarity of the items.

The resulting 17-item scale asked participants on a five-point Likert scale about their agreement with general statements of reaction to pressures, influences, and regulations posed on them by others. For example: “If something is prohibited, I have the attitude of ‘now I will do it for sure’.”

PCA requesting one factor was performed. The result indicated that one factor explained 41.6 % of variance, and all items were found to load well onto this one factor, with factor loadings between of .76 and .41. For a summary of these factor loadings please refer to Appendix E, Table E5.2.7.

The scores of the measure were calculated by adding the scores of the 17 individual items and creating the mean, with high scores pointing to a proportionally high level of trait reactance.

The distribution of scores in this measure was close to the normal distribution and therefore the measure was used in further analyses without further manipulations.

The internal consistency of this measure of trait reactance was good in this study, with a coefficient alpha of .905.

5.3.2.8 Attitude to supervisor treatment (Qs 85-88)

According to the proposed theoretical model, the participants’ perception of how their supervisor treats them in a general work context is a moderator of the relationship between perceived workload and PWU. The perception of supervisor treatment was explored with four items (e.g.” My supervisor makes an effort to deal with me in an honest way”). On seven-point Likert scales respondents were asked to indicate their agreement with four statements that probed how the respondents perceived their treatment by their supervisor in general. For example: “My supervisor treats me with kindness and consideration.”

The four items of this measure had been used by Lim (2002), together with a fifth question, as a measure of interactional fairness. However, in this study the four items were not seen in this light. Assessment of the content of the questions (Haynes, Richard & Kubany, 1995) suggested that they were phrased too broadly to be seen as such a measure. For example, the level of agreement or disagreement with the statement that one’s supervisor treats one with kindness and consideration does not necessarily reflect a level of perceived interactional fairness. In my opinion, all it clearly indicates is the respondent’s perception of how the supervisor treats him or her. If this treatment is perceived as fair in any given situation, it can be seen as a matter of speculation, but this does not automatically follow from the content of the questions.

The results of PCA indicated that all four items loaded strongly onto one single factor (factor loadings .91 to .80) which explained 77.2% of the variance. For a summary of the factor loadings please refer to Appendix E, Table E5.2.8. The PCA result suggested that the four items of this measure belonged to one common underlying concept. However, it is argued here that this underlying concept is the respondents' perception of how their supervisor treats them, rather than perceived interactional fairness, as Lim (2002) asserts.

The scores of the measure were calculated by adding the scores of the four individual items and creating the mean, with high scores pointing to a largely positive perception of how the respondent is treated by his or her supervisor.

The distribution of scores showed one outlier at the very low end of the scale. However, even after removal of this outlier the score distribution was negatively skewed (skewness -.531). Negative skewness suggested that the respondents tended to have largely positive perceptions about the treatment received from their supervisors. It is reasonable to assume that this response pattern is fairly typical for sample groups of the size found in the current research, and that one would need a very large sample of employees to achieve a normal distribution of this variable. Consequently the existing variable was retained in the analysis and it was closely observed.

The internal consistency of this measure of perception of how the supervisor generally treats the respondent at work was good, with a coefficient alpha of .892.

5.3.2.9 Attitude towards PWU control (Qs 51, 52, 57, 58)

The proposed theoretical model indicates that the attitude towards procedures that manage and regulate PWU in the participants' organisation moderates the relationship between perceived workload and PWU. The participants' attitude towards PWU control in their organisation was examined through four items. These items asked the respondents to indicate, on seven-point Likert scales, their level of satisfaction with, and trust in guidelines, procedures, and electronic monitoring practices implemented by their organisations in an effort to manage and regulate PWU. One example of these questions is: "How effective do you think the guidelines regarding Internet use for personal interest during work hours are at your work?") The present measure was inspired by similar measures of procedural fairness (e.g. Murphy, 1997). However, in my study the respondents were asked to indicate levels of satisfaction and trust rather than perceptions of fairness as was the case when measuring procedural fairness. Additionally, measures of procedural fairness typically examine fairness perceptions of general issues. For example, Murphy's (1997) measure included items such as: "At my company all employee concerns are heard before job decisions are made." or "At my company accurate and complete information is collected to make job decisions". This research, however, is less concerned with general perceptions of procedural fairness, and how the organisation deals with general policies, procedures and

decisions in general. The focus of the project is on attitudes towards policies and procedures that can potentially affect one's PWU. Therefore, the four items in this measure were phrased with this particular focus in mind, having not been used in previous studies.

The results of PCA indicated that all four items load satisfactorily onto one single factor (factor loadings .52 to .79) which explained 51.6% of the variance. For a summary of the factor loadings please refer to Appendix E, Table E5.2.9.

The scores of the measure were calculated by adding the scores of the four individual items and creating the mean, with high scores pointing to a fairly positive attitude towards PWU policies and procedures existing in one's organisation.

The distribution of scores in this measure was relatively close to the normal distribution and therefore the measure was used in further analyses without further manipulation.

The internal consistency of this measure was just acceptable with a coefficient alpha of .660.

5.3.2.10 Boredom at work (Qs 59-66)

The proposed theoretical model presents boredom at work as the driver influence in the fourth interaction influencing PWU. To investigate the extent of boredom that the participants experience at their current work, Lee's (1986) 17-item measure of boredom on the job had been considered. Lee (1986) developed the measure for research purposes in response to the lack of job boredom measures available for non-assembly line workers. Lee (1986) reported coefficient alphas for .95, .93 and .94 for the three validation studies conducted. However, since this study needed a short measure of boredom, only eight items were chosen from Lee's original scale, those for which Lee (1986) reported factor loadings of .7 and higher. Those eight items were adopted for this research in their original wording (e.g. "I get mentally sluggish during the day.").

In my study respondents were asked to indicate on a six-point Likert scale how strongly they agree with each of those eight questions (Example: "Time seems to go by slowly at work") in relation to their current job.

PCA showed that in this study one factor explained 71.4% of variance with all items loading highly onto this one factor (.90 to .67). For a summary of the factor loadings please refer to Appendix E, Table E5.2.10.

The scores of the measure were calculated by adding the scores of the eight individual items and creating the mean, with high scores on this scale indicating that the respondent reasonably often perceived work to be boring.

The coefficient alpha of the eight-item boredom measure was .940 indicating the measure has high reliability.

The distribution of that boredom measure was skewed towards the lower values (skewness .726) thus indicating that the sample group consisted of a high number of individuals who are not bored at work**.** In order to move the distribution of the data closer to the normal distribution assumed in multivariate analysis, the researcher experimented with different re-categorisations. The focus was to retain the rank order of scores in the data, and as much detailed information as possible. The experimentation process included (a) plotting the data (stem-and-leaf plots, and histograms with the normal curve superimposed) to visually assess the data and value groupings; (b) repeatedly recoding the boredom scores into differently sized categories by grouping these scores in ways that appeared meaningful and representative of the raw data; followed by (c) re-coding the data, re-calculating the skewness, and re-plotting the resulting data distribution, until a set of categories were identified that allowed the data to approach a normal distribution.

This process resulted in transforming the boredom data into six categories with the least degree of skewness, and yet retaining the rank order of scores: values from 0-1, coded as 1; values from 1.01-1.6, coded as 2; values from 1.61-2, coded as 3; values from 2.01-2.99, coded as 4; Values from 3-3.99, coded as 5, and values of 4 and above coded as 6. The thus recoded measure was used in the data analyses described later in this chapter.

5.3.2.11 Job status (Q128)

The proposed theoretical model asserts that the relationship between boredom at work and PWU is moderated by the status of one's job/position. This status is generally seen as reflected in the occupational level, with high levels having high job status. A single question asked the respondents to indicate, via a drop-down menu, their current occupational level. These levels were: entrance level, experienced employee, tertiary student, supervisory level, middle management, upper management, executive level**.** The job levels were kept relatively broad, so respondents from different organisational structures, with possibly different job labels, could give responses that best reflected their job levels and typically associated job status. Because the focus of this research project was the population of people who identified mainly as employees, as opposed to tertiary students, the scale was recoded to include only the six remaining categories of job status levels. The lowest level was entrance level (1), followed by that of employees who are

experienced in their job but are not at supervisory level (2), supervisory level (3), middle management level (4), upper management level (5), and executive management level (6).

The distribution of this variable is not normal, with a large group of individuals reporting to be experienced employees who are not at supervisory level. Since the participants in this research are members of a convenience sample, mainly recruited through the earlier described pass-on-effect, it would be unreasonable to expect a normal distribution. Furthermore, the use of conventional job status classifications, and the achieved good spread through the listed job categories, far outweigh any arguments for attempts to normalise the present data.

5.3.2.12 Tenure in the current job (Q130)

According to the proposed theoretical model, the relationship between boredom at work and PWU is moderated by how long the person has been in the current job. One open-response question asked the participants to write how many months and / or years they have been in their current position. Upon completion of data collection the responses given in years were recalculated into months for ease of data presentation and further analysis.

To increase the normality of data distribution (an assumption to be met for multivariate analysis), and to maintain the character of the tenure information, the researcher experimented with different re-categorisations of the data. The experimentation process followed the same steps as described earlier and used to manipulate the boredom data. This process resulted in recoding the tenure data into eight monthly categories: 0-3 months coded as 1; 4-6 months coded as 2; 7-12 months coded as 3; 13-30 months coded as 4; 31-60 months coded as 5, 61-96 months coded as 6, 97-18 months coded as 7, over 180 months coded as 9. The thus recoded measure was used in the data analyses described later in this chapter.

5.3.2.13 Social loafing risk index (Qs 55, 56, 74, 75, 76, 77, 78, 131, 134)

The proposed theoretical model suggests that social loafing moderates the relationship between boredom at work and PWU. Traditional measures of social loafing (e.g. George, 1992; Murphy, Wayne, Liden & Erdogan, 2003) consist of supervisor and/or colleague reports on an individual's behaviour in a workgroup; no self-report measure suitable for the present study had been found.

Therefore, the first step in forming the Social loafing risk index was to explore established aspects of social loafing that were relevant to this study. This was

accomplished through developing nine items based on previous research findings into the five most common determinants of social loafing, namely:

- Degree of individual accountability and identification of individual behaviour (Harkins & Szymanski, 1989; Williams, Harkins & Latane, 1981); (Q 55, Q56, Q74, Q134). For example: "The control systems in place at our organisation cannot identify exactly who in a workgroup is accessing the Internet."
- Type of work group's involvement in accomplishing own task (Jackson & Williams, 1985; Williams, Karau & Bourgeois, 1993); (Q75: "How would you describe your MAIN work situation? With answer options: I mainly work alone on tasks. My work is joined with that of other people to complement specific tasks. Completing my task requires me to interact with other people and their tasks. I compete with others when working on my tasks. I am not sure")
- Size of work group (Jackson & Latane, 1981) (Q131: "Please indicate the size of your work group. With an open response option regarding member numbers.")
- Perceived dispensability of effort (Albanese & vanFleet, 1985; Orbell & Dawes, 1981); (Q 76, Q78, e.g. "I believe my work input is of great importance to my work group.")
- Perceived lack of influence over task outcomes (Comer, 1995; Price, 1987); (Q77: "I have little control over the outcome of my work groups' tasks.")

All nine items explored either participant agreement with statements (e.g. "I have little control over the outcome of my work group's tasks"), or elicited descriptions (e.g. "How would you describe your MAIN work situation?") and frequencies (e.g. "Do you work in an open-plan office?" with answer options: all the time – never).

The second step in creation of the Social Loafing Risk Index was the recoding of each item's responses in such a way that, based on above listed research findings, the answer options were categorized either into the High Risk Indicator (+1) or Low Risk Indicator (-1).

Thirdly the sum of these variables was computed to create the final Social Loafing Risk Index. The higher the value of this index, the greater was the social loafing risk in the working environment of the participant.

5.3.3 The additional items

The online questionnaire concluded with two open-response questions (Questions 135 and 136). These questions explored the respondents' experiences with PWU, PWU control measures and the consequences of PWU. The two questions were identical except that one focused the respondent on the positive and one on the negative aspects of PWU ("Can you please, in brief sentences, describe an incident where electronic monitoring,

company guidelines, or your supervisor's behaviour in relation to Internet access at work, had a positive (negative) outcome. Please briefly describe the situation, the behaviour and the positive (negative) outcomes or result."). The questions were phrased as critical incident questions (Flanagan, 1954) in an effort to elicit information about specific situations, behaviours and outcomes. Their open-response format also gave the respondents the opportunity to share feelings, impressions and general comments.

5.4 Data analysis

The theoretical model was tested using ordinary least squares multiple regression. Regression was seen as preferable to structural equation modeling (SEM), given the predominance of single indicators in the measurement model, and SEM's requirement for very large samples to test complex models (Kline, 2005).

Six separate analyses were undertaken, one for each of the dependent PWU variables. Since the model contains main and interaction effects, a moderated hierarchical regression strategy was used (Jaccard & Turrisi, 2003).

All predictor variables were first centred, i.e. transformed into mean deviation form. Next, interaction terms were created by forming the products of each pair of variables that were hypothesised to interact. Each regression was conducted in two steps, whereby all of the predictor variables were entered in the first block, and all the product terms were entered in the second block. The r-squared statistics in the full models were seen to indicate how much of the variance in the criterion variables is explained by all investigated effects. Due to the large number of interaction terms included and the subsequent loss of power, the R^2 changes were not used as interaction detectors. To determine which main and interaction effects make significant, unique contribution to explaining the variance in the criterion variables, the significance level was set at $p<.05$. The form of each statistically significant interaction was explored using the Modgraph software available at: http://www.vuw.ac.nz/psyc/staff/paul-jose/files/helpcentre/help1_intro.php. This suite of programs plots the shape of the relationship between a pair of criterion and predictor variables for various values of a moderating variable, and provides significance tests of the simple regression coefficients for each of these relationships. With the exception of the Modgraph procedures, all regression and associated diagnostic analyses were conducted with SPSS, version 12. Further details of the statistical data analyses are described in Chapter 6 and Chapter 7.

The qualitative data was collected through two open-response questions at the end of the online questionnaire (Qs 135, 136). Although these questions were phrased as critical incident questions, their responses were analysed using thematic analysis

techniques (DeSantis & Ugarriza, 2000); in an anonymous online survey it is impractical, and nearly impossible, to prompt respondents to adhere with their answers to the critical incident format. At the same time, ignoring comments that did not fit the critical incident criteria would have resulted in the loss of important information. Thematic analysis, in turn, allowed the investigation of all qualitative data, identification of themes within the data, and subsequent interpretation of the comments given within the framework of this research project. Further details of the analysis steps are described in chapter 8.

5.5 Research ethics

Ethics approval was granted by the Massey University Human Ethics Committee (Approval #: MUHEC 03/074).
Ethical issues that could become potential problems included the possibility that one might feel enticement to engage in PWU, issues of anonymity and confidentiality, and the use of incentives for participants to complete the survey.

5.5.1 Enticement to engage in PWU

In the context of the research project, personal web use at work, the sending of invitation emails mainly to business email addresses could potentially be construed as enticement to engage in an undesired behaviour. However, this is not necessarily the case. Firstly the invitation email contained only a web link to the extensive survey and not the survey itself. Employees receive dozens of unsolicited emails at their work email address and have the choice of opening it, reading it, responding to it, forwarding, or deleting the said email: all of these are activities that are generally acceptable to organisations. Furthermore, a number of employees read their email from their home computer rather than a work computer, while others have firewalls and security systems that control the email messages the employee actually receives. In light of the common nature of emails and the diverse options of responding, it is therefore not seen as problematic that a number of potential participants were approached via email addresses at their work.

At the same time, completion of the online questionnaire was not in any way limited to or encouraged to be done from workplace computers. Nevertheless, it appeared that for nearly two thirds of participants, completion of the survey at the workplace was not perceived to be a problem (68.1% reported to have done so). Those individuals, in turn, who were aware of policies, procedures and controls that restrict personal web use at their workplace had the opportunity to forward the survey link to their home email address, and then complete the survey away from their workplace. Almost one third of participants

(29.5%) may have chosen to do so, and reported that they completed the questionnaire on a non-work computer.

5.5.2 Anonymity and confidentiality

Measures were taken to ensure anonymity of the participant for the researcher and confidentiality of the information supplied. At the same time it is acknowledged that the preservation of anonymity may not have been necessarily guaranteed from the side of the participants' employers. The possibility of workplaces identifying employees through monitoring emails and website access could potentially bring employer retribution for engaging in PWU. However, because the invitation emails were sent to work email addresses, electronic monitoring programs scanning for PWU would not have identified it as personal email. And although some electronic monitoring programs 'read' each in- and outgoing email, these programs tend to scan for any objectionable material, that could be seen as sabotage to the organisation. Only in special circumstances would an organisation order their IT department to scan and read every email sent and received by an individual, thus breaching the anonymity of the participant.

For those people who may have been unaware of such controls or restrictions, and whose participation in the survey may have resulted in a reprimand from their supervisor or employer, it was possible to contact the researcher, and advise her of this so that she could, in turn, have contacted the employer, explained the situation, and apologized for any inconvenience caused. No such request or comment had been made to the researcher in any form, either in the pilot studies or during the ten-week data gathering process. Confidentiality of the information gathered via the web-based survey was guaranteed, because even if organisation-based electronic monitoring procedures had identified the person accessing the survey website, the monitoring program would not have been able to access the data base with the participants' answers.

The perceived anonymity of the Internet can be argued to be technically only an illusion. With the potential presence of electronic monitoring systems on work stations, participants can remain anonymous to the researcher, but potentially not to the employer. It is acknowledged that in the present study, for example, there was no control over potential invasions of the participants' anonymity through electronic monitoring systems, 'spyware' or similar processes. However, from the researchers and the Webmaster's side every effort was made to ensure that identifying personal details (such as email addresses) were kept separate from the participant responses, and to destroy them immediately after their administrative use, thus reducing the possibility of breaching the anonymity of participants.

5.5.3 The use of incentives

In order to encourage survey participation and to acknowledge the effort and time spent by respondents (pilot testing suggested 30 minutes), a raffle of incentives was included. Each participant supplying his or her email address had an equal chance (1:30) to be the recipient of an incentive. The raffle prizes ranged from mini digital cameras, walkmans and picnic backpacks to shower radios and knife sets. All ten prizes were then mailed out to randomly selected participants within one week after receipt of their mailing address. Subsequently all email addresses and physical mailing addresses were destroyed. Again, anonymity towards the researcher was maintained, because at no time did I have access to any technically possible links between response data and individual-identifying information.

This practice of a prize pool as incentive and token of appreciation is common among consumer surveys conducted via the Internet (e.g. AC Nielsen, Consumer Link, Nestle) in New Zealand, Australia, and the United States, and in line with the this study's limited budget. Other incentives frequently used by researchers to gather data, such as paying every participant a set fee, or allowing course credits for participation were either not within the financial budget of the researcher, or not appropriate for the current research (considering the international target population that excluded tertiary students, for example).

The above described measures, statistical and qualitative data analysis procedures were then applied, and the results are presented in the following three chapters.

Chapter 6

The PWU patterns of the research participants

The aim of this research project is to identify psychological and workplace attributes that influence PWU. However, before testing the proposed theoretical model, it is important to understand the PWU patterns of the research participants. Understanding these patterns will place the results of the model testing and the subsequent conclusions in their appropriate context. In the online questionnaire, five facets of PWU were measured: PWU frequency, habitual frequency, duration, specific activities that were identified as companionship-related PWU and those that were conceptualised as information-seeking PWU. In this chapter, the statistical examination of how these measures characterised the behavioural PWU patterns of the research participants as a group are presented. These patterns, in turn, will allow the results presented in chapter 7 to be placed in the context of the research participants' PWU patterns.

The 267 individual data sets included in the research were relatively complete, there was still, however, some missing data. In an effort to stabilise the results by keeping the sample relatively constant, and to make comparisons across analyses more defensible, missing data was not imputed, and the strategy of listwise deletion was applied. The less conservative method of pairwise deletion would have created two dislocations. First, each correlation would not necessarily have applied to the same set of cases. Second, the bi-variate and multivariate analyses would have been based on different sub-samples, whereas statistical results based on roughly the same set of cases (as achieved through list-wise deletion) are more stable than those partially determined by changing subsets of cases. The uni-variate data presented in this chapter is that of the 220 research participants that were common to all model testing analyses. The correlational information in this chapter, however, includes data on the individual PWU activities which formed the variables of companionship-related PWU (CPWU) and information-seeking PWU (IPWU). Due to listwise deletion in these individual activities, the data presented in the correlation table is that of the core 220 participants.

6.2 PWU frequencies and duration

The five PWU measures used in this study represented five facets of PWU. On their own (uni-variate statistics) and in relationship with each other (bi-variate statistics) the summary statistics of the five PWU measures provided insights into the PWU patterns of

the participants. For those statistics, as well as for all further data analyses, the re-coded scales were used (see chapter 5).

Table 6.1 allows us to get a good first impression of the survey respondents' PWU patterns. The PWU frequencies reported varied from almost never to over 30 times per fortnight. Participants reported that, on average, they accessed the Internet for personal interest during work time over the two weeks preceding their survey participation about ten times (mean score 2.51). Thirty-nine per cent of the respondents reported to have engaged in PWU between two and seven times during those two weeks. Assuming a typical working week of five days, more than one third of them reported that they engaged less than once per day in PWU. Another third of the respondents (33%) indicated that they engaged between 8 and 25 times in PWU. At the same time, 16% of the respondents engaged more than 25 times in PWU (on average two or three times per day). Finally, 12% of respondents reported to not have engaged in PWU at all, or only once in those two weeks. With about 70% of respondents engaging less than twice per day in PWU, the research participants can be characterised as a group of relatively mild users of the Internet at work for personal use.

The data summarised in Table 6.1 shows participants reporting large variations in frequencies of PWU out of habit. These estimates ranged from never to over 25 times. The average frequency of engaging in PWU out of habit was about seven times per week (mean score 3.43). Just over half (55.5%) of the respondents reported to engage in PWU out of habit between two and ten times per week; which would translate to a maximum of twice per day (in a 5-day working week), similar to the general PWU frequencies reported over the preceding fortnight. The remaining respondents were evenly split between those who never or only once engaged in PWU out of habit (22.8%), and those who engaged in habitual PWU more than twice per day, up to more than four times per day in an average week (22.8%). Although the average daily PWU out of habit was slightly higher than their reported PWU frequency over the past fortnight, it is still reasonable to say that overall the participants were not very frequent, habitual users of the Internet for personal reasons.

Table 6.1: PWU frequencies, means and standard deviations (N = 220)

PWU measured	Engaged in (code)	Percentage	Mean	SD
PWU Frequency	In the past two weeks …		2.51	.89
	2 - 7 times (2)	38.6		
	8 – 25 times (3)	33.2		
	25 times and more (4)	15.9		
	Never or only once (1)	12.3		
PWU Habit	Per week …		3.43	1.39
	2 - 4 times (3)	31.4		
	5 - 10 times (4)	24.1		
	Only once (2)	11.4		
	11 - 20 times (5)	11.4		
	Never (1)	10.9		
	Over 20 times (6)	10.9		
PWU duration	In an average week…		2.97	1.40
	Up to half an hour (2)	26.8		
	Over two hours (5)	21.8		
	Up to one hour (3)	20.5		
	Virtually never (1)	16.4		
	Up to two hours (4)	14.5		
Companionship -	In last two weeks…		3.23	1.22
related PWU	Quite often (4)	36.8		
	Somewhat (3)	24.5		
	Rarely (2)	13.6		
	Almost never (1)	12.3		
	Frequently (5)	10.5		
	A lot (6)	2.3		
Information - seeking	In last two weeks…		3.29	1.27
PWU	Quite often (4)	34.5		
	Somewhat (3)	23.6		
	Rarely (2)	13.2		
	Frequently (5)	13.2		
	Almost never (1)	12.3		
	A lot (6)	3.2		

Note: The coding in brackets was added to assist linking the information in the table with the descriptions in the text.

The longest reported times spent on PWU in an average week were over two hours and the shortest were categorized as virtually no use (Table 6.1). The average PWU duration of the participants in one week was up to one hour (mean score 2.97). Just over one quarter of the them (26.8%) spent up to half an hour on PWU, while just under one quarter spent between half and hour up to one hour (20.5%) or over two ours (21.8%) on PWU. The remaining participants reported to engage either virtually never (16.4%) in PWU, or to have spent up to two hours (14.5%) per week engaged in PWU. When calculating the average daily PWU duration (i.e. weekly duration in minutes divided by five assumed working days), we find a wide spread from never to two hours per average day. A large standard deviation (SD = 23.53) indicated that the daily duration was spread widely around the mean of 19 minutes. With an average daily PWU of less than 20 minutes, the PWU duration of these participants was relatively low, compared with that of 59 minutes published by Malachowski & Simonini (2007). These authors reported, based on their annual online survey into "wasting time at work", that in 2006 United States employees "wasted" on average 1.9 hours at work, 52% of that by engaging in PWU. The difference in reported PWU duration between the two groups of research participants may be due to differences in their demographics, as well as differences in how the participants in my project were asked about their PWU duration.

While Malachowski and Simonini (2007) surveyed users of the Internet-based email website American Online (AOL), the choice was made on purpose not to focus on users of any particular website or Internet activity as research participants. Surveying users of an Internet-based email website could potentially have lead to a biased sample population of individuals whose PWU patterns differ from the general population. Secondly, Malachowski and Simonini (2007) reported to have surveyed employees' "work time wasting activity" patterns and duration, comparing self-report data of employees with tolerated "down-time" data of human resource (HR) professionals. The 2006 survey was the second of its kind conducted by the authors, and it is possible that a proportionally large number of respondents tried to second guess the authors' research goals which were widely publicised in connection with the 2005 survey results. These goals included following up on the previously reported, relatively large gap between how HR professionals guess how employees spend their time at work, and what employees report they do. Differences in participant recruitment and research purpose could, therefore, provide partial explanations for the comparatively large differences in PWU duration between the participants in the current study and those in that of Malachowski and Simonini (2007).

The reported frequencies of engaging in companionship-related PWU (CPWU) and information-seeking PWU (IPWU) activities ranged from never to very frequently. The participants engaged in both types of PWU activities, on average, to levels described as

"sometimes". Although more respondents reported to have engaged in companionship-related PWU activities "quite often" (36.8%) compared to those engaging in information-seeking PWU activities (34.5%), the means score for companionship-related PWU activities (mean = 3.23) was marginally lower than the mean score for IPWU (mean = 3.29). Only a small proportion of respondents indicated that they engaged 'a lot' in companionship-related PWU activities (2.3%) or in information-seeking PWU (3.2%) activities. In general the frequency patterns for engaging in companionship-related PWU and in information-seeking PWU activities were relatively similar. About half of the respondents engaged in companionship-related PWU activities (49.6%) and in information-seeking PWU (50.9%) quite often, frequently or a lot, while the other half engaged somewhat, rarely or almost never in these activity types.

The PWU of the survey participants was widely spread from the highest to the lowest possible frequencies and durations, with median values in the middle of their respective ranges. These findings indicated the presence of differences between individuals' PWU, and characterised the group of respondents to be, on average, a group that did not engage in extremely high or low levels of PWU. The fact that the participants tended to differ in their PWU made them an ideal group for this study, which aimed to examine attributes that influence such differences.

6.3 Specific PWU activities

In order to better understand what the research participants did when they engaged in PWU, not only the two general PWU activity categories (i.e. companionship-related and information-seeking) were examined, but also looked at the respondents' specific online activities. Table 6.2 summarises the percentages of individuals who accessed each of the online activities listed in the questionnaire either frequently, sometimes or never.

The most frequently used PWU activity was personal emailing (engaged in frequently or sometimes by 88% of respondents). Just over 58% of all respondents used a web-based email address instead of, or additionally to, their work email address. The second most engaged-in PWU activity was reading the news, sport and weather on-line (69%), closely followed by researching for hobbies and non-work related interests (62%) and taking care of banking and investments (60%).

Table 6.2: Percentages, means and standard deviations of specific PWU activities (N = 220)

Activity	Frequently (%)	Sometimes (%)	Never (%)	Mean	Std. deviation
Personal email	28.5	59.7	11.8	2.17	.61
News & sport	28.1	40.7	31.2	1.97	.77
Web-based email	27.9	30.6	41.6	1.86	.82
Banking	18.3	41.6	40.2	1.78	.73
Hobby research	9.6	52.5	37.9	1.72	.63
Travel	7.9	41.9	50.2	1.58	.64
External business	7.4	34.1	58.5	1.49	.63
Entertainment	4.6	35.3	60.1	1.45	.58
On-line shopping	2.8	27.2	70	1.33	.53
E-cards & gifts	0.5	17.5	82	1.18	.40

The least frequently used PWU activity was the sending of e-cards or e-gifts, which 82% of the respondents reported to never have done. Although reading general news and sports pages was very frequently done, surfing entertainment related websites was less so (60% reported to never have done so).

The standard deviations of the different PWU activities (Table 6.2) were relatively small, suggesting that the frequencies in these activities were reasonably close to the mean values. The mean scores in all activities were between the values of 1.3 and 2.1. On average, the respondents reported to engage in these activities only occasionally (1) or sometimes (2). The data characterised the group of research participants as a group of individuals who frequently sent, received and forwarded personal email messages either through their organisations' email system or through web-based personal email sites. At the same time, the participants frequently read the news, sports and weather online, researched their hobbies and non-work related interests and took care of their banking needs.

6.4 Examining patterns of the research participants' PWU

After characterising the PWU of the research participants in general, it was of interest to investigate possibly existing patterns in the way they reported the different PWU facets measured. The next step, therefore, was to examine patterns of relationships between the participants' reported PWU frequencies, habit, duration and activities. To assess these relationships correlations, scatterplots and boxplots were used. Correlations allow the examination of the variables' covariances, and identify trends in their relationships to each other. Scatterplots can give a general indication of the strength of the relationship between the two variables. Boxplots, in turn, are useful in exploring the distribution of the variables. In the interest of clarity, in this only the Pearson correlations in table form (see Table 6.3) are presented, while a number of cross-tabulations, scatterplots and boxplots can be found in Appendix F. Patterns of interest to this study found in the cross-tabulations and graphs are presented in the text.

Table 6.3: Pearson r-correlation coefficients of the PWU variables

	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Frequency	**.76**	**.66**	**.53**	**.60**	**.42**	**.40**	.11	**.49**	**.44**	**.31**	**.35**	**.25**	**.37**	**.43**
2. Habitual PWU / week	-	**.66**	**.54**	**.64**	**.44**	**.41**	.14	**.54**	**.48**	**.32**	**.34**	**.31**	**.42**	**.44**
3. PWU duration/ week		-	**.60**	**.60**	**.47**	**.44**	**.22**	**.51**	**.52**	**.45**	**.39**	**.26**	**.33**	**.44**
4. CPWU			-	**.53**	**.69**	**.69**	**.31**	**.39**	**.59**	**.45**	**.37**	**.54**	**.36**	**.34**
5. IPWU				**-**	**.38**	**.42**	.13	**.72**	**.43**	**.61**	**.30**	**.29**	**.69**	**.57**
6. Web email					-	**.39**	**.22**	**.28**	**.27**	**.29**	**.31**	**.30**	**.22**	**.28**
7. Personal email						**-**	**.18**	**.32**	**.36**	**.37**	**.23**	**.32**	**.34**	**.23**
8. e-cards & gifts							**-**	-.20	.12	**.23**	.11	**.16**	.12	.14
9. News & sports								-	**.38**	**.24**	**.25**	.21	**.33**	**.45**
10. Hobbies									-	**.37**	**.39**	**.32**	**.30**	**.36**
11. Travel										-	**.19**	**.24**	**.37**	**.31**
12. Shopping											**-**	**.19**	**.27**	**.20**
13. External business												**-**	**.31**	.09
14. Banking													-	**.32**
15. Entertainment														-

Note: N=220, p<.01 correlation coefficients shown in **bold**, p<.05 shown in italics, and non-significant coefficients are shown in regular font. CPWU=companionship-related PWU, IPWU=information-seeking PWU

6.4.1 Habitual PWU and PWU Frequency

Previously (chapter 3) the argument was that PWU may, to a large degree, be a habitual organisational behaviour. If this is the case, one would expect that the reported habitual and general PWU frequencies have a strong, positive relationship with each other. The cross-tabulations between PWU frequency and habitual PWU (see Table F6.1 in Appendix F) showed that 88% of individuals who reported lower general PWU frequencies (almost never) also reported relatively low habitual PWU frequencies (never or only once per week). At the same time, 52% of the individuals at the high end of reported PWU frequencies (over 25 times per week) also reported comparatively high levels of habitual PWU (over 20 times per week). The positive correlation coefficient ($r = .76$) confirmed the trend that individuals with high PWU frequency tended to also have high levels of habitual PWU, while those who rarely engaged in PWU out of habit, also reported to almost never engage in PWU. No respondent reported to have engaged very frequently in PWU (i.e. over 25 times) and yet not engaged in PWU out of habit. The positive and relatively strong relationship between PWU frequency and habitual PWU was as expected, i.e. PWU is partially a habitual behaviour.

The box plot of the relationship between habitual PWU and PWU frequency (see Figure F6.1, in Appendix F) suggested the presence of two rather distinct groups of research participants: one with relatively low median habitual and general PWU frequencies, and one with proportionally high median frequencies in both measures. Additionally, in the middle range of habitual PWU, the presence of outliers showed 13% of respondents reporting general PWU frequencies much higher or lower than the median. Removal of the outliers from the data set would have resulted in a stronger correlation, but at the cost of valuable information. Because this research aimed at investigating what influences the differences in PWU between individuals, the decision was made to retain the outliers in the data set. In general, the majority of respondents (52%) were rather moderate personal web users. They were characterised as having medium levels of habitual PWU and tended to also have had moderate PWU frequencies in the two weeks preceding their questionnaire response.

6.4.2 PWU Frequency and PWU duration

Intuitively one might expect that individuals who accessed the Internet often tended to spend more time on online activities than those who did so less frequently. However, it is also possible that individuals who engaged less often in PWU, spent longer times at their few sessions. These individuals would then have reported average PWU durations that were longer than those of more frequent PWU users with shorter PWU sessions.

The cross-tabulated data (Table F6.2, Appendix F) showed that 68% of respondents who reported to almost never engage in PWU, also reported to have spent virtually no time on PWU. At the same time, 59% of respondents reporting to have accessed the Internet at work for personal interest more than 25 times in two weeks, reported to have spent over two hours on PWU in an average week. The majority of the respondents did, therefore, follow the intuitive pattern of having high or low PWU frequencies and long or short PWU duration times respectively. The moderate, positive correlation between PWU frequency and PWU duration ($r = .66$, Table 6.3) confirmed that, on average, individuals who engaged very frequently in PWU also tended to spend a relatively longer time on PWU. However, different patterns of PWU frequency and duration existed within the group of research participants.

The cross-tabulated data and box plot of that relationship (to be found in Appendix F, Table F6.2; Figure F6.2) showed that 69% of respondents who engaged in PWU for up to half an hour per week, accessed the Internet between two and seven times in two weeks. The number of individuals who did so noticeably more ($n = 12$) or less ($n = 5$), were considered outliers. Those who engaged for longer or shorter periods in PWU, however, tended to vary widely around the median of PWU frequencies. The spread was especially large for the groups of respondents who spent up to one hour, or up to two hours, on PWU. Here we find that 50% of those reporting to have spent up to one hour on PWU in an average week, reported to have engaged in PWU between 2 and 25 times in PWU. This appears to be a wide spread, which could potentially be due to the earlier reported (chapter 5) data manipulation that saw the collapse of the original 11 frequency answer options into four categories. However, the scatterplot of the non-manipulated variables (see Figure F6.4 in Appendix F) suggested that the rather moderate correlation between PWU frequency and duration was more likely due to the presence of outliers. These were individuals who reported to engage in PWU for rather long times (between 300 and 600 minutes per week) and who varied widely in how often they engaged in PWU (between two or four times per week to over 30 times per week). Removal of these outliers would have resulted in a stronger, positive correlation between PWU frequency and PWU duration. However, as

already argued, in the interests of retaining information, and to avoid testing the model with an insufficiently small sample, the outliers were retained in the data set.

The data in this study showed that, in general, participants with infrequent PWU also reported a relatively shorter time spent on PWU, while those with frequent PWU tended to report longer times. The data also suggested that a number of frequent personal web users tended to spend very little time on the Internet, possibly using PWU for micro-breaks. At the same time, a number of respondents accessed the Internet at work relatively infrequently, but when they did they spent relatively long times on PWU.

6.4.3 Habitual PWU and PWU Duration

Respondents with higher habitual PWU frequencies also tended to report relatively long-lasting PWU sessions (r = .66); repeating the trend of those with relatively high general PWU frequencies to also report longer PWU sessions (r = .66) (Table 6.3). Although the correlation coefficients are identical, the data plots suggested a difference in pattern. The cross-tabulations and box plot of the relationship between habitual PWU and duration (see Table F6.3, Figure F6.3, in Appendix F) showed that, with the exception of three outliers, respondents engaging up to one hour per week in PWU varied less in their habitual PWU frequencies than in their general PWU frequencies. At the same time, those who engaged up to half an hour per week in PWU differed more in how often they did so out of habit, than in how often they engaged in general PWU.

In a second contrast to the pattern shown in the relationship between PWU frequency and duration, individuals who spent up to one hour per week on PWU, reported comparatively similar frequencies of habitual PWU; the exception was the five individuals with PWU frequencies out of habit noticeably higher or lower than those of their group. Individuals who engaged for up to, and those who engaged more than two hours per week in PWU, varied widely in their habitual PWU frequencies. Overall, the pattern of habitual PWU and weekly PWU duration was similar to that of general PWU frequencies and PWU. Those participants, who reported to spend on average either virtually none, or rather a lot of time on PWU, also reported infrequent and rather frequent habitual PWU respectively. At the same time, individuals with low to moderate PWU duration levels differed relatively little in their low to moderate habitual PWU frequencies.

6.4.4 Patterns of specific PWU activities

Besides characterising the PWU time dimension of the research participants, it was also of interest to investigate their PWU activity patterns. The question here was whether individuals who were frequent personal web users, spending relatively long times on PWU, chose similar online activities. At the same time, it was also of interest whether frequent engagement in some online activities was linked to frequent engagement in certain other online activities. Knowing the research participants' PWU activity patterns not only helps characterise them as a group but can also serve as an indication for the development of effective PWU control strategies.

The data (Table 6.3) in this study showed that only two online activities had a moderate degree of covariance. Those respondents who frequently read the online news, also tended to frequently read entertainment-related pages (r = .45). The correlation coefficients between all other activities were small, although mainly significant, suggesting that the participants varied widely in their PWU activity patterns, and that based on the current data there is little indication linking frequent access of one type of website to frequent access of another specific online activity.

The activity patterns of general and habitual PWU frequencies were proportionately similar, as could be expected seeing their close link with each other (Table 6.3). On average, individuals with relatively high habitual PWU frequencies tended to occupy themselves frequently with online news reading (r = .54), and researching their own hobbies (r = .48). Those individuals also leaned towards reading entertainment news rather frequently (r = .44), and towards frequently send and/or receive personal emails through web-based email systems (r = .44). The relatively low correlation coefficients and the plotted data indicated, however, that the research participants engaging in those activities "occasionally" varied quite widely in how often they engaged in habitual and in general PWU. The data, therefore, gives only a moderate indication about which PWU activities tended to be preferred by frequent personal web users.

Anyone who has ever surfed the Internet to find information about a hobby, had an email conversation, looked for a new job, or spent time reading the news, knows how easy it is to spend hours online that feel like minutes. Accordingly, those research participants who reported to spend a long time on PWU during an average week also tended to report more frequent access of websites that helped them to research their hobbies and other

non-work related interests (r = .52), followed by reading the news, sports or weather reports online (r = .51). In an average week, respondents with longer PWU duration also tended to engage more frequently in activities that involved taking care of personal email through the web (r = .47) or through the company's email system (r = .44), and in making travel arrangements (r = .45). However, the relationships between PWU duration and the online activities were less strong than was expected. The data plots showed that individuals who engaged "occasionally" or "sometimes" in these online activities varied greatly in how much time they spent on PWU in an average week. The research participants varied even more in how much time they spent on PWU and how often they engaged in online activities such as sending e-cards and gifts (r = .22), taking care of external business (r = .26), online banking (r = .33), and online shopping (r = .39). Overall, it appeared that individuals spending more time on PWU engaged to similar degrees in Internet research and news reading, personal email and taking care of travel arrangements.

Looking at the extremes of reported PWU duration, those respondents who spent almost no time on PWU also spent very little time on personal emails, or personal hobby research. At the other extreme of PWU duration, those reporting to spend more than two hours on PWU engaged, on average, rather frequently in personal emails, sending e-cards or e-gifts, and online shopping. In general, the data suggested that differences in individuals' PWU duration were associated with different PWU activities. At the same time, on average, individuals engaging in PWU for relatively long periods of time reported to more frequently send and/or receive personal emails, send e-cards and conduct online shopping than those who engaged in PWU for shorter periods.

6.5 Summary

Overall, the information gathered through the PWU measures in this study's online questionnaire indicated that the PWU patterns of the research participants showed no extreme patterns. For a large proportion of participants, frequent PWU was associated with frequent habitual PWU. However, they differed widely in their PWU frequencies and durations, making them an ideal group for investigations of individual PWU differences.

The exception here is possibly their relative similarity in frequencies of engaging in specific PWU activities, a result which may have been influenced by the limited choice of online activities offered in the online questionnaire. The activity patterns of the participants indicated that in general, high habitual PWU frequencies were associated with similarly

frequent instances of reading the news, researching hobbies, emailing and accessing entertainment websites.

On average, the participants spent a small amount of time per day engaging in PWU, when compared with a recent large scale US survey (Malachowski & Simonini, 2007). The difference may be due to variations in research focus and in sample populations. However, one cannot also rule out the possibility that the data reflects the trouble research participants may have experienced in recalling and estimating their PWU. The difficulty in recall potentially existed because PWU had become rather habitual and was engaged in without much conscious awareness. On the other hand, the on average relatively low to moderate PWU durations reported may have been influenced by a desire not to be seen to engage in high levels of a rather undesired organisational behaviour (= social desirability bias). (1)

Keeping these described PWU patterns of the research participants in mind, the following chapter is dedicated to examining which attributes influenced the differences in PWU between individuals through statistically testing the proposed theoretical model (Figure 4.1).

Note (1):
The research project's online questionnaire included a five-item social desirability scale (Hays, Hayashi & Stewart, 1989). However, during the data screening stage, it was found that the content and lack of item homogeneity did not allow the measure to be used as indicator for presence, absence or origin of social desirability bias. Therefore, it was not included in further analyses and discussion.

Chapter 7

Model Testing Results and Discussion

In this chapter the results of the data analyses conducted to test the proposed theoretical model (Figure 4.1) is presented. To examine the dispersion of the variables included in the model and their correlational relationships with each other the uni-variate and bi-variate statistics for these variables are presented first. This is followed by a description of the regression strategy used to test the model and the results of the multivariate assumption checks. This is followed by a presentation of the results of the moderated hierarchical regression analyses, and the Modgraph procedures. The chapter closes with a summary and brief discussion of the findings highlighting their contribution to the field of PWU research.

7.1 Uni-variate statistics

In the previous chapter the PWU characteristics of the research respondents were described. In this chapter section the focus is on the characterising the group of research participants with regards to their psychological and workplace attributes measure. In an effort to stabilise the results by keeping the sample relatively constant, and to make comparisons across analyses more defensible, missing data was not imputed, and the strategy of listwise deletion was applied. Subsequently, the sample sizes varied across the different analyses used. Although for the uni-variate and bi-variate statistics there was little difference in their values, when describing the characteristics of the data in this chapter the focus remains on the 220 cases that were common to all of the subsequent analyses to provide an analytical framework consistent with that used in the later regression analyses. To briefly characterise the sample, in Table 7.1 the means and standard deviations of this study's variables, as well as their skewness, minima and maxima, are presented. The PWU characteristics of the research participants were discussed in some detail in the previous chapter. Therefore, in this chapter it suffices to point out that the variance in the PWU data was satisfactorily wide for an investigation into individuals' differences in PWU.

Table 7.1: Summary statistics of the study's variables (n = 220)

	Minimum	Maximum	Mean	Std. Deviation	Skewness
PWU Frequency	1	4	2.51	0.89	0.06
PWU average habit	1	6	3.43	1.39	0.05
PWU average duration	1	5	2.97	1.40	0.16
Companionship PWU (CPWU)	1	6	3.23	1.22	-0.37
Information PWU (IPWU)	1	6	3.29	1.27	-0.24
Moral norms	1	7	3.70	1.76	0.03
Accept neutralization	1	7	3.89	1.39	-0.14
Workgroup norms	2.25	7	5.20	1.06	-0.04
Certainty about PWU rules	1	2	1.38	0.30	0.34
Workload	1	5	3.24	0.98	0.01
Giver	1.6	5	4.10	0.71	-1.06
Taker	2.5	5	4.62	0.51	-1.58
Trait Reactance	1	3.8	2.29	0.58	-0.02
Attitude to supervisor	2.25	7	5.53	1.17	-0.49
Attitude to PWU control	2.5	6	4.43	0.78	0.15
Boredom at work	1	6	3.45	1.46	-0.03
Occupational level	1	6			0.54
Job Tenure	1	8	4.73	1.73	-0.04
Social Loafing Risk	-8	6	-1.96	2.65	0.21

When looking at the psychological and workplace attributes proposed as influencing PWU, the spread and mean values in the measures describe the characteristics of the individuals and their working situations. The moral norms regarding PWU varied between strong disapproval (7) and strong approval (1) among the research participants. On average, however, the participants did not see PWU to be problematic (means score 3.70), with 72.7% of them approving PWU to some degree, 11% not being sure about it and 17% respondents disapproving of it. The level of ledger acceptance was equally wide spread, on average the participants having a moderate degree of acceptance for using that neutralization strategy (mean score 3.89). Of the 220 respondents, 47% reported accepting the strategy as a valid tool for neutralisation, 27% were not sure about it and 26% tended not to use it.

The participants further reported, on average, that their work groups' norms were relatively approving of PWU (mean score 5.2). It is of interest to note that no participants

indicated that their work groups strongly disapproved of PWU (lowest score 2.25); together only 6% of respondents reported that their work group disapproved of it to some degree. At the same time, 33% of respondents were not sure about their work groups' norms regarding PWU, and 46% felt their work group approved of it to some degree. These results described the research participants and their work groups as generally finding PWU acceptable. At the same time, the majority of participants were quite unclear about their organisations' expectations regarding PWU, and tended to employ the ledger strategy, possibly in an effort to neutralise feelings of discomfort as a result of engaging in behaviours they knew to be unacceptable.

The summary data of the variables included in the models' third cluster (Figure 4.1) was characterised by relatively small standard variations, indicating a degree of similarity between the research participants in those attributes. The workloads of the participants varied, ranging from very light (1) to very heavy (5). On average, the participants reported medium workloads (mean score 3.24), requiring them to work very hard and fast about once or twice per week with little time to getting things done. Very few respondents reported very light (3%) workloads whereas 13% of the respondents felt their workload to be very heavy.

On average the participants were characterised by a relatively high giver attitude towards work effort (mean score 4.1), which was further indicated by the lowest attitude level reported (1.60) by any participant being above the lowest level possible in the giver attitude measure (1). In total 35% of respondents scored very high in the scale, and only 1.4% of respondents appeared to be rather low in giver attitude. At the same time, the participants were characterised by relatively low levels of taker attitude towards work effort (mean score 4.62). Keeping in mind the reverse coding of the data, the generally low levels of taker attitude were outlined by the participants' lowest taker attitude score being 2.5 - when the lowest possible score of 1 would have indicated a very high level of taker attitude towards work effort. The very high levels of taker attitude were scored by only 1% of respondents; whereas the lowest level of taker attitude (a score of 5) was reported by 47% of respondents.

On average, the participants were also relatively low in trait reactance (mean score 2.29). The highest possible score in this measure was 5, yet the highest scores were those between 3.5 and 3.8, reached by only 3% of respondents. At the same time, the lowest scores (1.5 to 1) were reached by 14% of respondents, suggesting that they tended to be rather insensitive to perceived restrictions of previously existing freedoms. The attitude towards the general treatment received by their supervisor was, on average, moderately positive (mean score 5.53). While 17% of respondents expressed a very positive attitude towards their supervisor (score of 7), only 2.4% appeared to hold a strongly negative

attitude (scores 2.25 to 2.99), indicating that participants felt they generally had a good relationship with their supervisors. The participants' attitude towards their organisations' PWU control, including rules, regulations and electronic monitoring was also, on average, positive (mean score 4.43). Although none of the respondents indicated the highest level of positive attitude possible (7) towards their organisations' PWU control efforts, a clear majority of respondents (90%) held moderately to strongly positive attitudes towards them. It was interesting to note that none of the research participants reported to hold the most negative attitudes possible (1) towards their supervisors' treatment or their organisations' PWU control. Summarising the attributes contained in the third interaction cluster of the model (Figure 4.1), we find that the participants as a group were generally neither over- nor under-worked, held a comparatively benevolent attitude towards work effort and were relatively low in trait reactance. Their attitudes towards supervisors and PWU control of their organisations were, in general, positive.

Although their perceived levels of workplace boredom varied from very high to very low, the participants reported, on average, medium levels of workplace boredom (mean score 3.45). About half of the respondents felt rarely or not often bored (48%), whereas slightly more respondents (52%) reported to be bored sometimes, every now and then or relatively often.

The participants' job levels were well spread, and contained representatives of high level jobs such as executives down to low level jobs such as those at entrance level. The average job tenure was just over 30 months (mean score 4.73), with the lowest being 0-3 months (1) and the highest over 180 months (8).

The social loafing risk index (mean score -1.96) suggested that on average the workplace situations of the research participants contained relatively low levels of social loafing opportunities. However, the participants' work situations varied widely with regard to social loafing risk (standard deviation of 2.65). The highest social loafing risk indicator calculated from the responses was 6 (reported by .5% of respondents) and the lowest risk indicator was -8, reported by 2% of respondents, where an index of +1 and higher suggested an increasing presence of social loafing risks, and an index of -1 and lower indicated the opposite. Overall, the data described the participants as having widely differing levels of boredom in their workplaces, which were characterised by largely differing levels of social loafing risk. The participants themselves came from a variety of different job positions with differing lengths of tenure.

Based on the uni-variate statistics we can describe the group of research participants as one that was generally accepting of PWU, and working within groups that also tend to accept PWU. In general, the participants were rather uncertain about their organisations' PWU rules, and held positive attitudes towards work in general, and their

work situations in particular. On average, the participants were not a group of people characterised by extreme levels of PWU, or overly negative attitudes and working life experiences. These general characteristics of the participants should be kept in mind when evaluating the results of the data analyses.

7.2 Bi-variate statistics

The correlations between the five PWU measures and the four driver variables in the theoretical model (Figure 4.1) were all in the expected directions, and significant ($p<.001$). The correlations of each driver variable with each of the criterion variables varied in magnitude from small to moderate. The driver variables (moral norms, work group norms, workload and boredom) differed according to which of the five individual PWU measures they had their strongest associations with. For example, while moral norms were most strongly associated with PWU duration ($r = -.41$), work group norms' association with PWU was the strongest when it was measured through information-seeking activities ($r = .33$). The strongest link between workload and PWU was found when linking it to habitual PWU ($r = -.22$), while boredom was most strongly associated with PWU frequency ($r = .33$). These trends in the relationships between the different PWU measures and the driver variables indicate that different facets of PWU differ in strength of association with the four driver variables, providing some support to the decision to measure the identified PWU facets separately.

Table 7.2: Pearson r-correlation coefficients for the study's variables

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Frequency	**.77**	**.68**	**.56**	**.60**	**-.35**	**.27**	**.31**	*-.14*	*-.17*	-.09	**-.21**	.10	-.07	.11	**.33**	**-.19**	**-.21**	.13
2. Habitual PWU	-	**.66**	**.54**	**.62**	**-.36**	**.26**	**.32**	*-.15*	**-.22**	-.02	**-.24**	*.15*	-.10	*.14*	**.29**	-.12	**-.23**	*.15*
3. PWU duration		-	**.62**	**.62**	**-.40**	**.34**	**.31**	-.12	**-.21**	*-.17*	**-.30**	*.14*	-.03	.12	**.27**	-.07	-.90	**.19**
4. CPWU			-	**.52**	**-.38**	**.26**	**.25**	-.11	**-.19**	-.13	**-.20**	.11	-.04	.08	**.26**	-.02	-.12	**.20**
5. IPWU				**-**	**-.37**	**.31**	**.33**	**-.18**	-.09	-.04	-.17	*.17*	-.02	*.15*	**.24**	-.04	-.12	.08
6. Moral norms					**-**	**-.26**	**-.44**	**.18**	.10	**.19**	.06	-.04	.00	-.02	.03	-.03	-.11	**-.20**
7. Neutralisation						**-**	**.18**	.02	-.09	**-.18**	**-.26**	**.24**	-.12	-.01	**.31**	-.05	-.01	.12
8. Group norms							**-**	**-.21**	*-.15*	-.01	-.09	.10	*.14*	.10	.07	.05	-.10	**.36**
9. Uncertain								-	-.07	-.04	.05	-.11	.05	**-.28**	-.00	*-.14*	-.09	.07
10. Workload									-	.11	**.26**	.01	.06	-.01	**-.48**	**.31**	*.13*	*-.15*
11. Giver										-	**.29**	-.01	.10	*.15*	-.04	.12	-.10	*-.17*
12. Taker											**-**	**-.29**	.12	.03	**-.31**	*.17*	*.14*	**-.19**
13. Reactance												**-**	**-.18**	.02	*.15*	.02	.12	.10
14. Supervisor													-	.04	**-.25**	.02	.03	-.01
15. PWU control														-	.42	-.01	-.04	-.10
16. Boredom															-	**-.21**	**-.18**	.01
17. Status																**-**	**.25**	-.02
18. Tenure																	-	-.05
19. SL risk																		-

Note: N=220, p<.01 correlation coefficients shown in **bold**, p<.05 shown in italics, and non-significant coefficients are shown in regular font. CPWU=companionship-related PWU, IPWU=information-seeking PWU, SL risk=social loafing risk

When more closely examining the relationships between individual PWU measures and each of the driver variables, we find that these relationships were in the theoretically predicted directions, but varied in strengths. The strongest relationship between the dependent and predictor variables was that with moral norms regarding PWU. Moral norms were negatively correlated to all five PWU measures, suggesting that individuals with relatively high levels of PWU tended to approve of PWU (i.e. low scores in the moral norms measure). The moderate association between moral norms and PWU average duration (r = -.403), for example, suggested that the more individuals thought of PWU as morally acceptable the higher their PWU duration tended to be. Similar and only slightly weaker links were found between moral norms and the other four criterion variables, providing some support for the choice of moral norms as driver variable in the theoretical model (Figure 4.1).

While moral norms had the strongest associations with the PWU measures, perceived workload had the relatively weakest link to the five criterion variables. In general, the correlation coefficients show that individuals who had small workloads tended to have relatively high levels of PWU. The strongest of these relationships was the association of workload with habitual PWU. Here individuals with high workloads tended to engage comparatively little in PWU out of habit (r = -.22). The link between workload and PWU was somewhat weaker when focusing on PWU frequencies. Respondents indicating that their workload is relatively high engaged less frequently in PWU than those reporting comparatively low workloads (r = -.17). Theoretically and intuitively it was expected that PWU levels are higher when there is little to do and lower when the workload is high. Although this expectation was met in principle, in this study workload and PWU shared a somewhat weaker relationship than was anticipated.

The second strongest relationship between the five PWU variables and the driver variables was that with work group norms. The direction of these relationships showed that when the participants' work groups approved of PWU, the levels of their individual PWU tended to be relatively high, regardless of the PWU measure used. The strength of this trend was not uniform. For example, when their work groups approved of PWU, participants were more likely to engage in information-seeking PWU activities (r = .33) than in companionship-related PWU (r = .25). As in all relationships between the criterion variables and the driver variables, the direction of the relationship between PWU and work group norms was as theoretically expected, although slightly lower than anticipated.

As expected, perceived workplace boredom was positively associated with all criterion variables. The more bored individuals felt at work, the higher were their reported PWU levels. This trend was the strongest when measuring the PWU frequencies (r = .33), indicating that those who felt bored at work were likely to engage frequently in PWU. On the other hand, the trend was less strong for employees' information-seeking PWU activities (r = .24). In general, boredom was consistently associated with the five PWU measures. In summary we can say that those with relatively small workloads, high levels of workplace boredom who themselves approved of PWU and whose work groups approved of PWU, engaged in more frequent and longer PWU than those with different characteristics and in different work situations.

In the theoretical model (Figure 4.1) it is proposed that the relationships between PWU and the driver variables are moderated by a total of ten psychological and workplace attributes. High correlations between predictor variables could potentially act as confounds. However, none of the correlations (Table 7.2) were high enough to suggest confounding. Additionally, any confounding would be taken care of by using the multiple regression strategy.

Although correlations among predictor variables are not an indicator of their interaction, it is of interest to examine how they correlate as a means to further characterising the participants. We find, for example, that individuals approving of PWU (i.e. their moral norm scores decreased) also tended to use the ledger strategy of neutralisation (r = -.26, p<.001). At the same time, those who were relatively uncertain about their organisations' PWU rules tended to experience relatively high levels of PWU approval by their work groups (r = -.21, p<.001). Furthermore, employees with a relatively high level of taker attitude tended to perceive their workloads as proportionally high (r = .26, p<.001), and report relatively high levels of workplace boredom (r = -.31, p<.001). However, the participants' perceptions of their workload levels were not associated with their giver attitude (r = .11), nor their level of trait reactance (r = .01), their attitude towards supervisor treatment (r = .06) or their attitude towards PWU control (r = -.01). At the same time, people holding high status jobs (r = -.21, p<.001) and individuals with long job tenure (r = -.18, p<.001) tended to report relatively low levels of boredom.

7.3 Regression analyses and assumption checking

The theoretical model and the associated interaction hypotheses were tested through five sets of moderated hierarchical regression analyses, one set for each criterion variable.

In moderated hierarchical regression analysis the interaction terms are represented by product terms. These were found by creating the product terms for each pair of predictor variables in the proposed theoretical model (Figure 4.1) that were thought to influence the five criterion variables. To counter potentially high correlations between the product scores and their components, the predictor variable scores were centred before the product terms were computed. Centering the predictor variables by subtracting the sample mean from each observed value has frequently been recommended as a potential solution to problems in moderated multiple regression analysis caused by multicollinearity (Jaccard, Turrisi & Wan, 1990; Tabachnick & Fidell, 1996).

Hierarchical regression analysis is based on the assumptions of (a) multivariate normality, (b) homoscedasticity, (c) linearity and (d) independence of cases. SPSS provides the opportunity to check these assumptions, as well as the issue of multicollinearity when running regression analyses.

The normality assumption in regression analysis expects that the residuals of the predictor variables are normally distributed. In this research, multivariate normality was evaluated graphically by plotting, for each of the five regression analyses, the residual scores in histograms with superimposed normal curves. The five histograms showed satisfactorily normal distributions.

The focus in this statistical data analysis is on the regression coefficients. Therefore, to calculate the minimum sample size the recommendation made by Tabachnik and Fidell (1996) were followed. The authors suggested that to detect a medium size beta with alpha set at .05 and beta set at .20, with reliable measures and normally distributed criterion variables, a minimum sample size of 104 plus the number of predictor variables is required. Although these conditions were met in this research project, it needs to be pointed out that Tabachnik and Fidell's (1996) recommendation was based on standard (one step) multiple regression analysis and that more complicated models require more cases; however, according to the authors the exact number is difficult to calculate and most analysts refrain from doing so. Secondly, the minimum sample size is based on the assumption of medium sized betas (at least .2); should the betas turn out to be smaller, more cases are needed. In the case of this project, the required minimum sample size would be 130 cases. After listwise deletion, the sample sizes for the five moderated hierarchical regression analyses testing the theoretical model fell within the minimum

recommended size (i.e. N = 224 – N=227), and furthermore included additional cases to allow for small betas and the fact that a two-step hierarchical regression model was used.

The assumption of homoscedasticity requires a uniform banding of residual scores around the regression surface. In this research, homoscedasticity was assessed through examining the scatter plots of the regression standardised residuals and the regression standardised predicted values, without clear indications of heteroscedasticity.

The linearity assumption requires the residuals to have no relationship with the predicted scores of the criterion variable. The residual-predicted Y scatter plot was examined for patterns that might suggest non-linearity which the regression model has omitted.

Multicollinearity concerns the magnitude of the relationships among the predictor variables and is checked with the tolerance statistics. Tolerance scores are equal to 1 minus the r-squared of the regression of each predictor variable on all of the other predictor variables, while ignoring the criterion variable. A tolerance score for a variable approaching zero would indicate that most of that variable's variance is explained by the other predictor variables in the regression model (Conner, 2002). None of the tolerance scores in the current research's regression analyses fulfilled that condition, indicating that the assumption of linearity was not violated.

Finally, regression models assume that the error deviations are uncorrelated. This independence assumption is assessed through the Durbin-Watson statistic, where values below .80 tend to indicate autocorrelations. In the present study, the Durbin-Watson statistics in the five moderated hierarchical regressions were between 1.66 and 2.16, indicating that the independence assumption was not violated.

After assumption checking, the main effects and interaction effects of the predictor variables on the criterion variables were tested with t-tests of the regression coefficients. In each of the six sets of regression analyses, the predictor and moderator variables were entered in the first step of each hierarchical regression, extracting the main effects while controlling for the correlations among them. The interaction terms were then entered in the second step, testing for interaction effects whilst controlling for main effects and the correlations among the interactions. The r-squared statistics in the full models were seen to indicate how much variance in the criterion variables is explained by all investigated effects. Due to the large number of interaction terms included and the subsequent loss of power, the R^2 changes were not used as interaction detectors. To determine which main and interaction effects make significant, unique contribution to explaining the variance in the criterion variables the significance level was set at $p<.05$.

To more closely examine the nature of any significant interactions, the Modgraph software (http://www.vuw.ac.nz/psych/staff/paul-jose/files/helpcentre/help1_intro.php),

accessed 1.8.2007) was used to create graphical representations of the significant interactions, and to calculate the associated simple slope statistics. For these calculations trimmed regression models were used that included the significant main and interaction effects explaining the variance in each of the criterion variables. The reason for using trimmed regression models was that dropping predictor variables that made no significant, unique contribution to explaining the variance of the criterion variable, and allowing the sample size to increase, generated more statistical power for testing the simple slopes. The results of the Modgraph computations are graphs showing the regression lines for three levels of the moderator. The three levels of high, medium, and low were computed by the software using the mean as the medium value, one standard deviation above the mean as the high mean, and one standard deviation below the mean as the low mean (following Aiken & West, 1991).

7.4 Testing the theoretical model

7.4.1 PWU frequency as the criterion variable

As described above, the first step of the regression analysis tested the main effects of the fourteen psychological and workplace attributes on PWU frequency. The second step then tested for the interaction effects in explaining the variance in the criterion variable (PWU frequency). The results of this analysis are shown in Table 7.3. The adjusted R^2 = .27 ($p < .001$) showed that 27% of the variance in PWU frequencies were explained by the main and interaction effects of the psychological and workplace attributes.

Of the four driver variables, only moral norms and boredom made significant, unique contributions to explaining the variance of PWU frequencies. The effect sizes for moral norms and boredom were similar. On average, respondents who disapproved of PWU engaged less frequently in PWU than those who were more approving (ß = -.28, $p < .001$). At the same time, respondents who reported high levels of workplace boredom engaged more frequently in PWU than those experiencing less boredom (ß = .28, $p < .001$).

Table 7.3: Summary of the moderated hierarchical regression analysis results for variables predicting PWU frequencies in the preceding fortnight (N = 227)

Variables	B	SE B	ß	p
Step 1				
Moral norms	-.14	.04	-.28	< .001
Ledger acceptance	.06	.04	.09	.15
Work group norms	.11	.06	.12	.09
Certainty about PWU rules	-.18	.19	-.06	.35
Workload	.08	.06	.09	.19
Giver attitude to work effort	-.03	.08	-.02	.77
Taker attitude to work effort	-.08	.12	-.05	.49
Trait reactance	.02	.10	.01	.84
Attitude to supervisor	-.01	.05	-.01	.91
Attitude to PWU control	.06	.07	.05	.41
Boredom at work	.17	.04	.28	< .001
Job status	-.09	.04	-.14	.03
Job tenure	-.08	.03	-.15	.02
Social loafing risk	.00	.02	.01	.87
Step 2				
Moral * Ledger	.02	.02	.04	.46
Work group * Certainty	.15	.19	.05	.43
Workload * Giver	.07	.09	.06	.44
Workload * Taker	.01	.14	.01	.93
Workload * Reactance	-.01	.10	-.00	.96
Workload * Supervisor	-.01	.05	-.01	.92
Workload * PWU control	-.02	.07	-.02	.80
Boredom * Giver	-.12	.06	-.14	.04
Boredom * Taker	.05	.09	.05	.58
Boredom * Status	-.03	.03	-.08	.19
Boredom * Tenure	.02	.02	.05	.45
Boredom * Social loafing risk	-.01	.01	-.03	.67
Adjusted R^2 = .27, F(226) = 4.19				<.001

In addition to the main effects of moral norms and boredom, job status and job tenure also made significant, unique contributions. Here the effect sizes were again similar to each other, but weaker than those of moral norms and boredom. Incumbents of relatively high status positions engaged less frequently in PWU than those of low status jobs (ß = -.14, p = .028), and respondents with relatively long job tenure engaged less frequently in PWU than those who had been in their jobs a shorter time (ß = -.15, p = .02).

Of the theoretical model's 12 hypothesised interactions, only the Boredom*Giver attitude interaction made a significant unique contribution (ß = -.14, p = .04), indicating that giver attitude towards work effort moderated the workplace boredom-PWU frequency relationship. The result meant that respondents with different levels of giver attitude towards work effort engaged in PWU to different degrees when either feeling very bored or not bored at all at work. The characteristics of this interaction were then explored in more detail through the above described Modgraph procedure.

*7.4.1.1 Examining the Boredom*Giver interaction*

To assess the nature of the Boredom*Giver interaction, and to compare it with the hypothesised interaction (see Hypothesis 4a) the graphical presentation and the slope statistics provided by the Modgraph software were examined. The graphical representation of the interaction, including the simple slope statistics, can be found in Figure 7.1B, with the results of the trimmed model's regression analysis in Appendix G, Table G7.1.

For comparison purposes, the graphical representation of the hypothesised Boredom*Giver interaction (as discussed in chapter 5) is repeated in Figure 7.1A. According to Hypothesis 4a1 it was expected that high boredom levels are linked with high levels in PWU, and differences in the levels of giver attitude towards work effort explain individual differences in the strength of this relationship. The PWU levels of individuals with low levels of giver attitude towards work effort were hypothesised to be affected by changing levels of boredom, whereas PWU levels of individuals with high levels of giver attitude were expected to be not affected by changes in boredom levels.

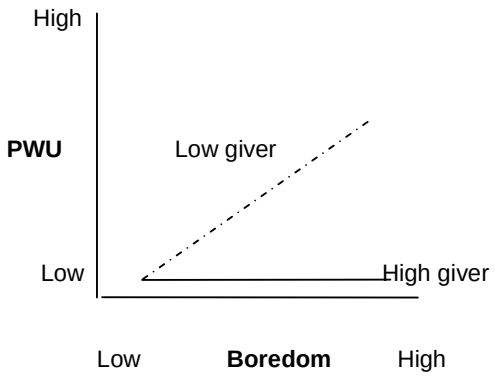
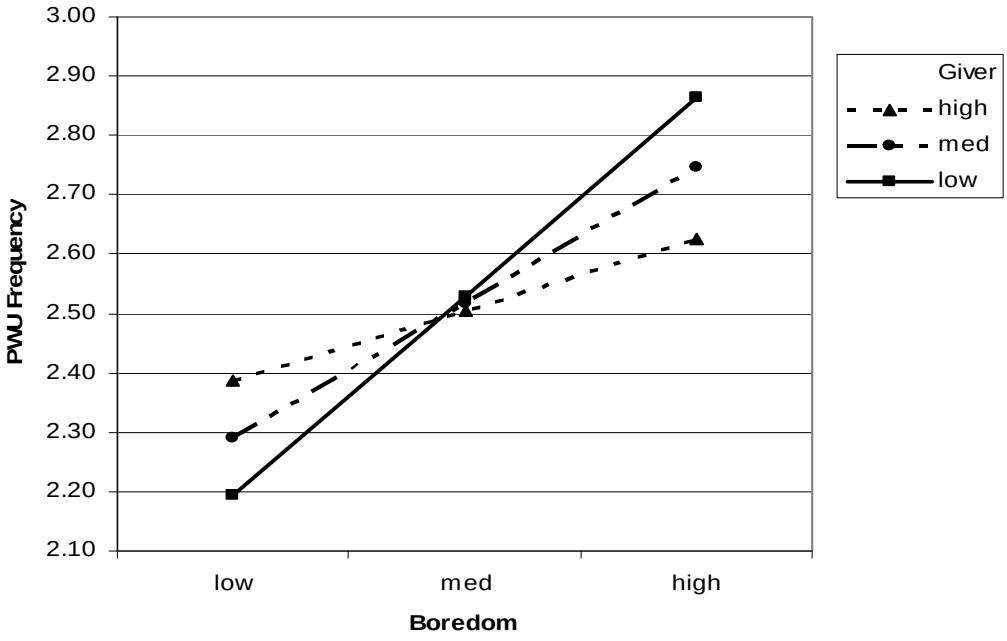


Figure 7.1 A: Giver attitude as moderator of the boredom–PWU relationship as expressed in Hypothesis 4a1

In addition to the regression lines for the group of individuals with high and those with low levels of giver attitude, Figure 7.1B also contains the regression line for the group of medium level givers. This line was not included in the graphical expression of the interaction hypotheses which focused on the extreme groups of giver attitude levels. The focus on the high and low giver groups, however, could have masked non-linear relationships between boredom and PWU frequencies for medium level givers. That relationship, however, is automatically calculated by the Modgraph procedure and provides a test for the bilinear assumption of the interaction. The bilinear assumption refers to the form of the expected interactions, assuming that the slope for any IV-DV pair changes linearly across the values of the moderator. The medium regression line in Figure 7.1B remained between that of the high and the low giver groups of individuals, even when these two lines crossed at the medium boredom level, allowing us to conclude that the bilinear assumption of the interaction was not violated.

The results of the Modgraph computations and simple slope statistics gave partial support to the hypothesised nature of the Boredom*Giver interaction. The impact of boredom on PWU frequencies was smaller at high levels of giver attitude (b =. 08) than at medium (b = .16) and low levels of giver attitude (b = .23). However, the p-values of the associated simple slope statistics (p=.06) showed that the coefficients were not significant for the high giver group, whereas they were significant for the low and medium level giver groups (p<.001).



Giver level	Simple slope (b)	p-value
High giver	.08	.06
Medium giver	.16	<.001
Low giver	.23	<.001

Figure 7.1.B: Showing the giver attitude as moderator of the boredom–PWU frequency relationship (n = 259) and the associated simple slope statistics

These results showed that, as expected in Hypothesis 4a, the PWU frequencies of individuals high in giver attitude were not affected by changes in boredom. For individuals who had a strong sense of giving effort to their organisation, the endurance of boredom was apparently part of their 'giving' of work effort. At the same time, as expressed in Hypothesis 4a, the PWU frequencies of low level givers were affected by their experience of workplace boredom. On average, respondents with low levels of giver attitude who experienced little workplace boredom engaged less frequently in PWU than those with low levels of giver attitude who were exposed to high degrees of boredom at work.

7.4.2 Habitual PWU frequencies as the criterion variable

As in the previous test, when testing the theoretical model through measuring average habitual PWU frequency, the main effects were tested in the first step of the

regression analysis, and the interaction effects in the second step. The results of this analysis are shown in Table 7.4.

Table 7.4: Summary of the moderated hierarchical regression analysis results for variables predicting average habitual PWU frequency (N = 227)

Variables	B	SE B	ß	p
Step 1				
Moral norms	-.23	.06	-.29	< .001
Ledger acceptance	.11	.07	.10	.12
Work group norms	.16	.10	.11	.11
Certainty about PWU rules	-.24	.30	-.05	.42
Workload	-.05	.10	-.04	.61
Giver attitude to work effort	.15	.13	.08	.24
Taker attitude to work effort	-.29	.193	-.10	.14
Trait reactance	.13	.16	.05	.42
Attitude to supervisor	-.07	.08	-.05	.39
Attitude to PWU control	.14	.11	.08	.21
Boredom at work	.15	.07	.15	.03
Job status	-.05	.06	-.05	.43
Job tenure	-.15	.05	-.18	.01
Social loafing risk	.01	.03	.02	.75
Step 2				
Moral * Ledger	.04	.03	.08	.18
Work group * Certainty	.33	.30	.07	.27
Workload * Giver	.35	.15	.17	.02
Workload * Taker	-.08	.22	-.03	.71
Workload * Reactance	-.03	.15	-.01	.86
Workload * Supervisor	-.06	.08	-.04	.48
Workload * PWU control	-.13	.12	-.07	.25
Boredom * Giver	-.07	.09	-.06	.41
Boredom * Taker	.08	.15	.05	.57
Boredom * Status	-.04	.04	-.07	.28
Boredom * Tenure	-.02	.04	-.03	.64
Boredom * Social loafing risk	-.02	.02	-.06	.34
Adjusted R^2 = .28, F(226) = 4.38				<.001

The main and interaction effects explained 28% of the variance in habitual average PWU frequency (adj. R^2 = .28, p < .001). Of the four main effects of theoretical interest, only two provided significant, unique contributions: moral norms and boredom at work. On average, individuals who did not approve of PWU engaged less frequently in it out of habit than those whose moral norms did approve (ß = -.29, p < .001). At the same time, those who experienced high levels of boredom reported, on average, more frequent habitual PWU than those who felt less bored at work (ß = .15, p = .03). It was also found that individuals with relatively long job tenure engaged less frequently in PWU out of habit than those who were in their positions for shorter periods of time. (ß = -.18, p = .01).

The results of the second step suggested that of the 12 interactions proposed in the theoretical model (Figure 4.1), only the Workload*Giver attitude interaction made a unique, significant contribution (ß = .17, p = .02), indicating that giver attitude moderated the relationship of workload with average habitual PWU frequency. The interaction was therefore examined with the Modgraph procedure.

*7.4.2.1 Examining the Workload*Giver interaction*

The graphical representation of the interaction, including the simple slope statistics, can be found in Figure 7.2B, with the results of the trimmed model's regression analysis in Appendix G, Table G7.2. For comparison purposes, the graphical representation of the hypothesised Workload*Giver interaction (as discussed in chapter 5) is repeated in Figure 7.2A. According to Hypothesis 3a1 it was expected that low workloads are linked to high levels of PWU, and differences in the levels of giver attitude towards work effort explain individual differences in the strength of this relationship. The PWU levels of individuals with low levels of giver attitude towards work effort were expected to be more influenced by changes in workload, than those of people with high giver attitude.

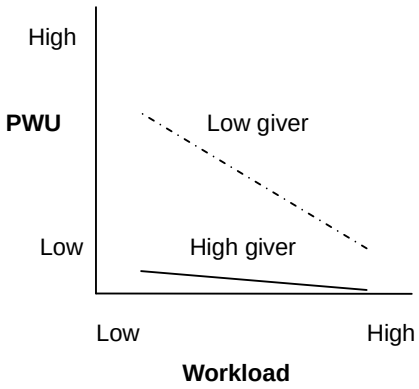
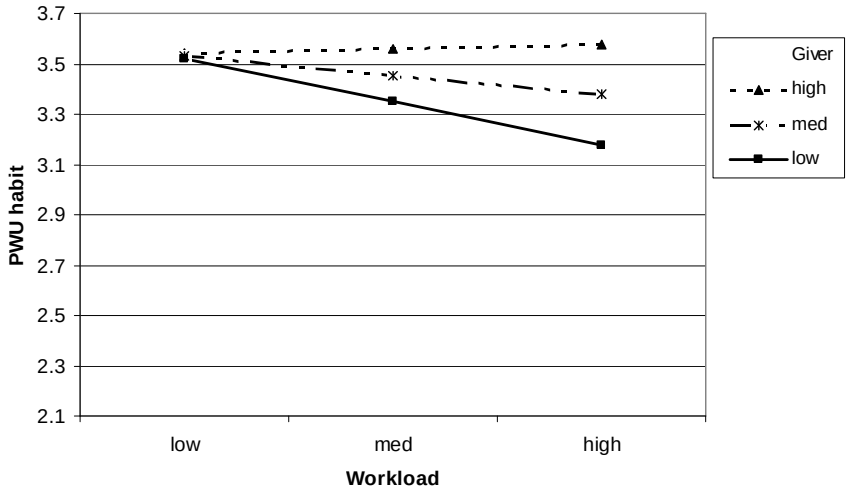


Figure 7.2.A: Giver attitude as moderator of the workload–PWU relationship as expressed in Hypothesis 3a1.

Confirming the results of the analysis testing the full model, the results of the trimmed model regression analysis showed the presence of three main effects in explaining the variance of habitual PWU. The more the moral norms held by individuals disapproved of PWU, the less frequently these individuals engaged in habitual PWU (ß = -.34, $p < .001$). At the same time, people who felt very bored at work had higher habitual PWU than those who felt relatively little (ß = .24, $p < .001$). Furthermore, employees who were with their organisation for a long time engaged less in PWU out of habit than those with relatively short tenure (ß = -.21, $p < .001$).

As noted earlier, the results of the Modgraph computations provided regression lines for the groups of individuals with high, medium and low levels of giver attitude. The line for the medium level givers remained between the line of the high and low ‘givers’ and thus showed that the bilinear assumption of the interaction was not violated. The direction of the interaction was different from the hypothesised one. The results of the Modgraph calculations did not support Hypothesis 3a1.



Giver level	Simple slope (b)	p-value
High giver	.02	.89
Medium giver	-.08	.40
Low giver	-.17	.15

Figure 7.2.B: Showing the giver attitude as moderator of the workload–PWU habit relationship (n = 276) and the associated simple slope statistics

At first glance the Modgraph figure (Figure 7.2.B) shows that the regression lines for high, medium and low givers were in the opposite direction and slopes to those expected by Hypothesis 3a. Contrary to expectations, in situations of low workload there was virtually no difference between the habitual PWU levels of individuals with high or low levels of giver attitude. At the same time, when faced with high workloads, individuals with high levels of giver attitude unexpectedly had relatively high habitual PWU levels (b =.02), whereas medium (b = -.08) and low givers (b = -.17) engaged less in PWU out of habit. However, the p-values of the associated simple slope statistics showed that the coefficients were not significant either for the high giver group (p = .89), the low (p = .15) or the medium level giver groups (p = .40). These results indicated that although the regression analysis shows that there is an interaction, the simple slope statistics mean that the form of the interaction is un-interpretable in an inferential sense.

The p values of the simple slopes are inevitably affected by the fact that each of the three sub samples used to calculate them is about one third the size of the sample used to calculate the moderated regression. The associated drop in sample size probably accounts for the significance results in the slope statistics. It is further possible that the

finding was also due to the different sample used in the trimmed regression model due to listwise deletion strategy.

The lack of statistical significance for the simple slopes means that one is constrained to describe their patterns for this sample only, and cannot infer beyond it. The shape of the Workload*Giver interaction found, as examined through the Modgraph procedure, was generally consistent with the hypothesis (H3a1) in the most important respect: the strongest effect for workload is in the low giver group and it is negative. From an inferential perspective, however, there is no reliable pattern to interpret.

7.4.3 Average weekly PWU duration as the criterion variable

The first step in the moderated hierarchical regression used to test the theoretical model with PWU measured as average weekly PWU duration tested the main effects, while in the second step the interaction effects were tested. The results of this analysis are shown in Table 7.5. The main and interaction effects explained 28% of the variance in average weekly PWU duration (R^2 = .28, $p < .001$). Of the four main effects of theoretical interest, only two provided significant, unique contributions. As for the previously described two measures of PWU (PWU frequency and habitual PWU), the data in this research indicated that individuals who found PWU morally unacceptable engaged in it for shorter periods than those who found it morally acceptable (ß = -.31, $p < .001$). Individuals who judged their work situations to be boring engaged longer in PWU than those who experienced work to be relatively stimulating. (ß = .17, $p = .02$). This finding of main effects strengthens the notion of common influences on the five PWU measures.

In Step 2 of the 12 interactions proposed in the theoretical model (Figure 4.1), none made a unique, significant contribution, and therefore none was statistically investigated further.

Table 7.5: Summary of the moderated hierarchical regression analysis results for variables predicting average weekly PWU duration (N = 224)

Variables	B	SE B	ß	p
Step 1				
Moral norms	-.24	.05	-.31	< .001
Ledger acceptance	.15	.07	.14	.03
Work group norms	.09	.10	.07	.36
Certainty about PWU rules	-.12	.29	-.03	.68
Workload	-.02	.10	-.01	.86
Giver attitude to work effort	-.08	.13	-.04	.52
Taker attitude to work effort	-.46	.19	-.17	.02
Trait reactance	.02	.15	.01	.87
Attitude to supervisor	.05	.07	.05	.46
Attitude to PWU control	.18	.11	.10	.10
Boredom at work	.16	.07	.17	.02
Job status	.00	.06	.00	.95
Job tenure	-.06	.05	-.07	.25
Social loafing risk	.03	.03	.06	.35
Step 2				
Moral * Ledger	.01	.03	.03	.64
Work group * Certainty	-.01	.29	-.00	.97
Workload * Giver	.06	.14	.03	.68
Workload * Taker	-.01	.22	-.00	.98
Workload * Reactance	-.13	.15	-.05	.40
Workload * Supervisor	-.03	.08	-.03	.67
Workload * PWU control	.05	.11	.03	.66
Boredom * Giver	-.12	.09	-.09	.19
Boredom * Taker	.04	.14	.02	.80
Boredom * Status	-.06	.04	-.09	.16
Boredom * Tenure	-.01	.04	-.03	.69
Boredom * Social loafing risk	-.04	.02	-.12	.06
Adjusted R^2 = .28, F(223) = 4.26				<.001

Contrary to expectations, acceptance of the ledger strategy did not moderate the relationship moral norms had with PWU duration (H1); nor did taker attitude moderate the relationship boredom had with PWU duration (H4b). Both attributes, however, influenced PWU duration directly. It appeared that individuals who accepted the use of the ledger strategy as an instrument to maintain a positive self-concept before engaging in rule-breaking behaviours, reported longer-lasting PWU than those who did not accept use of the strategy (ß = .14, p = .03). At the same time, the results show that, on average, individuals with high levels of taker attitude (i.e. low taker measure values) engaged longer in PWU in an average week than respondents with lower levels of taker attitude (ß = -.17, p = .02).

Both, the ledger strategy and the taker attitude are built on the notion of equity. Individuals using the ledger strategy to maintain a positive self image before engaging in a relatively undesired behaviour (i.e. long-lasting PWU) assess their perceived ledger status of 'good' behaviour to find whether it shows a balance in their favour. At the same time, individuals high in taker attitude are of the opinion that they have already given enough work effort to the organisation and now deserve something in return, and in their mind that something may well include prolonged periods of PWU.

7.4.4 Frequency of companionship-related PWU (CPWU) activities as the criterion variable

To test how the proposed model holds when measuring PWU as the frequency of companionship-related PWU activities, in Step 1, the main effects, and in Step 2, the interaction effects were tested. Companionship-related PWU activities aim at maintaining or establishing personal contacts through Internet activities such as the sending of e-cards, establishing and/or maintaining personal business external to the current work tasks, shopping online, sending and receiving personal emails using either the organisation's email system or websites such as Hotmail and Yahoo!. The results of this analysis are shown in Table 7.6. The main and interaction effects explained 21% of the variance in companionship-related PWU activities (R^2 = .21, p < .001).

Table 7.6: Summary of moderated hierarchical regression analysis for variables predicting frequencies of companionship-related PWU (CPWU) activities (N = 225)

Variables	B	SE B	ß	p
Step 1				
Moral norms	.24	.05	-.34	< .001
Ledger acceptance	.08	.06	.09	.21
Work group norms	-.02	.09	-.02	.81
Certainty about PWU rules	-.17	.27	-.04	.53
Workload	-.01	.09	-.01	.95
Giver attitude to work effort	-.05	.12	-.03	.68
Taker attitude to work effort	-.07	.18	-.03	.70
Trait reactance	.06	.14	.03	.67
Attitude to supervisor	.05	.07	.05	.47
Attitude to PWU control	.10	.10	.06	.34
Boredom at work	.19	.06	.23	<.01
Job status	.05	.06	.06	.34
Job tenure	-.10	.05	-.14	.04
Social loafing risk	.06	.03	.12	.07
Step 2				
Moral * Ledger	.04	.03	.09	.15
Work group * Certainty	.37	.28	.09	.18
Workload * Giver	.01	.14	.00	.96
Workload * Taker	-.10	.20	-.04	.63
Workload * Reactance	-.14	.14	-.06	.34
Workload * Supervisor	.00	.07	.00	.10
Workload * PWU control	-.06	.11	-.04	.57
Boredom * Giver	-.10	.01	-.09	.22
Boredom * Taker	.06	.13	.04	.67
Boredom * Status	-.01	.04	-.01	.86
Boredom * Tenure	-.06	.03	-.12	.07
Boredom * Social loafing risk	.00	.02	.01	.86
Adjusted R^2 = .21, F(224) = 3.32				<.001

As was the case with the previously reported PWU measures, only two of the hypothesised main effects made significant, unique contributions. On average, individuals whose moral norms found PWU unacceptable, engaged less frequently in companionship-related PWU activities than those whose moral norms approved PWU (ß = -.34, p < .001). And people who experienced high levels of workplace boredom engaged, on average, more frequently in companionship-related PWU activities than those who felt less bored at (ß = .23, p < .01). Additionally, it was found that, on average, employees with long job tenure engage less frequently in companionship-related PWU activities than those with relatively shorter tenure (ß = -.14, p = .04).

In Step 2 of the 12 interactions proposed in the theoretical model (Figure 4.1), none made a unique, significant contribution, and the interactions were therefore not further statistically investigated.

7.4.5 Frequency of information-seeking PWU (IPWU) activities as the criterion variable

To test how the proposed model holds when, in turn, PWU is measured as the frequency of information-seeking PWU activities (IPWU) engaged in, in Step 1 of the regression analysis, the main effects, and in Step 2, the interaction effects were tested. Information-seeking PWU activities included gaining non-work related information through reading the news, viewing entertainment pages, completing personal banking activities and making travel or recreational arrangements. The results of the regression analysis are shown in Table 7.7.

Table 7.7: Summary of moderated hierarchical regression analysis for variables predicting frequencies of information-seeking PWU (IPWU) activities (N = 225)

Variables	B	SE B	ß	p
Step 1				
Moral norms	-.21	.05	-.29	<.001
Ledger acceptance	.14	.06	.14	.03
Work group norms	.18	.09	.15	.05
Certainty about PWU rules	-.25	.28	-.06	.37
Workload	.11	.10	.08	.25
Giver attitude to work effort	.03	.12	.02	.80
Taker attitude to work effort	-.11	.18	-.04	.54
Trait reactance	.17	.14	.08	.23
Attitude to supervisor	.05	.07	.04	.52
Attitude to PWU control	.16	.10	.10	.12
Boredom at work	.17	.07	.2	.01
Job status	-.01	.06	-.01	.90
Job tenure	-.09	.05	-.12	.07
Social loafing risk	-.02	.03	-.05	.47
Step 2				
Moral * Ledger	.08	.03	.16	.01
Work group * Certainty	.10	.28	.02	.72
Workload * Giver	-.01	.14	-.01	.92
Workload * Taker	.03	.20	.01	.88
Workload * Reactance	.10	.14	.05	.48
Workload * Supervisor	-.02	.07	-.02	.79
Workload * PWU control	-.10	.11	-.06	.36
Boredom * Giver	-.07	.08	-.06	.43
Boredom * Taker	.07	.14	.05	.59
Boredom * Status	-.08	.04	-.13	.04
Boredom * Tenure	.02	.03	.04	.54
Boredom * Social loafing risk	-.02	.02	-.05	.41
Adjusted R^2 = .26, F(223) = 3.94				<.001

The main and interaction effects explained 26% of the variance in information-seeking PWU activities (R^2 = .26, p < .001). Of the four main effects of theoretical interest, only two provided significant, unique contributions. These were the same two that also provided significant explanations for individuals' differences in the previously reported four PWU measures: moral norms and workplace boredom.

On average, the respondents who disapproved of PWU engaged less frequently in information-seeking PWU activities than respondents who approved of it (ß = -.29, p < .001). At the same time, respondents who experienced high levels of boredom at their work engaged more frequently in information-seeking PWU activities than those who reported to be less bored a work (ß = .20, p = .01). Additionally, respondents who approved of using the ledger strategy before engaging in PWU, engaged more frequently in information-seeking PWU activities than individuals who did not accept the ledger strategy as a neutralisation tool (ß = .14, p = .03).

In Step 2, of the 12 interactions proposed in the theoretical model (Figure 4.1), two made unique significant contributions. The significant contribution of the Moral norm*Ledger acceptance interaction (ß = .16, p = .01) indicated that acceptance of the ledger strategy of neutralisation moderated the relationship of moral norms with information-seeking PWU. At the same time, the significant contribution of the Boredom*Job status interaction (ß = -.13, p = .04) indicated that the boredom–information-seeking PWU relationship was moderated by job status level. Both interactions were, therefore, explored further through the Modgraph procedure.

*7.4.5.1 Examining the Moral norm*Ledger acceptance interaction*

The graphical representation of the interaction can be found in Figure 7.3.B, including the associated simple slope statistics. The relevant regression analysis results can be found in Appendix G, Table G7.3. For comparison purposes, the graphical representation of the hypothesised Moral norm*Ledger acceptance interaction (H1) is repeated in Figure 7.3.A.

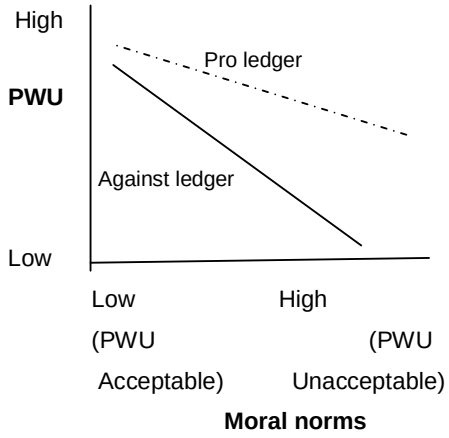
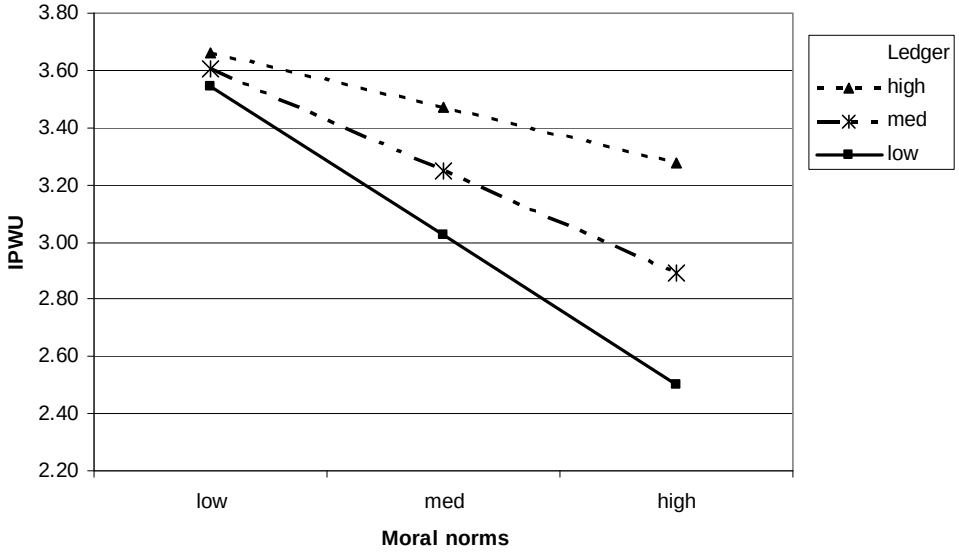


Figure 7.3.A: Showing acceptance of the ledger strategy of neutralisation as moderator of the relationship between moral norms and PWU, as expressed in Hypothesis 1.

According to Hypothesis 1 it was expected that relatively strong acceptance of PWU by one's personal moral norms is linked to relatively high levels of PWU, and differences in the attitude towards using the ledger strategy of neutralisation explain differences in the strength of this relationship. The PWU levels of individuals who do not approve of using the ledger strategy were expected to be more influenced by changes in moral acceptance of PWU, than the PWU levels those who approve of it.

The Modgraph procedure provided not only the results for the group of individuals with high and those with low levels of ledger acceptance, but also those for the group of individuals with a medium degree of ledger acceptance (Figure 7.3.B). The line in the graph and the associated simple slope statistics show that, on average, the information-seeking PWU frequencies of individuals with medium levels of ledger acceptance were less influenced by their moral norms than the information-seeking PWU frequencies of those who approved less of the strategy. At the same time, the information-seeking PWU frequencies of those with medium levels of ledger acceptance were more influenced by moral norms than the information-seeking PWU frequencies of those who had higher levels of approval. The fact that the medium line remained between the line of the higher and lower acceptance levels was an indication that the bilinear assumption of the interaction was not violated.

As expected in Hypothesis 1, the impact of moral norms on information-seeking PWU was larger when the ledger acceptance was low (b = -.29, p < .001) than when its acceptance was high (b = -.11, p = .08*).* However, the p-values of the associated t-tests suggest that the coefficients were not significant for the high ledger acceptance group (p = .084). At the same time, the p-values indicated that individuals with medium (p<.001) and low levels (p<.001) of ledger acceptance were influenced by their moral norms. Individuals who disapproved of PWU (i.e. increasing moral norm values) tended to also have relatively low information-seeking PWU activity frequencies.



Level of ledger acceptance	Simple slope (b)	p-value
High acceptance	-.11	.08
Medium acceptance	-.20	<.001
Low acceptance	-.29	<.001

Figure 7.3.B: Graphically showing acceptance of the ledger strategy as moderator of the moral norm–IPWU frequency relationship, including the associated simple slope statistics (N = 257)

These results showed that the effect of moral norms on information-seeking PWU (IPWU) frequency was suppressed by an individual's degree of ledger strategy acceptance to the point where for those with high levels of ledger acceptance, moral norms did not significantly affect information-seeking PWU activities (b=-.11, p=.08). Or expressed differently, as hypothesised in Hypothesis 1, at low levels of moral norms attitude towards ledger acceptance did not affect the relationship between moral norms and information-

seeking PWU, whereas a high levels of moral norms there were substantial differences in information-seeking PWU levels between individuals accepting the ledger strategy and those who did not.

*7.4.5.2 Examining the Boredom*Job status interaction*

The Boredom*Job status interaction is graphically presented in Figure 7.4.B (with the associated simple slope statistics) and the regression results can be found in Appendix G, Table G7.3. The graphs of the hypothesised interactions (H 4c) are repeated in Figure 7.4.A. Hypothesis 4c was a two-tailed hypothesis expecting that high levels in workplace boredom are linked to relatively high levels of PWU, and differences in job status explain the strength of this relationship. The relatively high levels of PWU levels of individuals holding high status jobs can then theoretically be both greater or smaller than the PWU levels of low-status jobholders.

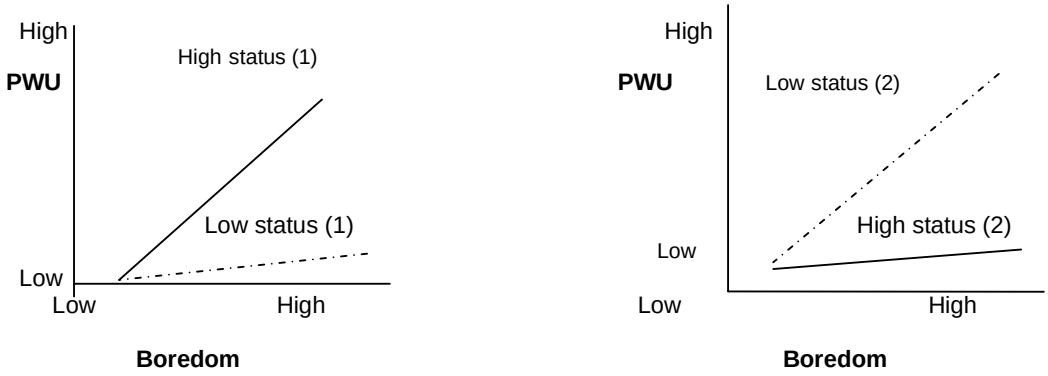
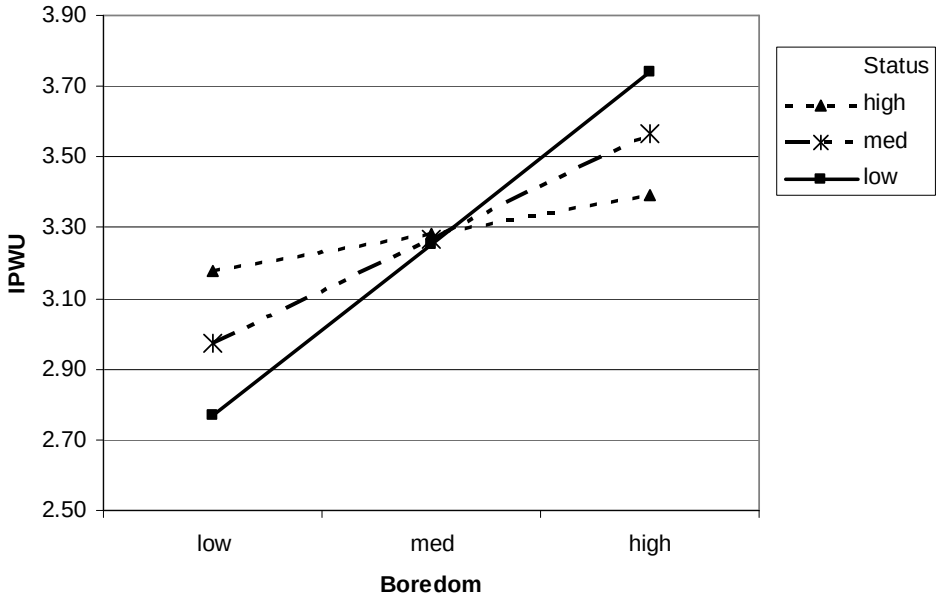


Figure 7.4.A: Job status as moderator of the relationship between boredom and PWU, as expressed in Hypothesis 4c.

The Modgraph computation results provided mixed support to the hypothesised nature of the Boredom*Job status interaction (H4c). Similar to the medium level regression lines in previous interaction graphs, Figure 7.4.B also depicts the regression line for the group of individuals holding jobs with medium levels of status. The medium line in the graph remained between that of the high and the low status groups, even when these two regression lines crossed at the medium boredom level, indicating that the bilinear assumption of the interaction was not violated.



Status level	Simple slope(b)	p-value
High status	.05	.51
Medium status	.17	<.005
Low status	.29	<.001

Figure 7.4.B: Graphically showing job status as moderator of the boredom-IPWU frequency relationship, including the associated simple slope statistics (N = 257)

The second interaction influencing IPWU frequencies was that of boredom and job status. The nature of this interaction provided partial support for Hypothesis 4c (2). Information-seeking PWU frequencies of high status employees were not influenced by changes in their boredom levels (b=.05, p=.51). The frequency of information-seeking PWU of low (b=.29, p<.001) and medium status employees (b=.17, p <.005), in turn, was influenced by their workplace boredom. In situations perceived to be very boring, individuals with low status jobs engaged relatively more frequently in information-seeking PWU activities than those in medium or high status positions. In situations of medium level boredom there was little difference in information-seeking PWU activities between the three status groups. Or expressed differently: at medium levels of workplace boredom there was no status effect on information-seeking PWU, whereas job status impacted on the relationship between boredom and information-seeking PWU in low as well as high boredom situations. However, the expectation that low boredom levels would provide no

motivation to engage in information-seeking PWU, regardless of job status, was not supported. Although low status employees engaged with relative infrequence in information-seeking PWU activities when they experienced little boredom, employees in medium or high status jobs engaged more frequently in information-seeking PWU activities when they felt not bored at work.

7.5 Summary of the results

The aim of this research project was to identify psychological and workplace attributes, and their relationships to each other, that can explain differences in individuals' PWU. In the absence of suitable existing models, fourteen attributes that can influence an individual's PWU are identified. These fourteen attributes were then organised into a theoretical model used to examine the degree to which they influence PWU. The model (Figure 4.1) consisted of four clusters of interactions, each cluster headed by a driver variable (i.e. moral norms, work group norms, workload and boredom) that characterised the general theme of its cluster of influences. Moderated hierarchical regression analyses were then used to test the theoretical model and the associated hypotheses. Table G7.4 in Appendix G summarises the hypotheses, and indicates which were supported by the data for each of the five PWU measures.

The participants in this study were a group of individuals who, on average, had worked for their organisations for two and a half years, and held supervisory or middle management positions. Generally, the participants reported to approve of PWU, and were members of work groups that approved of it. As a group the participants experienced relatively medium levels of workload, and were neither overly bored nor extremely stimulated by their work. On average, they held positive attitudes towards work, their supervisor and their organisations' PWU control strategies. Few of them worked in settings that held high social loafing risks, or had the desire to react strongly to perceived limitations of behavioural freedom. The psychological and workplace attributes of these research participants, measured by an online questionnaire, were then used to test the proposed theoretical model (Figure 4.1).

Five facets of PWU were measured: (1) PWU frequency, (2) habitual PWU, (3) PWU duration, (4) companionship-related PWU activities and (5) information-seeking PWU activities. These five PWU facets were influenced by different combinations of the hypothesised psychological and workplace attributes.

(1) PWU frequency was directly influenced by four attributes (moral norms, boredom, job status and tenure), and the hypothesised Boredom*Giver interaction (see Figure 7.5).

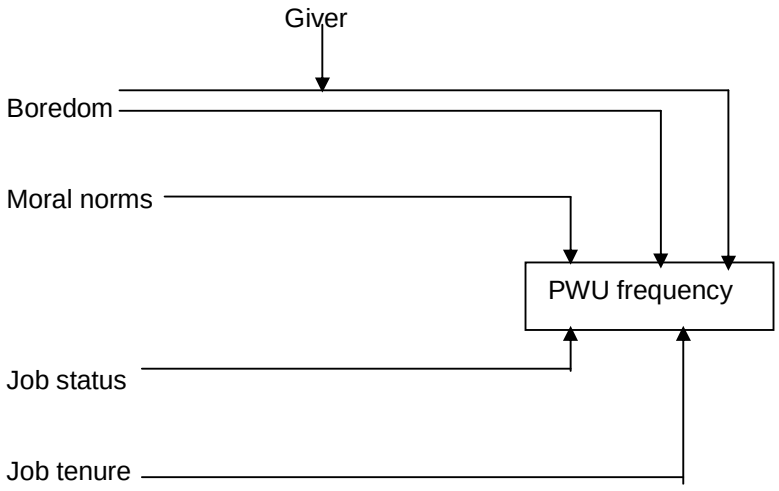


Figure 7.5: A model of psychological and workplace attributes that influence differences in individuals' PWU frequency

Based on the data it is reasonable to conclude that individuals were predisposed to engage more frequently in PWU if they held moral norms that approved of it, held relatively low status positions within their organisation, and had relatively short tenure. At the same time, the motivational push to frequently engage in PWU provided by boredom was moderated by one's level of giver attitude. The interaction showed that changes in experienced workplace boredom had no influence on the PWU frequencies of employees high in giver attitude. Boredom, however, influenced the PWU frequencies of those with medium and low levels of giver attitude, whereby those who were more bored also engaged more frequently in PWU than those who were less bored.

(2) Similar to differences in companionship-related PWU, differences in habitual PWU were influenced by differences in moral norms, workplace boredom, and job tenure (see Figure 7.6). In addition to these attributes, it was found that habitual PWU was, as expected in Hypothesis 4a1, influenced by the Workload*Giver interaction.

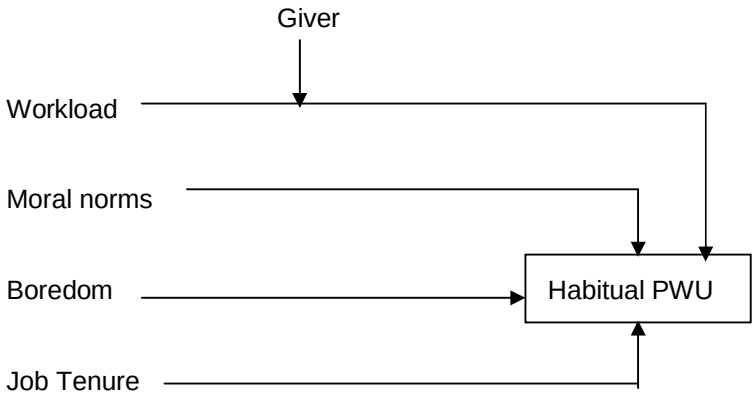


Figure 7.6: A model of psychological and workplace attributes that influence differences in individuals' habitual PWU

(3) The set of psychological and workplace attributes that influenced differences in PWU duration was the one that most clearly highlighted links between PWU, fairness and equity. According to the data in this study, how long individuals engaged in PWU was influenced by how bored they felt at their job and how acceptable they found PWU. At the same time, how much they accepted the ledger strategy as a useful tool for neutralisation and the degree to which they felt entitled to withhold work effort also influenced how long they engaged in PWU (see Figure 7.7).

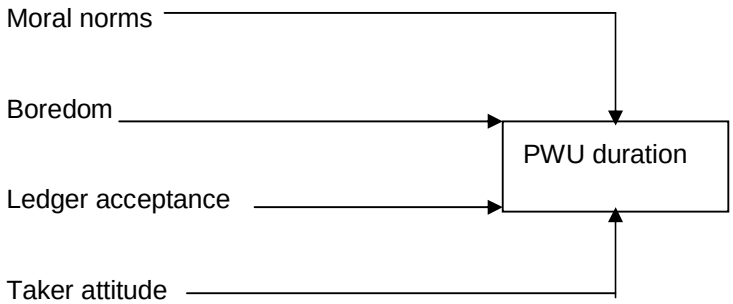


Figure 7.7: A model of psychological and workplace attributes that influence differences in individuals' PWU duration

The results of the data analysis showed that, contrary to Hypotheses 1 and 4b, approval of the ledger strategy and the level of taker attitude were not moderators of moral norms or boredom, but influences on PWU duration in their own right.

(4) Moral norms that are accepting of PWU, high levels of workplace boredom and relatively short tenure in the job predisposed participants to engage in proportionally frequent companionship-related PWU activities. Contrary to hypothesis 4d, job tenure did not moderate the boredom-CPWU relationship, but was found to be a direct influence on companionship-related PWU (see Figure 7.8)

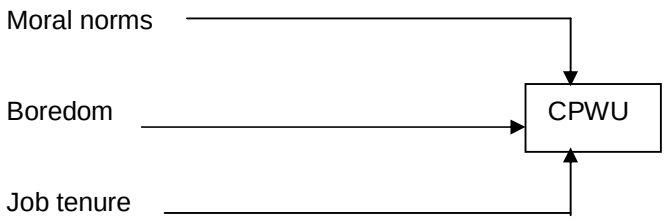


Figure 7.8: A model of psychological and workplace attributes that influence differences in individuals' companionship-related PWU (CPWU)

(5) The final facet of PWU that was investigated in this study was that of differences in individuals' information-seeking PWU activities. In addition to the direct influence boredom and moral norms had, differences in the frequency with which these activities were engaged in were influenced by two of the twelve hypothesised interactions: Moral norms*Ledger acceptance and Boredom*Job status (see Figure 7.9).

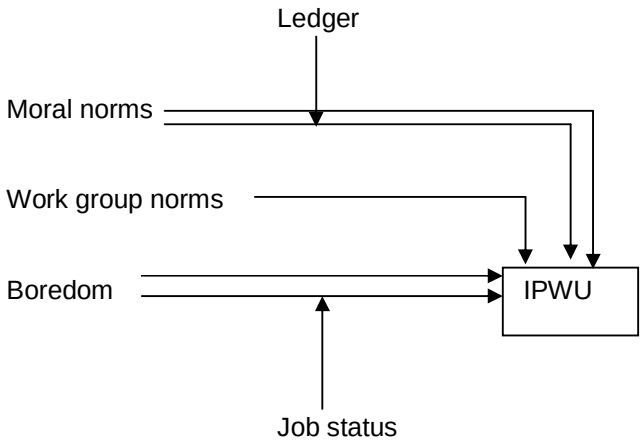


Figure 7.9: A model of psychological and workplace attributes that influence differences in individuals' information-seeking PWU (IPWU)

As hypothesised (H 1), for individuals who use the ledger strategy to a relatively high degree, the frequency of information-seeking PWU activities did not depend on their

moral approval of PWU. However, those who strongly approved of PWU and had medium to low levels of ledger strategy use, also engaged more frequently in information-seeking PWU activities. At the same time, as expected by Hypothesis 4c, how often high status job holders engaged in information-seeking activities was not influenced by the level of their workplace boredom. Employees holding low and medium status jobs, on the other hand, engaged in relatively high levels of information-seeking activities when highly bored at work.

It is interesting to note that the two types of PWU activities investigated (companionship-related and information-seeking PWU) appeared to be influenced by rather different attributes. Although in both cases moral norms and boredom were influences on differences in frequency, in one case (that of information-seeking PWU) these influences were moderated as expected, while in the other case (that of companionship-related PWU) they were not. And although in both cases characteristics of an employee's formal relationship with the organisation (i.e. position and tenure) helped explain differences in individuals' PWU activities, these characteristics covered different aspects of that relationship (i.e. job status, how long one has been in a job). In the past, research has suggested that PWU activities can be summarised into different categories. These activity categories, in turn, tended to be seen as one coherent measure of PWU (e.g. Anandarajan, Simmers & Igbaria, 2000; Lim & Teo, 2005; Mahatanankoon, Anandarajan & Igbaria, 2004). However, none of those studies examined what influences the differences in frequencies of engaging in the various PWU activity categories. This research contributes a first step towards investigating these influences by suggesting that differences in PWU activities may be accounted for by differences in antecedent conditions (i.e. moral norms, boredom, tenure, and/or position).

7.6 Discussion of the model testing results

The five facets of PWU measured in this research (i.e. frequency, habit, duration, and communication-related and information-seeking activities) were influenced by different determinants. The two influences that significantly explained differences in all PWU facets were workplace boredom and personal moral norms. On the one hand there is the motivation to engage in PWU. Regardless of the PWU measure investigated, this push effect to engage in PWU apparently originated in the experience of workplace boredom. On the other hand, a certain 'pull' effect, motivating restraint in one's PWU appears to be based on the degree to which one disapproves of PWU on moral grounds. However, surprisingly few of the expected moderating influences on moral norms and boredom at work were statistically significant. Because the interactions were the theoretical focus of

this thesis, the following discussion focuses only on those interactions that were found to be significant.

When measuring PWU through frequencies of PWU, the push effect of workplace boredom tended to be moderated by employees' level of giver attitude. While those with high levels of giver attitude towards work were not influenced by their workplace boredom, medium or low givers were. When low givers experienced little boredom, they engaged relatively infrequently in PWU. However, low givers who felt very bored at work, engaged more frequently in PWU than medium or high givers. Contrary to expectations, medium and high givers engaged more frequently in PWU in situations with low levels of boredom than low givers.

According to the theoretical reasoning that led to Hypothesis 4a, PWU can be used by individuals as a means to alleviate the undesired experience of boredom. Or said differently, the motivation to engage in PWU out of boredom is seen as an adaptive response to the perception of boredom. The notion that boredom provides an adaptive motivational push force is supported to some degree by the data in this study, pointing to the possibility that for different levels of giver attitude, the purpose of PWU with respect to workplace boredom can shift. For example, when highly bored at work, individuals of all giver attitude levels engaged more frequently in PWU than in situations of low or medium boredom. It is possible to speculate that in those situations the purpose of PWU was for all individuals to alleviate boredom to some degree. In situations of low workplace boredom, however, employees may engage in PWU for other purposes. In those situations the need to alleviate boredom is less strong, and depending on differences in giver attitude, PWU can serve different purposes, such as mini breaks for stress relief. Individuals with high and medium levels of giver attitude may experience more keenly the need for such relief than low giver' because of their intense desire to 'give' high levels of work effort. The use of PWU for different purposes can possibly explain this study's findings that high and medium level givers engaged more in PWU when they were not very bored than low givers.

Recently Malachowski & Simonini (2007) presented US-based survey results suggesting that being bored at work was the most frequently mentioned reason for engaging in PWU. This study's findings add to the field of PWU research empirical findings indicating that boredom can indeed be an influence on PWU. In addition, the data suggest that the effect of boredom on PWU frequencies is moderated by the level of giver attitude a person has towards work effort.

The influence the Workload*Giver interaction had on habitual PWU gave additional support to the notion that PWU can serve different purposes for individuals with different characteristics who are in similar situations. The unexpected finding that high givers

developed a habit of engaging more in PWU when faced with high workloads than when having relatively little to do, suggests that for some individuals PWU may have served purposes other than distraction from boredom. Looking at the correlational link between workplace boredom and workload reported in Table 7.2 (r = -.48), it is possible to speculate that situations of low boredom were frequently associated with relatively high workloads. When bored as well as when faced with heavy workloads, individuals with strong giver attitude retained their need to give large amounts of work effort. To balance possibly negative effects arising from the combined pressures of a high workload and their personal disposition, these people may have developed the habit of using PWU for frequent mini breaks, rather than as a tool for distraction. Low givers, in contrast, have a lesser need to give work effort, and may have used PWU to alleviate the negative sensation of boredom, as expected in Hypothesis 3a. When faced with high workloads these individuals 'buckled up' and focused on their work tasks in favour of PWU. Although this is intuitively obvious, no previously published study has yet provided empirical indication for the argument that in similar workplace situations (i.e. perceived workload) PWU can serve different purposes for individuals, depending on their psychological attributes, such as their attitude towards work effort in general. It needs, however, to be reiterated at this point, that the findings in this study were inconclusive and future research may want to further examine the nature of the Workload*Giver interaction with regards to habitual PWU.

In this research project, when measuring PWU through the activities people engage in, the push effect of boredom to engage in information-seeking (IPWU) activities was moderated by the status a person's job had within the organisational hierarchy. The frequencies of engaging in IPWU activities of research participants in high status jobs were not influenced by how bored they felt at work. Medium and low status employees, however, differed in their IPWU activity frequencies. Those employees engaged relatively infrequently in information-seeking PWU activities when not bored, and rather frequently when experiencing high levels of boredom. Contrary to the expectations expressed in Hypothesis 4c, however, low levels of boredom apparently presented more motivation to engage in information-seeking PWU activities for medium and high status employees than for low status job holders.

As in the case of the Boredom*Giver interaction, it is possible that the purpose of engaging in information-seeking PWU activities differed for employees on different levels in the organisational hierarchy, and thus changed with changing levels of workplace boredom. It is, for example, possible that in situations of low boredom, employees in high and medium level status positions chose to engage in information-seeking PWU activities in order to balance the demands of their personal lives (e.g. shopping or banking) with the stimulation they experienced at work. Low status job holders, however, may have had

relatively little need for this balancing. Their typically set and limited working hours may have allowed these individuals to take care of personal business without the help of PWU. At the same time, however, individuals in low status jobs may have treated information-seeking PWU activities as diversions from high levels of boredom. Individuals in medium and high status jobs may have done so to a lesser degree possibly due to the availability of alternative diversions. The data suggested that although boredom may have provided the motivational push to engage in PWU, differences in opportunity to do so due to job status (acting as pull forces) may have resulted in differences in information-seeking PWU activities.

None of these theoretical possibilities have yet been empirically investigated in published research. In the past, one study (Lee, Lee & Kim, 2004) found that high status employees tend to have fewer intentions to engage in PWU than low status employees. However, no research could be found that empirically examined possible reasons for the differences in PWU between employees with differing job status. Equally, no study was found that investigated if employees with different job status differed in their PWU activities. This study contributes to the field of PWU empirical evidence that differences in workplace boredom can be a reason for differences in the PWU of individuals with varying job status. The facet of these individuals' PWU that is most likely affected by workplace boredom is that of information-seeking PWU activities, which were found to be slightly more frequently, engaged in by the research participants than companionship-related PWU activities.

For the participants in this study, the motivation to engage in PWU provided by perceived workplace boredom and workload appeared to serve an adaptive function rather than a maladaptive one. Individuals with different levels of giver attitude, and in different work situations (i.e. job levels), were apparently motivated to engage in PWU to balance unwelcome experiences (i.e. workload, boredom). The interpretation of seeing the motivational push forces as of adaptations to the environment rather than as maladaptations was partially supported by the reported PWU patterns of the research participants, which were, on average, relatively light. The interpretation received further support from the nature of the pull force of moral approval.

Besides the motivational push to engage in PWU provided by workplace boredom, a moral pull to refrain from PWU, or to limit it, can be experienced by an individual's moral norms regarding PWU. In this research, the level of moral approval of PWU influenced all measures of PWU. However, the influence moral norms had on the frequencies of information-seeking PWU activities differed depending on the degree to which individuals accepted the ledger strategy as a valid tool for neutralisation. The data in this study

supported Hypothesis 1 with regard to information-seeking PWU activities. As expected, information-seeking PWU frequencies were relatively high when individuals approved of PWU, regardless of their attitude towards the ledger strategy. However, if individuals saw the strategy as a valid method for neutralisation, their information-seeking PWU frequencies were not influenced by their disapproval of PWU on moral grounds. Presumably, any moral qualms these individuals may have had regarding PWU were neutralised by their use of the strategy.

In further support of Hypothesis 1, the information-seeking PWU activities of individuals who tended to disapprove of the ledger strategy were significantly influenced by their moral norms. However, it was interesting to note that the hypothesised interaction between moral norms and the strategy was significant only when measuring frequencies of information-seeking PWU activities, and not when measuring, for example, companionship-related PWU or PWU duration. One possible explanation could lie in the general characteristic of the research participants to be relatively high in giver and relatively low in taker attitudes. For individuals with these attitude characteristics it may have been morally easier to address perceived ledger imbalances by engaging in information-seeking activities than by engaging in relatively 'frivolous' companionship-related activities or prolonged durations of PWU.

Both the taker attitude and the nature of the ledger neutralisation strategy are based on the notion of perceived fairness in giving and taking in working relationships. The more likely one is to use the ledger strategy, the more likely it is that one feels it is fair to engage in longer sessions of PWU to hold that internal ledger in balance. Similarly, the stronger developed individuals' attitudes of entitlement are (taker attitude), the more likely they will engage in long PWU sessions out of a sense that they 'deserve' it. Although previous research has suggested that PWU is linked with justification, neutralisation and equity (e.g. Lim, 2000; Lim & Teo, 2004; Scheuerman & Langford, 1997), no study had been found to empirically demonstrate that moral norms, boredom, neutralisation and equity form a set of influences that can explain differences in PWU duration. This study contributes to the field of PWU empirical evidence that how long individuals engage in PWU may depend on their moral norms, workplace boredom, their use of neutralisation strategies, and the level of their giver attitude towards work effort.

This research project has so far focused on what influences individuals' differences in PWU; or in other words, the research has examined antecedents of PWU. To contribute to a better understanding of the increasingly popular organisational behaviour of PWU**,** it was deemed necessary, however, to not only examine the antecedents of PWU, but to also take a closer look at the context in which PWU exists. This context typically includes the

fact that organisations have control measures in place that aim at regulating PWU. The context also includes consequences of PWU affecting individuals and organisations. The following chapter, therefore, presents the analysis of qualitative data provided by the research participants that enabled me to explore the wider context of PWU as it presented itself to individuals engaging in the behaviour.

Chapter 8

Thematic analysis of PWU

So far this research project has focused on testing a theoretical model through asking the research participants very specific questions aimed at giving very specific pieces of information. To increase our understanding of the relatively under-researched organisational behaviour of PWU, the aim was to not only examine theoretical possibilities of why individuals differ in their PWU, but also to view PWU in a wider context than that of most published research. Context consists of those factors that surround a phenomenon and help understand it, and are typically associated with variables above those expressly under investigation (Capelli & Sheerer, 1991). To place PWU in a wider context than that created by the variables investigated so far, when designing the research questionnaire, the decision was made to include two open-response questions. Their aim was to encourage the respondents to write in their own words about aspects of PWU important to them: monitoring and control, policies and procedures, positive and negative consequences. A balanced view of these issues was achieved by asking two questions that were identical except for their positive and negative focus.

Adding the element of qualitative data analysis to the quantitative data analysis required for model testing had three purposes. Firstly, the aim was to seek validation for the above presented theoretical reasoning and interpretation of the model testing results. Typically, as was the case in this research project, quantitative data gives the research participants a limited choice from which to choose their responses, based on the theoretical choices made by the researcher. Open-response questions, however, allow them to express feelings, impressions, thoughts, and experiences without that constraint. It can then be argued that if one finds in the qualitative data the same or similar information to that gained through statistical analysis, the qualitative data validates these statistical findings. Secondly, through investigating PWU in a wider context the intention was to gather information that would allow me to add meaning to the statistical analyses results. Thirdly, the desire was to gather divergent information. Divergent information provides new insights and information that was apparently overlooked or discounted by the researcher during the theoretical argument phase of the research (Carr, Marsella & Purcell, 2002). It may explain potentially small effect sizes in the statistical findings of theoretically expected relationships, and it may also encourage data interpretations that go beyond the researcher's original theoretical arguments. The addition of a qualitative data component to

this research project was expected to allow exploring PWU in a more holistic manner than previous research had done, and to provide incentives for future PWU research directions.

In this chapter the method used for gathering and analysis of the qualitative data are described first. This description is followed by the presentation of the thematic analysis results, followed by brief discussions. A summary of the main findings from the thematic analysis concludes the chapter.

8.1 Method

8.1.1 The participants

Of the 267 participants in the survey described in chapter 5, 45% (n = 119) responded to one or both of the questions requesting written comments (open-response questions). This is a quite high response rate, considering that the two questions appeared at the end of a rather lengthy online questionnaire where response fatigue could be expected. The majority of the respondents were female (55%), and aged either between 26 and 30 years (16%) or between 31 and 35 years (20%). Most described themselves as NZ Europeans (44%). Although the respondents reported to work for a large number of industries, universities (37%), professional services (11%) and government departments (9%) were the most frequently listed employers. The median job tenure was between one and two years, and the majority reported their job status to be middle management or equivalent (for a summary of their demographics, please refer to Appendix H, Table H8.1).The demographic characteristics of these 119 respondents were a reasonable representation of the complete group of participants responding to this research project's survey (described in chapter 5).

In addition to comparing the demographic characteristics of the participants, the similarities and differences between respondents and non-respondents to the open-response questions were investigated further. Significant differences between respondents and non-respondents would indicate that individuals with certain characteristics self-selected to respond to the open-response questions, and would limit the generalisability of the results.

Based on the results of independent-sample t-tests (which can be found in Table H8.2, Appendix H) it was reasonable to conclude that with regard to the characteristics of interest in the present study the group of individuals responding to the two open-response questions was, on average, relatively similar to the group of non-respondents. This finding,

in turn, increased the added value the qualitative data provides to the statistical results presented in the previous chapter.

8.1.2 Critical incident technique to collect data

In the context of the current research project, the most appropriate way to encourage individuals to share with the researcher their experiences with PWU, and to continue to present PWU in the most neutral way possible, was the use of critical incident questions (Flanagan, 1954). The 'critical incident technique' is essentially a method for collecting examples of human behaviour in defined situations (Twelker, 2003).

By an incident is meant any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects (Flanagan, 1954; p 327).

Typically a critical incident includes a description of the situation, the behaviour one focuses on, and the consequences of that behaviour. The technique is frequently used in job analysis (DeNisi & Griffin, 2001), customer satisfaction studies (Gremler, 2004), or to construct typical scenarios of user behaviour when they interact with different types of information systems (Serenko, 2006). The technique allows the researcher to present the topic of interest in a balanced form by encouraging the respondents to report positive and negative critical incidents. Seeing that the use of the critical incident technique is reasonably well established in industrial/organisational psychology, service and information technology research it was identified as a suitable technique to complement the statistical evaluation of the proposed theoretical model with qualitative data.

Critical incidents can be gathered in various ways, but typically respondents are asked in interviews to tell a story about an experience they have had in a specific situation. However, in the context of this research the use of interviews was not feasible. Because the aim was to complement the quantitative data from the research participants with their own qualitative data, rather than that from a different group of participants, the decision was made to add two critical incident type questions at the end of the previously described (chapter 5) online questionnaire. The aim of these questions was to further explore the little understood issues of PWU, PWU control strategies and potential consequences of both. It was expected that using critical incident type questions would focus the respondents on positive and negative aspects of PWU and PWU control.

The two questions, based on the tenets of critical incidents, included in the questionnaire were:

> *Can you please, in brief sentences, describe an incident where electronic monitoring, company guidelines, or your supervisor's behaviour in relation to Internet access at work had a positive outcome. Please briefly describe the situation, the behaviour and the positive outcome or result (Q135).*

> *Can you please, in brief sentences, describe an incident where electronic monitoring, company guidelines, or your supervisor's behaviour in relation to Internet access at work had a negative outcome. Please briefly describe the situation, the behaviour and the negative outcome or result (Q136)*.

In line with the critical incident technique (Flanagan, 1954; Twelker, 2003) both these questions focused the participants on the specific system of interest (outcomes of PWU in situations of organisational PWU control including electronic monitoring, company guidelines and/or supervisor activities). The questions then looked for descriptions of action or behaviours that were directly or indirectly related to circumstances of different PWU control (e.g. measures taken by the organisation to restrict PWU). Finally, the questions asked for descriptions of actions and behaviours that demonstrated experienced consequences of PWU in those circumstances (e.g. the individual experienced increased job satisfaction).

The questions allowed respondents to interpret the term 'consequence' as they felt fit. For example, the consequences asked for could include those for individuals (the respondent or others), organisations, or a combination of these options. Allowing this choice of interpretation, after limiting the situation of interest to one of PWU control, gave the respondents the opportunity to express consequences for those stakeholders they perceived to be of importance. When interpreting the comments of the respondents it is therefore important to keep in mind that the consequences asked for were restricted to those in situations of organisational PWU control, while the questions allowed individual interpretations of the 'consequence for whom' aspect.

8.1.3 Thematic analysis to interpret the data

Descriptions of the critical incident technique found in the literature explain the technique being used in interviews (e.g. Flanagan, 1954; Twelker, 2003). In the context of this study, however, interviewing the participants in the above described online survey was impractical. Because a written survey does not allow the researcher to repeatedly prompt respondents to focus on specific situations, behaviours and experienced outcomes, it was to be expected that few comments given would comply with the critical incident format. It was, therefore, decided that the responses to the open-response questions were not analysed with a view to critical incident analysis, but using the less restrictive method of thematic analysis.

Thematic analysis is a qualitative data analysis strategy that involves recognising common themes in textual data (DeSantis & Ugarriza, 2000; Wilson, 1993). Thematic analysis involves searching the respondents' comments for common threads that extend throughout the collection of written responses. Themes tend to be abstract, and may be concepts indicated by the data rather than concrete descriptions by respondents using identical or synonymous words or phrases (Morse & Field, 1995). Consequently, themes are not always obvious at the first reading of the text and require repeated reading with the question in mind of what the respondents might want to tell the researcher in the brief space (and time) available. However, once themes are identified, the patterns become easy to recognize, comments can be categorised, and dominant themes can be identified.

Thematic analysis is somewhat more subjective than the critical incident technique which focuses on clear and relatively objective descriptions of situations, behaviours and outcomes. Finding common themes through trying to find the explicit and implicit messages of the respondents can also be influenced by differences between the respondents and the researcher with regards to climate and experience with the behaviour and situation in question. It is thus possible that the researcher identifying themes may, based on his or her reality, interpret the implied and the direct messages differently from how the respondent intended (Carr, Marsella & Purcell, 2002). However, misinterpretation of messages between sender and receiver are typical in any communication, and should not be over-emphasised.

Research on PWU, which by definition involves individuals from different climates and with different experiences communicating with each other, either directly through email and chat rooms or indirectly through website postings, arguably encompasses cross-cultural communication. In the absence of published research on cross-cultural

communication issues in PWU, when conducting the thematic analysis in the current research procedural steps were taken to minimise the potential of the researcher's personal reality influencing the interpretation the respondents' comments. These precautions are described in the procedures of the method section below.

8.1.4. Procedure of data analysis

To counter potential rater bias through the researchers own values, experiences, familiarity with the quantitative data and the aim of the research, it was decided to involve a second rater in parts of the thematic data analysis. Consequently, parts of the analysis were performed by the researcher and a colleague whose academic work (published and in teaching) is in the majority based on qualitative research methods (e.g. Mouly & Sankaran, 2002). In addition to being 'naïve' as to the quantitative data and the precise purpose of the study, the colleague is from a different culture (Indian) from the researcher herself (German) and specialises in a different discipline (human resource management). Both have worked and studied in New Zealand for over ten years, and during that time have themselves engaged in PWU and witnessed/experienced consequences of PWU and PWU control. Their experiences and training allowed the raters to analyse the comments given by the respondents with an open mind, although they did acknowledge that their realities may have influenced them in the choices of labels and categories. The analysis of the respondents' comments took place in several steps, and incorporated aspects of the critical incident technique and thematic analysis techniques.

In the first instance the qualitative researcher was given the comments made by the respondents and asked to identify categories and topic themes in the responses to the two open-response questions. At that stage the raters had not discussed any other results from this research project or both their respective opinions of the topics of PWU and PWU control.

Independently from each other they worked on identifying themes they found emerging from the written comments. In the first instance they identified thematic categories, described by long and specific descriptions. This enabled them to sort comments based on common/similar words and phrases without relying heavily on subjective interpretation. Once the evaluators had decided on our theme categories, they assigned each answer to a category and kept running tallies to identify how many answers each of their categories contained.

In the second instance, the comments in their categories were searched for common overarching themes, looking for implied and direct messages the respondents

might have wanted to send. The resulting theme labels were broad and general so as to not over interpret the specific intent of the messages.

The raters then met and compared their category labels and the associated responses. We identified a few minor differences with regard to the choice of words used to label the categories and the categorisation of 21 comments. The differences in label choices were mainly based on differences in perspective due to our respective research disciplines (human resource management and I/O psychology), experience in qualitative data analysis, and differences in English language use. The labels of the themes, however, were almost identical.

Subsequently the label choices and reasons for categorising the 21 comments differently were discussed. The result of this discussion was agreement on the category descriptions and on the categorisation of 12 comments, and disagreement on nine comments; for those comments the researcher's original classifications were adopted. The resulting themes, category labels and comment frequencies are presented in Table 8.1.

The final step in the data analysis procedure was to identify how the themes related to PWU. Because the qualitative researcher was naïve as to details of the statistical data and the theoretical arguments of the thesis, this step was done by the researcher only. In this final step she identified how each theme contributed to placing PWU and the model testing results in a wider context.

Table 8.1: Themes of the critical incidents with associated positive and negative outcomes and frequencies of associated comments made by respondents

Theme	Categories of positive outcomes (n)	Categories of negative outcomes (n)	% of total responses
Climate of organisation	Self management of PWU has benefits for individual and organisation, including trust, respect, and getting personal things done without leaving work (32)	Loss of trust/increase of resentment towards organisation due to heavy disciplinary action or supervisor being very vigilant (19) Colleagues were accused of stealing time and resources (2) Negative impact on morale due to heavy handed monitoring and supervisor comments (8) Employee lost job due to PWU (7)	39%
Productivity	Finding information that is beneficial for self and organisation (8) Limiting PWU to ensure everyone in team gets work done and is focused (8) Blocking distribution of material negative to the company (2)	Blocking of popular websites causes inconveniences at work when these sites are needed for work (13) Unnecessary exposure of organisation's server to viren when visiting popular websites not related to business (4)	20%
Moral issues	Blocking access of sexually offensive material / gambling material (15)	Feeling guilty when engaging in PWU (4)	11%
Boredom	Get back some motivation to work in slow and boring periods (7) Getting new ideas when bored with old systems and work processes (3) PWU due to boredom, picked that up and assigned new tasks including analysing and monitoring PWU (2)	Spending too much time on the Internet and getting not enough done (7)	11%
Work-Life Balance	PWU compensates for fluent borders between work life and personal life (13)	Have to do some work tasks at home because websites are blocked and getting permission to use them is tedious (5)	10%
Employee well-being	Provides mini-breaks and downtime, necessary to well being of employees (6) Social network and support in times of personal issues, heavy workload and widely spread work teams (6)	PWU activities can support addictions (e.g. gambling, pornography) (2)	8%
No comment made	(5)	(18)	

Note: N = 119 respondents, n = 173 comments made

8.2 Results

The 119 individuals responding to the two open-response questions gave 173 responses. Not all respondents went into the same level of detail and most also added their opinion about PWU in general, how their company manages PWU, or elaborated on their perceived entitlement to engage in PWU. In total 102 responses with positive and 71 with negative outcomes of PWU and/or PWU control strategies were reported. Twelve respondents noted that they could not think of a critical incident showing positive aspects of PWU, while 32 noted that they could not think of, or never experienced negative aspects of PWU. Overall, five respondents chose not to respond to the question regarding positive outcomes, and 18 chose not to comment on negative outcomes of PWU. The response pattern indicated that their experiences and opinions appeared to go against the popular tendency to portray PWU as predominantly negative organisational behaviour.

In essence, the trend evident in the comments indicated that, in their eyes, PWU was not ‘black and white’, or ‘good’ and ‘bad’. It was rather apparent that to the respondents PWU was an organisational behaviour that, depending on the ‘for whom’ and the situation, can have positive and negative aspects. It was interesting to notice that more respondents reportedly could not think of negative consequences than could not think of positive consequences of PWU control. That result could possibly be due to the respondents as a group engaging in PWU to relatively low to moderate degrees in PWU (see PWU characteristics in chapter 6), and potentially having relatively little experience with negative consequences themselves.

8.2.1 PWU control strategies

The critical incident questions placed the experiences of, and comments about, the consequences of PWU within the context of PWU control strategies. The questions allowed the respondents to elaborate on the PWU control strategies they have experienced, in addition to the levels of awareness and approval already measured in the quantitative data collection part of the questionnaire. The most frequently mentioned PWU control strategies were the blocking of websites deemed to be non-work related (n = 64), and disciplinary consequences in response to electronic monitoring (n = 51). The respondents varied in their reports on the severity or strictness

of their organisations' PWU control measures. A relatively large number (n = 47) reported working in organisations that gave their employees a 'reasonable', degree of freedom to engage in PWU:

> "We work in a white collar work environment, personal internet usage is acceptable as long as it is not for any length of time."

At the same time, other respondents (n = 9) expressed disapproval of their organisation's PWU control systems:

> "… I have been witness to cases where employees have been sacked for accessing personal sites and I believe this level of monitoring is too heavy-handed."

It appeared that a relatively large number of respondents commenting (n = 32) learned details of their organisations' PWU control system through experiencing or witnessing disciplinary action rather than through implicit instructions. PWU-related disciplinary actions were reported through comments like: "I had been told to use the Internet less frequently for personal reasons"; or through reports of cases where disciplinary actions led to the dismissal of colleagues. However, noticeably few wrote about supervisors or managers explicitly explaining the PWU rules in the organisation (n = 2). At the same time, equally sparse were comments made indicating that PWU control strategies were explicitly communicated to individuals as part of induction training, employee handbooks or other official channels (n = 1). The questionnaire data indicated that, on average, the respondents were relatively uncertain about their organisations' PWU expectations and PWU control mechanisms. Their comments added to this finding further information on how this uncertainty may have been achieved, through experience or observation of PWU consequences. Supervisory explanations, perhaps as part of organisational induction, might arguably increase certainty among employees regarding organisational PWU expectations and consequences.

PWU control strategies are typically seen by individuals as restricting a behavioural freedom. This restriction was expected to trigger strong reactions in individuals and to lead to a relatively large number of comments describing PWU and PWU control in negative terms. Although these reactions are reflected in a number of the comments, they were less dominant than expected; possibly due to the relatively low level of trait reactance the respondents had as a group.

When specifically asked about their PWU within the context of PWU control strategies, the respondents were generally able to describe experiences with and

consequences of PWU control measures, and tended to have positive and/or negative opinions about them. Their comments suggested that PWU control strategies such as electronic monitoring and website blocking were accepted as standard practices that can be a nuisance at times, but were generally seen as a given part of organisational 'life', rather than a direct influence on their PWU. Although the popular press tends to suggest the existence of a 'them and us' mentality when it comes to PWU and PWU control strategies, the overall tone in the comments of this study's participants was one of appreciation of the need for PWU control measures – as long as they were seen to be beneficial for individuals and their organisations. This rather benign perception of PWU control can possibly be due to the PWU patterns of the participants (i.e. relative low to medium levels of PWU) and their on average high levels of giver attitude, and low levels of trait reactance.

8.2.2 Themes

A popular perception tends to be that employees cannot be trusted with Internet access at work. The prevailing mantra is that if left unchecked, employees will pursue their own advantages and engage in excessive levels of PWU, without regard for the interests of the organisation. Subsequently numerous publications suggest that electronic monitoring, as well as consistent and strict reinforcement of PWU rules, are important managerial tools to avoid negative consequences by curbing employees misuse of their organisation's resources (e.g. KensingtonSwan, 2003; Vorobyov, 2005). The comments made by the respondents in the current research, however, demonstrated a different level of reality. The responses to the open-response questions were summarised into eleven 'positive' and ten 'negative' categories. From these categories, in turn, six general themes emerged: organisational climate, productivity, moral issues, boredom, work-life balance, and employee well-being (see Table 8.1). These themes and their association to PWU, PWU control and the outcomes of both are described in the following paragraphs.

8.2.2.1 Organisational climate

The dominant theme in the majority of comments (n = 68), is very closely linked to the PWU control measures described and relates to 'organisational climate' (see Table 8.1). Organisational climate and organisational culture are two terms that are often used interchangeably. However, there are fundamental differences between these concepts. Organisational climate is the shared values and beliefs that underlie a company's identity and are expressed in its policies, procedures and the way 'things are done around here'

(Schein, 1996). Organisational culture (e.g. a culture of trust and respect) is created by founder values, senior leader behaviours and values, national climate and the prevailing industry and business environments (Ostroff, Kinicki & Tamkins, 2003). It is expressed through organisational practices (such as PWU control strategies and their enforcement), leads to group and social processes (such as self-management of PWU) which in turn influence work attitudes (i.e. job satisfaction) as well as organisational outcomes (i.e. productivity, employee stress). Conversely, organisational climate, on the other hand, describes employees' perceptions, attitudes and believes about, for example, how much they are trusted to limit their PWU.

Climate is typically measured through surveys and presents a snapshot of the current state (Mearns & Flin, 1999). In this research it is possible, that within some organisations trust and respect are parts of the organisational climate, in others that they are part of organisational culture. Because none of the measures in the on-line survey explicitly assessed either climate or culture, and in the absence of previous research findings into PWU, organisational climate and organisational culture, the label 'organisational climate' was seen as the most appropriate one summarising the respondents' comments. It identifies perceptions of employees without claiming that trust and respect have to be enduringly embedded in organisational culture. The respondents' comments strongly suggested the presence of a link between organisational climate, PWU control strategies, PWU levels and PWU consequences such as job satisfaction and productivity.

Responses with this theme highlighted circumstances that led to positive and negative consequences of PWU. Description of these circumstances focused on evidence of mutual trust and respect:

> "It is great to be able to have personal access at work, within reason. We are trusted to keep the usage to a minimum".

or their perceived betrayal through 'heavy handed' enforcement of PWU control strategies:

> "Electronic monitoring would make the employees feel mistrusted".
>
> "I have been witness to cases where employees have been sacked for accessing personal sites and I believe this level of monitoring is too heavy handed."

A large number of respondents felt that a general organisational climate of mutual respect and trust resulted in PWU being self-managed within levels acceptable for the individual and the organisation.

> "We are free to use the Internet for personal reasons as long as it does not impact on our ability to do our job, is kept to a reasonable time frame and does not involve inappropriate sites. As a result people don't abuse this allowance, nothing is hidden or done covertly and there is no resentment."

At the same time, many respondents did not explicitly report reduced or limited PWU as a result of an organisational climate of trust and respect, but pointed out that such a climate can promote employee development and communication – two aspects that are typically associated with job satisfaction and motivation (e.g. Sanzotta, 1977).

> "Occasionally I am able to show my supervisor material that I have collected from the Internet for my own interest (peripheral to my work) and he has also found it interesting and relevant to our work."

The feeling of satisfaction with the job and/or the organisation was a frequently mentioned outcome of PWU self-managing situations. In contrast, organisational climates lacking in trust, exemplified by strict PWU controls, were generally reported to result in the opposite. Two respondents' comments epitomise these two sides of the influence organisational climate, expressed through PWU control strategies, was reported to have on the outcomes of PWU:

> "Situation: my partner's work had two staff members that were wasting considerable time on the internet, the managers (under advice of unskilled Information Technology, IT, support staff) decide to deal with the situation by preventing staff internet access altogether, rather than approaching the staff directly and dealing with appropriately. Outcome: the staff are now less productive."

> "Recently, our non-server computers were all linked up with continuous Internet access for the benefit of all members of staff who don't have access to the server

(when they aren't actually working). In my opinion this has increased staff morale and job satisfaction."

A number of respondents suggested that organisational climates emphasising teamwork, openness and accountability of one's activities to the team tended to result in limited PWU without the need for strict explicit control mechanisms.

"We never have problems with our employees and Internet access as we work together as a team. Everyone respects the work put into the clinic and patient care."

Typically, organisations with team-focused climates tend to have their workspaces arranged in open-plan offices (Hobson & Meacheam, 20047). In such office arrangements and organisational climates, team members (co-workers and supervisors) tend to 'keep an eye' not only on their own activities, but also on those of others, apparently with PWU-limiting results:

"No special incident – just a reflection that when you are positioned in such a way in your office that others can see your screen, I find that my personal use of the Internet has been much more limited."

At this point, it is prudent to point out that not every open-plan office arrangement is necessarily a reflection of an organisational climate of teamwork. Some open-plan offices mentioned in the respondents' comments were the result of space limitations or in response enabling easier control of employee work: however, even when the control aspects of the office lay-out were clearly mentioned, the underlying notion tended to be that supervisors or team members saw the need to enforce the desired organisational climate of teamwork and accountability:

".. and with a large number of temps over the extremely busy enrolment period there was a lot of internet misuse by the temps. .. The seating arrangements were very conducive to them getting away with personal internet use. … we put pressure on the supervisor to change the seating arrangements of the temps so everyone could see their monitors. The misuse was cut dramatically and throughput of enrolment was markedly increased".

The finding that PWU can be influenced by co-workers can possibly explain why the variable of work group norms, hypothesised to influence differences in PWU, did not contribute statistically significant explanations. In the questionnaire, the content of the workgroup norm questions focused on their norms regarding PWU as potentially limiting (or supporting) PWU. The comments made by the respondents, however, indicated that general work group norms with regards to team work, accountability and work ethics appeared to have greater influence on PWU. Therefore, as hoped for, the qualitative data added meaning to the statistical result of non-significant influence of work group norms.

In general, the comments categorised under the theme of organisational climate suggested that levels and outcomes of PWU can be influenced by the level of mutual trust and respect within an organisational climate. For example, when employees were trusted with self-management of their PWU, the response tended to be a respecting of the organisations' PWU limits. The consequence of such an organisational climate and PWU control measures tended to show PWU as contributing to job satisfaction and employee productivity.

On the other hand, PWU control strategies that conveyed the message that employees could not be trusted to self-manage PWU tended to result in reports of decreased job satisfaction and productivity. However, none of the respondents reported to have increased their PWU to get even with the organisation or to recapture their perceived 'right' to engage in PWU. Overall, the respondents reported a strong link between organisational climate, PWU and the outcomes associated with PWU within the context of the specific organisational climate.

Giving the theme organisational climate such dominance, the qualitative data provided divergent information to the findings of the statistical analysis. Based on the comments of the research participants, the strong possibility exists that,in addition to the proposed influences on PWU, differences in individuals' PWU were influenced by differences in their organisational climates' levels of trust and respect, expressed through PWU control strategies.

8.2.2.2 The impact of PWU on productivity

Numerous publications in the past have claimed that employees waste large amounts of their time at work through engaging in PWU (Malachowski & Simonini, 2007) or 'slacking off' on the Internet (e.g. Mills, Hu, Beldona & Clay, 2001) without concern for their organisations' interest. The second most common theme in the respondents' comments

supported the notion that PWU mediates between organisational climate and organisational outcomes, especially the outcome of employee productivity. The comments of this study's participants, however, painted a somewhat different picture to that previously painted of PWU. The responses clearly indicated that individuals were aware of the positive and negative influences that PWU can have on productivity. A relatively large proportion of respondents (18%) reported incidents and gave comments demonstrating the influence PWU can have on the productivity of the individual employees and the organisation (Table 8.1):

> "Subordinate was downloading music and this was stopped. It interfered with my work getting done".

> "While cruising porn sites, three separate employees have crashed our servers by downloading live video and overloading the system, causing problems for the whole company…"

While a number of respondents (n=35) wrote about uncontrolled PWU interfering with productivity, nearly half of them (n=17) also pointed out that restricting access to popular websites as a PWU control measure can also hinder productivity and lead to frustration:

> "As purchasing officer I am required to access sites like Amazon.com etc. Occasionally the Web marshall system informs me that such sites are blocked because of language content. RIDICULOUS! I can't work if I can't shop!"

The respondents' comments regarding the impact PWU can have on employee productivity and their reported understanding for organisations' desire to control PWU, in turn further illuminate the context of organisational climate. In these comments we found, again, the message that PWU most likely cannot be fully understood and appreciated without considering the degree of mutual respect, understanding and trust that exists within an organisation.

8.2.2.3 Moral issues

The statistical analyses testing the theoretical model proposed in the current research showed that the degree to which individuals found PWU morally acceptable

influenced their level of PWU. In the reported incidents and comments, however, the issue of moral approval was not expressed in terms of a general approval of PWU. On the contrary, issues of moral approval focused either on very specific activities, or on a general feeling of guilt. A number of respondents (n = 15) expressed their moral issue with PWU through disapproval for the accessing and forwarding of illegal and 'adult' material (Table 8.1):

> "Electronic monitoring prevents employees from access [sic] morally unacceptable sites i.e. pornography, gambling."

This disapproval of viewing and/or passing on of sexually explicit material when engaging in PWU was expressed by male and female respondents of all ages, job positions, job tenure and cultural affiliations.

The second moral issue identified in the comments relating to PWU and PWU control systems was that of feeling guilty when engaging in PWU:

> "My supervisor told me that she uses the internet often for things like personal banking and bill payment. This is a relief for me and had the positive outcome that I now feel okay about checking my bank accounts and making online bill payments at work."

Although all four comments in this category expressed a feeling of guilt when engaging in non-work related Internet activities, it was not clear from their wording whether this guilt was due to moral disapproval of PWU or due to knowingly acting against organisational PWU control measures. The qualitative data on the moral issues of PWU complemented the statistical findings two-fold. On the one hand, the fact that the research respondents did mention that PWU was, in part, for them a moral issue, validated the statistical findings that moral approval influenced PWU. On the other hand, the clear focus of the moral approval on sexually explicit content suggested that engagement in PWU may not depend only on whether or not one approves of it in principle, but also on the moral approval of the PWU activities oneself and/or others engage in; specifically the viewing and/or distribution of sexually explicit content.

8.2.2.4 Boredom and PWU

In addition to moral approval of PWU, the statistical analysis found that workplace boredom influenced PWU. The theme of boredom was also found in the replies to the open-response questions. The majority of the responses (n = 12) in that category (n=19) suggested that engagement in PWU due to boredom had positive consequences for themselves and the organisation. Seven respondents, in turn, indicated that if one engages too much in PWU because one is bored, one tends not to get enough work done; with potentially negative consequences for oneself and the organisation (Table 8.1):

> "...It keeps me awake when I am really bored and unable to help other staff… I would rather surf the Internet than to 'make up' work for myself that was not going to serve any purpose in the organisation…"

Most respondents (n=14) mentioning boredom at work appeared to associate it with workload, and also supported the notion that boredom is a reflection of perceived meaninglessness of work:

> " As I see it – the reason I, as most people in my area access emails/Internet is as a result of two things: a. a monotonous task and b. not enough to do. I personally experience both of these working in projects as I do."

According to two respondents, organisations can potentially use relatively high levels of PWU as a marker that identifies employees who are bored with their work and who may need some attention. For example:

> "An employee (not me) surfed the Internet a lot. She was caught, and the supervisor found out she was bored. She was assigned different tasks and is now more productive and happier."

The comments made by the participants validated the statistical findings that workplace boredom was a noticeable influence on PWU. And although a number of individuals (n=7) pointed out that too much working time could be lost through PWU when

one is bored at work, the majority reported to have experienced or witnessed positive consequences when using PWU to alleviate workplace boredom.

8.2.2.5 PWU and Work-Life balance

The respondents' comments indicated that boredom through low workload was potentially one reason for their PWU. At the same time, job demands, possibly including high workloads, apparently impinged on the personal lives of a number of them. For a number of respondents in different occupations and job levels, being able to connect to the Internet and work from any location gave them not only additional freedom but also rather fluid borders between work and personal life (Table 8.1). These fluent borders were reported to lead to increased expectations by managers and were experienced as relatively negative by the respondents:

> "Ironically, my myopic managers felt that I was never in the office despite my additional work outside normal work hours using a company laptop and mobile internet to juggle my work commitments."

In view of their long working hours and the fluent borders between work and personal life, the majority of responses categorised under the theme of Work-Life balance (n=13) indicated that being able to engage in non-work related Internet activities allowed them to maintain some degree of work-life balance:

> "Often I am travelling or working odd hours for my employer, the ability to manage some personal details (like banking etc) is beneficial to me being able to stay at work. The boundaries between personal and work time are so blurred, I found it difficult to answer some of these questions – for example, I spent Friday night/Saturday and Sunday marking – but feel no guilt in paying a bill from my work station."

> "…Using the Internet for private use at work can be good for an organisation. If an employee orders a present or groceries over the net at work, it takes half the time it would if they had to leave the office and do it. In reality people can be more productive and balance their work and private lives better."

The qualitative data indicating that PWU was associated with Work-Life balance added a certain degree of validation to the quantitative data. In their comments the respondents associated a lack of Work-Life balance with high workload as well as blurred lines between personal life and work life. Therefore, the inclusion of the variable workload in the theoretical model was validated; although it was not found to be a statistically significant influence on PWU. At the same time, the theme of Work-Life balance placed PWU in a context that had not been considered by the tested theoretical model (Figure 4.1). Diverging from that model, the qualitative data further suggested that differences between the participants' reported PWU could have been influenced by differences in how distinct they perceived their working lives and working hours to be from their private lives and personal time. The PWU patterns of the participants presented in chapter 6 showed that as a group they reported relatively low to moderate levels of PWU frequency and duration. Although these levels may have been due to already discussed psychological and workplace attributes of the participants (i.e. giver attitude, level of trait reactance), the comments capturing the theme of Work-Life balance suggested that in addition it may have been hard for many of them to distinguish between working time (as required by the questionnaire) and personal time. This difficulty to distinguish may, in turn, have been a partial influence on the reported levels of PWU frequency and duration that was not captured by the variables of the proposed theoretical model (Figure 4.1).

8.2.2.6 PWU and employee well-being

Closely associated with efforts to alleviate boredom at work and to maintain a Work-Life balance was the comments' general theme of employee well-being (Table 8.1). The responses summarised under this theme reported how different PWU activities can be used as tools to maintain a sense of personal well-being at work. As one respondent, for example, expressed it, companionship-related PWU activities can be tools to establish and maintain relationships at work:

> "The is so little time for face to face contact that the email is the only way for people to communicate – personal telephone calls are banned so the Internet is the only social opportunity to reinforce support networks and social support. Staggered lunch breaks means that no face to face contact is possible and again the email is the link to human contact."

For other respondents, their PWU activities focused more on information providing websites. These respondents perceived that PWU promoted their well-being because it allowed for mini breaks reducing work stress:

"It is natural not to expect employees to work hard all the time: everybody needs some 'downtime'. The ability to read the day's news, personal emails, etc is a form of relaxation and leads staff not to think they are being pushed all the time. Of course, too much usage needs to be addressed."

The theme of employee well-being emerging from the respondents' comments added a new dimension to the possible psychological and workplace attributes that could have influenced the PWU of the participants. From their comments it appeared that the desire for personal well-being could have possibly influenced the type of PWU activity individuals engaged in and/or the duration of PWU. It appeared that companionship-related activities were triggered by a need to overcome a sense of isolation due to work settings. Another group of respondents (n=6) indicated that frequent micro breaks of PWU were helpful strategies for stress reduction. These findings suggested that organisational structures and work processes as well as perceived work stress are potential influences on PWU that were not included in the tested theoretical model (Figure 4.1). These attributes may have influenced the frequencies, duration and possibly specific PWU activities of some research participants.

8.3 Additional findings

8.3.1 Supervisors' role in PWU

One aspect of PWU, its management and consequences that was repeatedly highlighted in the comments, across all six themes and twenty-one categories, was the role of supervisors. Explicit or implicit sanctioning of PWU by supervisors or managers appeared to be frequently experienced but with differing consequences. On the one hand a supervisor's permissive stance on PWU, when openly discussed, appeared to be seen as positive, and could be interpreted as communicating a PWU control strategy of mutual trust and respect:

> "I told my supervisor that I sometimes check my email at home and at my other employer (I have two jobs) when I am at work. I also told her I sometimes take a break and check news websites. Apparently she does not mind…. "(1)

Similarly, in some PWU control environments it appeared that supervisors trusted employees to keep their PWU within reasonable limits, and saw their role as one of giving ‘gentle’ reminders:

> “I believe that my supervisor expects that I and my colleagues will use the Internet access for personal interest, but that if this under control, it is acceptable…However, on Christmas eve [sic], 5 minutes before closing time, my supervisor dropped in to wish me Happy Christmas. I was looking at an mpeg file of an aircraft sent by a colleague. He commented he was glad I was using the time wisely. I don’t think he meant it.” (2)

And the consequences of such described supervisor and employee relationships tended to be situations beneficial for all involved, as above two respondents, (1) and (2) reported:

> “…and because I don’t abuse it, there are no negative consequences to report.”(1)
>
> “…I therefore have no negative outcome to report.”(2)

Another respondent similarly described the consequences of relatively understanding supervisory PWU actions:

> “Somebody spending a lot of time accessing soccer websites was told off gently – it improved both their work performance and job satisfaction”

On the other hand, implicit sanctioning of PWU by supervisors or managers through ‘leading by PWU example’, without explicitly addressing the issue at all, was reported to have mainly negative consequences. The negative consequence in most cases was for the organisation where supervisory behaviour gave everyone else in the team permission to engage in PWU, although PWU control strategies tried to limit it.

> “My supervisor had a high personal internet usage rate, even in a monitored environment. It was very obvious as we were in an open plan environment. This opened the door for the whole team to increase personal usage as this made it ‘ok’ – even to look for new jobs!”

While respondents did not approve of supervisors who encouraged excessive PWU through role modelling it, a number of comments also made the potentially negative consequences of overly zealous supervisor interventions clear:

"The supervisor was rude when reprimanding one staff's Internet use. This had a negative impact. The use of the Internet declined dramatically, but the output and quality of work suffered."

From the comments made by the participants in the present study it became clear that the actions of supervisors with regard to PWU control appeared to have significant impact not only on the effectiveness of PWU control strategies, but also on the experienced consequences of PWU for individuals and organisations. The supervisor is generally seen as an agent of the organisation, and therefore as a messenger and example of the organisational climate. Therefore, the respondents' comments about their supervisors' behaviours with regards to PWU reinforced the importance of viewing PWU in the context of organisational climate.

8.3.2 Entitlement to PWU

Although the previously described questionnaire did not portray PWU in any way as negative or positive for employers or employees, it was interesting to note that across all themes respondents were found who addressed the popular perception of PWU being an 'organisational *mis*behaviour'. These respondents chose to justify and defend their PWU activities by pointing to the issue of fair exchange in the workplace:

"…As I semi-voluntary choose to work 65+ hours per week, I would react very negatively indeed if I were not allowed to do personal e-mail and check cricinfo for cricket results while working on site. I also work from home most evenings and for substantial parts of most weekends."

"…There was a strong sense that we were entitled to utilise our work emails [for emailing personal communications] as this was an issue of academic freedom and the importance of debate and discussion…"

> "…We all work hard and she knows that – so it is better to treat us respectfully and allow us to check out the football scores for a few minutes than to get on our cases and cause conflicts."

> "Note: your survey misses something on those with less structured work. E.g. if I am working 10 hour days and at my level overtime does not apply, then I see occasional access differently to if I was working a std 8 hour day. i.e. swings and roundabouts."

It is reasonable to deduct from these and a relatively large number of comments with a similar tone, that many respondents perceived PWU as an integral part of their work. For these respondents PWU is possibly part of their psychological contract with the organisation, justifying to a certain degree the attention PWU is receiving in the popular and research literature. The tendency of the participants in this study to want to justify their PWU was also in line with the findings of Lim and colleagues (2002, 2005) who linked PWU duration to the perceived fairness of the exchange processes between individuals and their employing organisations.

8.4. Summary

The results of the thematic analysis of the two open-response questions placed PWU within the context of organisational climate, and described PWU as an organisational behaviour that can have positive and negative consequences for individuals and organisations. At the same time, the results supported the inclusion of a number of psychological and workplace attributes in the theoretical model (i.e. workload, certainty about PWU rules, and supervisor behaviour), and validated the statistical findings that workplace boredom and moral opinions influenced PWU. The qualitative data gained through the open-response questions further supported the notion of the presence of a push- and pull- effect, simultaneously motivating individuals to both engage in PWU and to limit it. The motivation to engage in PWU (the pushing force) was the respondents' desire to alleviate workplace boredom, to manage stress, to maintain workplace relationships, and to achieve a Work-Life balance. At the same time, organisational control strategies such as electronic monitoring, website blocking, disciplinary actions as well as the individuals' own moral disapproval of sexually explicit or illegal Internet activities, presented certain incentives to limit or refrain from PWU (the pulling force). The data analysed also pointed to

organisational climate as a possible way to achieve a successful balance of these opposing forces.

Supportive organisational climates expressing respect for their employees appeared to lessen the motivation to engage in PWU to some degree, and appeared to be able to treat reasonable levels of PWU as necessary for employee well-being. Relatively authoritarian organisational climates, on the other hand, appeared to fuel the motivating push forces, tipping the balance in favour of negative outcomes. In general, the findings of the thematic analysis leave us with the impression that, similar to the gun that in itself is not an instrument of murder, PWU in itself is neither good nor bad. Like with a gun, it depends on the context and the user's intent whether PWU is an organisational behaviour that is to be viewed positively, or one to be viewed negatively.

The prevalence of the theme organisational climate, and a strong theoretical support that exists for its importance, suggest that the level of trust and respect within an organisational climate may have influenced PWU, which in turn influenced outcomes that are generally important to the organisation as well as the individual (i.e. job satisfaction, well-being, and productivity). This study's findings contribute to the field of PWU the strong incentive for future research to gain an understanding of PWU through empirical investigations of its link with organisational climate, trust and respect.

With the findings from the thematic analysis of the qualitative data, this research project contributes to our understanding of PWU a more balanced view of the behaviour. The results encourage viewing PWU as an organisational behaviour with positive and negative aspects, rather than conceptualising it as an organisational *mis*behaviour as others have implicitly or explicitly done in the past (e.g. Li, 2002; Lim & Teo, 2005; Malachowski & Simonini, 2006; Vardi & Weitz, 2004).

The main contribution of the thematic analysis findings to this research project, however, was that the data indicated that to understand PWU one needs to view it in the context of organisational climate, which can achieve a balance between the push and pull forces resulting in benefits for the individual and the organisation.

Through presenting empirical evidence that places PWU firmly in the context of organisational climate, and that identifies psychological and workplace attributes influencing the differences between individuals' PWU, the present study contributes to our understanding of the increasingly popular and worldwide phenomenon of PWU, and has

implications for research and practice. Some of these implications will be discussed in the following chapter. This, the final chapter this dissertation, offers a synthesis of the main findings presented in the project, before briefly discussing the implications of these findings, the limitations of the current research, and making suggestions for future research on PWU.

Chapter 9

Synthesis

The findings presented in this dissertation suggest that individuals differ in their PWU based on differences in their moral approval of PWU, and how much meaning and excitement they derive from their work. The PWU levels of other work group members and what they think about PWU, or how busy the individuals themselves are, appeared to be of little influence on one's level of PWU. The degree to which a person approves of the ledger strategy of neutralisation played a role in influencing only two of the five measured PWU facets (PWU duration and information-seeking PWU). In addition to identifying moral approval and workplace boredom as influences on PWU, the data in this research did not support recent claims (e.g. Block, 2001; Wallace, 2004) that PWU is 'just another' social loafing activity. Furthermore, contrary to expectations, PWU did not emerge as an organisational behaviour employees engage in as a response to perceived unfairness at work. Overall, the findings of this study indicate that PWU is less influenced by workplace attributes than that it is an individual-centred behaviour with a number of different functions.

In this chapter the results on which the above conclusions are based are discussed, limitations of the research project are acknowledged, some potential implications of the research are pointed to, and a conceptual model of PWU that may inspire future research directions is presented.

9.1 Moral approval of PWU and workplace boredom

Although in this research most of the variance in each of the measured PWU facets was unexplained, the data showed that differences between peoples' PWU are influenced by how much individuals morally approve of PWU and how bored they feel at work. Boredom and moral norms regarding PWU are two rather opposing forces, with boredom providing a motivational push to engage in PWU, and moral norms a motivational pull to limit or refrain from it. Interpreting the data with the mental picture of a push-pull effect makes intuitive sense, and if mentioned, is probably not a new concept to individuals engaging in PWU. It is of interest to note though, that no previous studies viewed the influences on PWU under this perspective.

For the majority of individuals, being motivated at work is a feeling of achievement, responsibility, growth, advancement, enjoyment of the work itself, and earned recognition (Meyers, 1964). Employees become dissatisfied when opportunities for meaningful

achievement are eliminated and workplace boredom is experienced. Workplace boredom is the perceived absence of meaning in what one does, the lack of excitement, and/or the lack of experiencing a purpose in one's working life and its activities (Svendson, 2005). Seeing little purpose or meaning in one's working day is such an undesired sensation, that individuals are motivated to take steps alleviating it. The Internet-enabled workstation is, for many employees, the ideal place to regain some purpose and enthusiasm during their working day, and to balance boredom with more meaningful stimuli. These stimuli can, for example, be provided by email contact with others, re-enforcing that one has a purpose as friend, colleague or family member. For some individuals a degree of excitement can come from bidding on an auction side, while others satisfy their sense of purpose through having an organised home life by online shopping or banking.

For other employees, PWU may be akin to escape conditioning, a form of negative reinforcement (Skinner, 1938). Engaging in PWU may not necessarily provide meaning and excitement, but it may remove the aversive stimulus of boredom presented by one's current work task. For example, when bored at work, one may scroll through pages of the online auction site Trade Me just to look what is on offer in certain auction categories. Few will argue such casual window shopping provides meaning and excitement. What it may, however, provide is temporary escape from an even more boring work situation. Although past studies (with the exception of the recent survey by Malachowski & Simonini, 2007) did not include boredom as a factor influencing PWU, the results of this research suggest that the experience of workplace boredom plays a role in predisposing individuals to engage more, or engage less in PWU.

Just as individuals differ in their perception of workplace boredom, they also differ in their personal moral norms. While boredom appears to be a motivator pushing to engage in PWU, one's moral norms regarding PWU can have a pulling effect, at least for individuals who judge engaging in PWU to be morally wrong. The pulling effect of moral norms, however, declines as acceptance of PWU increases. The influence of moral issues on PWU, identified by the statistical analyses as well as the thematic analysis, is in support of previous research findings (e.g. Banerjee, Cronan & Jones, 1998; Leonard, Cronan & Kreie, 2004) suggesting that moral judgements and personal normative beliefs tend to lead to ethical behaviours in the IT industry, including the degree of Internet use for personal reasons.

It was expected that the strength of moral norms' motivational pull to restrict PWU is moderated by individuals' attitude towards use of the ledger strategy of neutralisation. However, only when focusing on information-seeking PWU activities was this the case. Differences in the other four measured PWU were directly influenced by individuals' moral norms regarding PWU. The relatively strong direct influence suggests that moral approval

of PWU in itself is a robust psychological attribute, and that individuals apparently prefer not to compromise their moral norms towards PWU with attempts to balance their internal ledger keeping score of their good deeds at work.

From a theoretical standpoint, this research's finding is in line with norm activation theory (NAT; Schwartz, 1977) which suggested that individuals adopt specific behaviour out of the conviction that they feel a moral obligation to do so. The present study's combination of statistical results (i.e. personal moral norms influence differences in PWU) and thematic analysis results (i.e. the moral issues of accessing sexually explicit websites and feeling guilty when engaging in PWU) suggested that individuals refrain from PWU because they feel a moral obligation to do so. The results of the statistical analyses showed that individuals who morally approved of PWU were more likely to engage in it than those who disapproved of the behaviour. With these findings, this study extends Anandarajan and Simmers' (2002) research by indicating that the moral influences on PWU rest less on the approval of PWU control strategies as being ethical, and more on individuals' moral norms regarding the morality of PWU.

At the same time, this study's findings are somewhat in contrast to those reported by Lee, Lee and Kim (2004). These authors asserted that moral obligation was not a factor constraining individuals' PWU. In their view, individuals refrain from PWU because the situation (i.e. electronic monitoring and blocked websites or high workload) does not allow it, rather than because the behaviour feels morally inappropriate. The authors' drew their conclusions based on their findings that high workloads with their time limitations and lack of private office space were the most significant deterrents of PWU, whereas moral obligations were not significantly related to their PWU measures. However, looking at comments from this research's participants, as well as the statistical results, it becomes clear that PWU is more likely influenced by moral approval than by access restrictions. Even when respondents' work situations sanctioned PWU, individuals still tended to consider the moral appropriateness of their PWU, a small number even reporting to feel guilty when doing so. The difference in results between this study and the research reported by Lee, Lee and Kim (2004) can potentially lie in the way the moral aspect was measured. In the current research, moral norms regarding PWU were examined in general through questions suggested by the Ajzen (2002) when examining moral norms. Furthermore, the link between moral considerations and PWU was also established through open responses by research participants. On the other hand, Lee, Lee and Kim (2004) reported to have created one measure of moral obligation by adapting parts of two previously reported measures Banerjee, Cronan & Jones, 1998; Tessler & Schwartz, 1972) without going into detail about the nature of the adaptations made. Banerjee, Cronan and Jones (1998) however, reported the development and use of four measures related to

ethics and moral considerations, intentions, moral judgements as well as personal normative beliefs when explaining misuse of computer information systems in general. Therefore, without more detailed knowledge of the actual measure used by Lee, Lee and Kim (2004) any thoughts about the apparently contradictory results of this research and that by Lee, Lee and Kim would be in the realm of speculation.

It is of interest to notice that in the written comments, moral approval of PWU focused to a lesser extent on the ethical correctness of the behaviour as such than on the moral appropriateness of the actual online activities. Viewed in combination with the statistical analysis results, the respondents' comments point to the possibility that moral approval of PWU may need to be understood, at least in part, as the degree to which a person approves of accessing illegal and/or sexually explicit websites at work. With these findings this study extends existing research and suggests that to understand differences in individuals' PWU it may be advisable not only to examine the degree to which individuals see PWU control as morally and ethically acceptable, but also to examine their moral approval of PWU and specific PWU activities.

9.2 Work group norms regarding PWU

Contrary to the expectations based on social comparison theory (Festinger, 1954), social learning theory (Bandura, 1977) and social information processing theory (Salancik & Pfeffer, 1978) individuals apparently do not vary in their PWU based on differences in their work groups' PWU norms. Said differently, whether other team members approve or disapprove of PWU does not generally influence the level of PWU an individual engages in, with one exception: individuals who feel that their work group approves of PWU tend to engage more in information-seeking activities than those whose group disapproves. Information-seeking activities include reading the news and weather, viewing entertainment pages, and taking care of banking and shopping. Compared to companionship-related PWU activities (e.g. emailing), information-seeking PWU is an online activity, which is probably the hardest to 'hide' from team members. A passer-by may not be able to distinguish whether one's emails are personal or work-related. Yet it may be harder to explain reading the sports pages of a newspaper as work-related (with the possible exception of some jobs, where reading the news, sports and entertainment is part of the daily tasks). It is, therefore, plausible that because other work group members can easier identify and disapprove of information-seeking PWU activities, in an effort to avoid confrontation individuals are influenced by the norms of their social comparison group when engaging in these activities.

However, the influence of work group norms on information-seeking PWU activities was not, as hypothesised, moderated by the degree to which respondents were certain about PWU rules in their organisations. Individuals whose work group norms approved of PWU tended to engage more in information-seeking PWU activities than those with disapproving work groups, regardless of how sure they were about their organisations' PWU expectations. One reason for this finding may be that these expectations were perceived as too abstract and too removed from one's daily work reality to trigger attempts to balance potentially conflicting expectations. This argument appears to be somewhat supported by those individuals who reported to know about their organisations' electronic monitoring procedures, were aware of negative disciplinary consequences, and subsequently adjusted their own online behaviours. For these individuals their organisational expectations were not abstract but concrete reality of their working lives. The presence or absence of competing PWU expectations could, theoretically, be associated with the wider organisational context, specifically with the organisational climate. An organisational climate of mutual trust and respect will in most cases foster corresponding expectations between work group members and management. With regard to the influence work group norms and certainty about organisational PWU rules have on individuals' PWU, it appears that meeting the PWU expectations of others is seen as desirable only as far as these 'others' are able to monitor one's PWU and influence its consequences.

9.3 Workload and PWU

Based on previously published research it was expected that workload plays a significant role in predisposing people to engage more, or less, in PWU. In particular, the expectation was that high workloads are a barrier to PWU, and that the relationship would be moderated by a number of psychological and workplace attributes which fall broadly under the category of 'response to perceived fairness and attitude towards work effort'. Of interest, however, was finding that workload did not play a significant role in influencing PWU. The initially most unexpected result concerning workload was the lack of influence it had on PWU duration. Intuitively and theoretically it was to be expected that, regardless of any moderating effects, individuals who are busy at work engage in PWU for shorter periods of time than those who are less busy. However, in the hierarchical moderated regression analysis, the variances explained by workload and the workload-related interactions did not even approach statistical significance.

One possible explanation for the lack of influence workload appeared to have on PWU may be that differences between individuals' PWU are less influenced by the presence of absence of opportunity than originally thought. Even in the participant comments an absence of remarks saying that one is limited in PWU due to high workload is

noticeable. Together these findings suggest that maybe PWU is less an issue of opportunity, and more one of functionality. When faced with high workloads one may not have the obvious opportunity to engage in PWU, but one may want to use frequent PWU to take breaks from work to counter stress, anxiety or lack of inspiration. Under these conditions individuals would engage in PWU out of a perceived need and its being to satisfy this specific need. In contrast, if one engages in PWU due to the opportunity given by low workload, there may be no clear need to do so – except the potential aspects of workplace boredom which were discussed earlier in this chapter. The lack of evidence for workload's influence on PWU implies that people are less likely to engage in it 'just because it is there and they can' and more likely because they perceive that PWU serves a specific purpose for them.

The only PWU facet where workload differentiated between individuals' PWU was that of habitual PWU. But even here the results of the statistical analyses were somewhat unclear. On the one hand, they showed that the Workload*Giver interaction explained a significant proportion of the variance in habitual PWU. On the other hand, the simple slope statistics showed no significant difference in habitual PWU between high and low givers in situations of either high or low workloads. The lack of statistical significance in the Modgraph-associated simple slope calculations may have been due to small sample size and the listwise deletion procedure, as discussed in chapter 7. Due to the inconsistent findings, the data could not be interpreted further than saying that the relationship between workload and PWU was moderated by the level of peoples' giver attitude towards work effort.

The finding that workload apparently asserts its influence only on habitual PWU can possibly be explained by the fact that it is a relatively thoughtless behaviour. Once developed, habitual PWU is engaged in on a regular basis without much of conscious decision making. Individuals may have formed, for example, the habit of reading the news first thing after logging in at their workstation. How often they do so, however, may depend on the conscious assessment of how much work they have to get through during the day. If the workload is light, people might then consciously give themselves permission to indulge in their habit and continue reading a bit longer, check their emails more frequently, or check the sporting results more often than they would normally do – regardless of their general attitude towards work. If the workload is heavy, people might make the conscious decision to engage less in their habitual PWU. Overall, although not predicted, the apparent absence of workload from influencing PWU can be theoretically explained by looking at the different purposes of PWU and the way it is morally accepted.

9.4 Fairness and PWU

In the theoretical model of influences on PWU (Figure 4.1) it was hypothesised that differences in PWU would be due to twelve interactions between fourteen relatively stable attributes within the individual and the working environment. The model testing results, however, suggested that this was not necessarily the case. Some of the hypothesised moderator variables emerged as direct influences on different PWU facets. Status and tenure, for example, directly influenced PWU frequency; tenure influenced habitual PWU and companionship-related PWU; different levels of approval of the ledger strategy were associated with differences in PWU duration and information-seeking PWU. At the same time other hypothesised influences (i.e. trait reactance, supervisor treatment and attitude towards PWU control) did not contribute significant levels of explanation to any of the five measured PWU facets' variances, neither directly nor as part of the hypothesised interactions. The apparent absence of some attributes as influences on PWU is as interesting as their hypothesised presence would have been.

Trait reactance, supervisor treatment and attitude towards PWU control were hypothesised to moderate the influence of workload on PWU. As discussed, individuals did not differ in PWU due to differences in their workload. Irrespective of the workload–PWU relationship's nature, because the hypothesised moderator variables were relatively stable attributes, it was theoretically possible that they emerged as direct influences on some or all PWU facets. However, this was not the case in this study. One reason for this finding may lie in the theoretical basis for the choice of the three variables as influences on PWU.

The common theoretical threads in trait reactance, supervisor treatment and attitude towards PWU control are those of social exchange and the addressing of perceived unfairness. Theoretically, unfairness could have been perceived after experiencing removal of the freedom to engage in PWU, as a result of supervisor treatment, or when examining organisational PWU procedures. The finding that none of the theorised relationships between the fairness-based attributes and PWU was significant, questions the Theory X-based idea that individuals will engage in PWU if they dislike their supervisor and organisation. From the study's data it appears that PWU in general has less the purpose of addressing perceived organisational unfairness than was originally hypothesised. Furthermore, the lack of influence on PWU by psychological and workplace attributes drawn from the theoretical frameworks of organisational fairness, social exchange, and leadership suggests that the level of PWU is less influenced by external, socially oriented attributes than anticipated. This interpretation is in line with those presented earlier suggesting that PWU is less influenced by work group norms and organisational PWU rules than by personal morals and experiences of meaninglessness at work.

Although in general PWU does not appear to be a response to perceived unfairness, two of the measured PWU facets showed a somewhat different pattern of influences. To a relatively small, but statistically significant degree, peoples' PWU duration and information-seeking PWU activities appear to be influenced by their perception of entitlement and an effort to retain a fair and balanced give and take relationship with their organisation. In this study, individuals with highly developed Taker attitudes were more likely to engage in long PWU sessions than those with weaker developed taker attitudes. Similarly, individuals who accepted the ledger strategy of neutralisation to a high degree were predisposed to engage longer in PWU than those who disapproved of it. The taker attitude and acceptance of the ledger strategy can, in principle, send the internal message of "I deserve it" in response to workplace situations. This internal message, in turn, suggests that the function of PWU duration is most likely one of restoring and maintaining balanced levels of fairness. The perception of balance, however, is subjective, and for high takers a fair working relationship may mean they can get as much out of it as possible – potentially including long sessions of PWU. Similarly, for individuals using the ledger strategy, 'fair balance' may mean to ensure that their internal ledger balance of 'good' work behaviours is in their favour before engaging in PWU. In either case, the function of PWU duration is most likely to respond to perceived unfairness.

The results and arguments presented in this study provided partial support to Lim's (2002) research and extended her findings. The difference between Lim's study and this research project is that Lim identified the ledger strategy as mediator between perceptions of organisational fairness and engagement in cyberloafing activities (see her model in Figure A2.4, in Appendix A). According to the previously presented results of this study, approval of the ledger strategy is a direct influence on PWU. The differences in these findings can be due to differences in defining and measuring PWU as well as the fact that in this research the acceptance of the ledger strategy–PWU relationship was not modelled as being mediated attributes based on organisational fairness perceptions (i.e. supervisor treatment, PWU management, reactance). This project expanded on Lim's (2002) findings by showing that acceptance of the ledger strategy in principle has a direct influence on only one facet of PWU, that of how long one engages in it. The influence that acceptance of the ledger strategy has on the frequency of information-seeking PWU activities was, as hypothesised, through moderating the relationship between moral norms and information-seeking PWU activities. Use of the ledger strategy, however, played no part in influencing differences in individuals' PWU frequencies, habitual PWU or companionship-related PWU activities. To clarify the role these attributes play in influencing PWU duration levels, future research could potentially design a study using structural equation modelling (SEM) to test competing models of influences on PWU. Future research projects intending to utilise SEM

to test their complex causal models, however, need to be aware that the technique requires relatively large sample sizes, which may become an issue when relying on voluntary and unpaid research participation.

Combining the findings of this research study with those of Lim (2002), it becomes evident that PWU is only partially an organisational behaviour in response to perceptions of organisational fairness and equity. Under the theoretical frameworks of organisational fairness and equity the driving force to engage in PWU would be an idea of entitlement to do so. Perceptions of entitlement, however, can to some extent explain differences only in individuals' PWU duration, and information-seeking PWU activities. The idea of entitlement is less likely to explain differences in overall PWU frequencies, habitual PWU, or companionship-related PWU activities, supporting the above mentioned interpretation that PWU has a number of different purposes besides one of 'taking' from the employing organisation.

9.5 PWU and social loafing

Another 'taking-oriented' purpose PWU is frequently said to have is one of social loafing. Lim (2002) defined PWU as 'cyberloafing' and described it as a behaviour that reminds the reader of social loafing behaviours such as taking long lunch breaks, making personal phone calls and lingering around the water cooler. A number of other authors have also voiced the opinion that PWU is "nothing new under the sun" (Block, 2001, p. 225), and that researching the behaviour as different from similar social loafing activities is due more to popular hype than necessity (Wallace, 2004). However, none of these authors reported research that empirically established a link between PWU and social loafing, or known social loafing determinants. This previously unchallenged assumed association between PWU and social loafing was investigated as part of this study's theoretical model (see Figure 4.1). It was expected that if PWU is a social loafing activity as the above authors stated and implied, the association would show in the statistical analyses as well as in the respondents' comments.

In the absence of a published self-report measure assessing the social loafing characteristics of work situations, a social loafing index incorporating the known determinants for social loafing (see chapter 5) was developed specifically for this research project. It was interesting to see that the statistical results in this research showed only very small correlations between that index and PWU. Furthermore, social loafing was not a significant influence on PWU, either directly or through its hypothesised moderator function. Moreover, only a small number of respondents described in their open-response comments situations where the removal of social loafing risk factors such as secluded workstations

was experienced to reduce excessive levels of PWU. These results may be due partially to the self-report measure used, but they may also be an indication that PWU is not in the same category of social loafing behaviours of long lunches and private phone conversations.

The interpretation that PWU may not be a social loafing behaviour also fits in with the already discussed characteristic of PWU to be more individual than socially focused. Similar to other attributes in the model (Figure 4.1) found to be insignificant influences on PWU, social loafing is focused on interactions between individuals and their social environments. Social loafing is about avoiding being seen not pulling one's full weight at work and being held accountable for that. However, if individuals place little value on their work groups' PWU norms, it is also likely that they are not unduly concerned about whether their own PWU is visible to others or not. Furthermore, if workload does not have the originally hypothesised linear relationship with PWU, it is unlikely that PWU is associated with trying to reduce one's workload on team tasks. The absence of significant influences on PWU by these socially-focused attributes strongly supports the interpretation that PWU is not a social loafing activity. Neither the work group nor the workload or typical PWU risk situations appear to have significant influences on PWU. Overall, it appears that there are no social risks involved in PWU. There are, however, individual risks associated with excessive levels of PWU, as the research participants' comments clearly indicated. Therefore, another way of looking at PWU in the future may be to conceptualise it as 'individual loafing' rather than as 'social loafing'.

A better understanding of the assumed social loafing character of PWU may aid a more appropriate conceptualisation of PWU as organisational behaviour. If PWU would be an expression of social loafing, viewing and investigating it as an organisational misbehaviour may be correct. If, however, PWU is not social loafing, it may be advisable to adopt a more balanced view of the behaviour. This view would need to include the context in which PWU takes place, as well as acknowledge the different functions PWU can have for individuals in different work situations and with different psychological attributes.

The results of this research project suggest that when asking what predisposes individuals to engage more, or engage less, in PWU, the answer is that boredom and moral norms about PWU are the strongest influences regardless of the facet measured.
At the same time, however, it is necessary to point out that the results of the moderated hierarchical regression analyses showed that the effect sizes found were not very large. The main and interaction effects together explained only 28% (habitual PWU, PWU duration), 27% (PWU frequency), 26% (information-seeking PWU) and 21% (companionship-related PWU) of the PWU facets' variances. Additionally, of the 12 expected interaction effects, only five (42%) were significant, and one of those interaction

results was not conclusive. This suggests that in addition to the relatively large number of hypothesised influences on PWU differences, other factors that were not considered in the theoretical arguments also played a role.

These factors may include those that were mentioned by the research participants in their open-response questions. It is, for example, possible that the organisational climate, expressed through different PWU control strategies and task designs, explains a relatively large proportion of the variance in the PWU facets. Organisational climate and organisational culture permeate nearly all aspects of working life. Organisational culture and its components of trust and respect were not considered when developing the theoretical model (Figure 4.1) for the present research project. Based on the qualitative data in the study, it is possible that organisational culture may have a significant influence on why individuals differ in their PWU.

9.6 Organisational culture and PWU

Besides statistically testing the theoretical model of influences on PWU, in this research project qualitative data was used to explore the context in which the research participants experienced and viewed PWU, PWU control strategies, and the consequences of PWU. The outcome of the thematic analysis of the responses validated some of the model testing results (i.e. boredom, moral issues). At the same time, the qualitative data supported the inclusion of some variables in the model that did not emerge as statistically significant influences on PWU. In particular, supervisor actions, team member expectations and actions, social loafing risks, and certainty about PWU rules were mentioned by a number of participants as influencing their level of PWU. The thematic analysis results also added explanations to some of the statistical findings (i.e. moral approval of certain online activities). Most importantly, however, the results of the thematic analysis gave divergent information to the theoretically reasoned and statistically tested arguments. The results strongly suggested that if one aims to understand the influences on PWU, one needs to look at the organisational culture and climate in which the behaviour occurs, and to consider the consequences of PWU for employees and their organisations.

Based on the statistical analysis results, PWU appears to be an individual-focused behaviour rather than a socially influenced one. At the same time, the thematic analysis results indicated that the context in which PWU happens is of some importance. Organisational culture and/or the less enduring organisational climate provide the most appropriate context for PWU as an organisational behaviour. According to this study's data, organisational climate may influence the balance of the motivational push and pull forces

that affect individuals' PWU. Supportive organisational climates expressing respect for their employees appeared to be able to treat reasonable levels of PWU as acceptable for employee well-being. In such organisational climates the respondents described generally positive outcomes of PWU and PWU controls. These positive outcomes included that the respondents reportedly reciprocated with limited PWU, and that they expressed job satisfaction and organisational commitment.

On the other hand, more authoritarian organisational climates appeared to fuel the motivating forces pushing to engage in PWU, tipping the balance in favour of negative outcomes. In these climates, perceived to lack trust and respect, respondents described mainly negative consequences of PWU such as loss of job satisfaction, decreased performance levels, and loss of organisational commitment. In general, the findings of the thematic analysis leave us with the impression that, similar to the gun that in itself is not an instrument of murder, PWU in itself is neither 'good' nor 'bad'. As with the said gun, it depends on the context and the user's intent whether PWU is an organisational behaviour that is to be viewed positively, or one to be viewed negatively.

In view of the strong presence of organisational climate as a theme in the respondents' comments, it was surprising that in the past no published, empirical study investigating influences on or consequences of PWU explicitly included organisational culture or climate, trust, or respect in its investigations. When discussing the managerial implications of her research findings, Lim (2002) mentioned a link between neutralisation strategies and organisational culture. She suggested that managers wanting to reduce instances of cyberloafing activities are best advised to express organisational expectations of PWU through clear and explicit guidelines, thus creating organisational cultures of clarity. The findings of this research project give support to Lim's (2002) interpretations by indicating that organisational culture may be expressed through PWU control mechanisms, of which clear guidelines are one aspect. At the same time, my research extends Lim's (2002) work by identifying that the components of respect and trust in an organisational culture determine not only the nature of PWU control strategies, but also indirectly the workplace attributes that influence PWU and its consequences. The findings presented in this document suggest that organisational culture and organisational climate provide the context within which PWU and its five facets need to be investigated, analysed and interpreted.

9.7 Limitations of this study

Like most research, this study also has its limitations, and five such limitations need to be highlighted here. First of all, due to the choice of data gathering, the PWU measures

contain information about self-reported frequencies, activities and durations, rather than actual instances of PWU. The frequency scales of the PWU frequency and habitual PWU spanned from ‘never’ to ‘over 30 times’, which in hindsight may have suggested to the participants that ‘over 30 times’ in two weeks (or in an average week) is a very high frequency. Although a recent study (Stanton, 2006) indicated that in general research participants are fairly accurate in their self-reporting of PWU, it is likely that respondents under-reported their PWU frequencies and duration in an effort to avoid portraying themselves in a negative light – after all, PWU judged to be excessive is an undesired behaviour. Subsequently, when reporting their own PWU, respondents may have tended to chose a response option that was placed somewhat below the ‘over 30 times’ mark.

The opportunity for self-report bias is, however, not limited to the measures of PWU. Due to the nature of the questionnaire (self-report) and the topics explored, the possibility exists that the responses to all questions are biased to some degree. Even though the questionnaire contained a measure of social desirability, in hindsight this measure was not the best choice, not being able to detect the presence, size of or reasons for potential socially desirable responding. Although the self-report nature of the questionnaire may have influenced research participant responses, self-report biases are more likely to change the level of variables (e.g. over- or under-reporting) than the relationships between the variables – which were the focus in this research project**.** It is therefore acknowledged that self-report biases may have operated for all or some of the respondents, but I suggest that these biases did not, however, distort the found relationships between the variables investigated.

A limitation closely related to that of self-report is that of self-selection. Although care was taken to invite a large number of individuals from a wide variety of occupations, the final group of participants reported to a relatively high degree to be employed by universities in some capacity (35.7% of respondents). The reasons for this self-selection can be numerous, reaching from lack of interest in the topic, to fear of reprisals, and lack of time to complete the survey. Almost all surveys eliciting responses through the pass-along or snowball method are likely to suffer from similar effects. However, when comparing the demographic profile of this study’s participants with those of other PWU-related research, the diversity of respondents and the targeted absence of student participants, are a distinct advantage when drawing conclusions from the presented findings to the wider population engaged in PWU. Although the proportion of university employees should not be ignored, it is also possible to associate university employees in general with other white-collar professionals working in professional services industries. Both groups tend to work relatively autonomous on their respective tasks, yet are bound to operate within the financial and philosophical limitations of their employing organisation. In summary, it is

advisable to not ignore the fact that a large proportion of study participants probably share common characteristics. However, it is also not warranted to let the characteristics of this group of participants limit significantly the conclusions that can be drawn from the presented findings.

Thirdly, it is not uncommon to find that in lengthy questionnaires some individuals, completing the questionnaire in one sitting, experience fatigue, lack of concentration or lack of interest as they progress through the survey. In such cases, random answering reduces the reliability of the measures assessed towards the end of the survey. The last measure in the survey (before the demographics questions) presented the participants with 16 questions examining their trait reactance. Although trait reactance did not explain significant parts of the PWU variance, the measure had satisfactory psychometric properties (described in chapter 5). The questions immediately preceding the trait reactance measure examined the participants' degrees of fiver and taker attitudes. Again these measures had acceptable levels of reliability (as described in chapter 5), and in turn were significant in explaining the variances in some PWU facets, either directly or as moderators. Although the possibility of random answering cannot be completely discounted, it is reasonable to assume that, on average, the impact of fatigue effects on the reliability of the last measures of the questionnaire was light.

Fourthly, the possibility cannot be ignored that the cross-sectional design of the study impacted on the causal interpretations of the relationships found between the independent and criterion variables. It is, for example, possible that once respondents had completed the PWU measures in the questionnaire, they made an effort to respond to the remaining questions in such a way that their responses were consistent with and in justification of the reported PWU estimates. In that case, the causal pathway would be opposite to the one hypothesised in this study. This is, however, not a phenomenon unique to this research, reverse causation being a potential problem in all causal interpretations based on survey data, frequently leading to avoiding the use of terms such as 'influencing' or 'predicting'. Besides the theoretical unlikelihood of reversed causal links between the attributes measured, the length of the questionnaire used in this study may, in this case, have worked in its favour. It would have taken considerable time, focus and attention to consistently ensure that the 116 questions following the PWU measures were kept in line with the responses to the first fourteen questions. The average research participant, however, is unlikely to have spent the energy to artificially do so. It is, nevertheless, advisable to keep the possibility of that effect in mind.

A second, not to be ignored potential critique point when using cross-sectional designs is that of stability of the attributes measured. In this study arguments were

presented that the attributes under investigation are relatively stable attributes of individuals and their workplace environments. These arguments focused on the general stability of the attributes included in the theoretical model. Although changes in all investigated variables are theoretically possible, and in reality not unlikely, they are seen as relatively stable enough to allow freezing them at the point of the data collection, to investigate this snapshot, and to draw inferences from the resulting findings.

Finally, the relatively small impact the interactions had on explaining differences between individuals' PWU frequency, habitual PWU, and information-seeking PWU activities suggests that their influence is of some importance but should not be over-interpreted. On the one hand, the overall lack of influence the hypothesised interactions appear to have on PWU may point to faults in theoretical reasoning, measurement issues, or inadequate sample size. On the other hand, the project was explorative in nature and the fact that a relatively large number of hypothesised interactions were not statistically significant can be seen as important to the field of PWU research as the significant findings. Instead of highlighting aspects that were 'wrong' in the research, the patterns of the insignificant findings may actually help in identifying the character and functionality of PWU to a degree that research based on a single, specific theoretical framework may fail to do.

9.8 Implications

The findings described in this study can have implications for individuals' quality of working life and organisational effectiveness. Excessive PWU can reduce organisational effectiveness through reduced productivity and increased risk exposure of organisational computer servers. Currently, organisations are encouraged to protect themselves from these negative impacts through electronic monitoring and strict enforcement of PWU control policies and procedures (e.g. KensingtonSwan, 2003). These measures, in turn, tend to have negative consequences for employees engaging in PWU through the associated disciplinary actions. From a managerial point of view, disciplinary actions may result in the desired reduction in PWU, an outcome seen as positive by many organisations.

The earlier presented findings, however, question the idea that strict PWU control measures necessarily lead to positive outcomes for organisations and individuals. The results of this study point to the possibility that PWU control strategies can, if they are perceived to be over-zealous, have unintended negative consequences for the organisation.

For example, strict electronic monitoring programs limiting access to large numbers of websites, can lead to limiting the resources necessary for a number of employees to

adequately complete their work tasks. For some employees this may result in less than optimal performance, while others may feel obligated to access the relevant websites from home. A number of employees, in turn, may attempt to gain exceptional 'privileges' allowing them to access blocked websites, only to be faced with procedural 'red tape' and potential mistrust by management. The extra efforts required from employees in such strict website control situations can have a potentially negative impact on job satisfaction and organisational commitment of the employees. Employee job satisfaction has repeatedly been associated with emotional wellbeing (Wiener, Vardi & Muczyk, 1981), increases in job performance (Iaffaldano & Muchinsky, 1985), and decreases in absenteeism (Blau, 1985) and employee turn-over (Mobley, 1982). The implications for organisations are thus that management may want to consider carefully how, with regard to PWU control, a balance can be achieved between organisational and individual interests. The comments made by the participants in this study indicated that the creation of an organisational climate of mutual trust and respect may be a good starting point.

Creation of an organisational climate of trust and respect would most likely include concern for employees' quality of working life. An indicator that something may be amiss with employee wellbeing can be the perceptions of relatively high levels of workplace boredom. While it may be inevitable that employees have short bouts of workplace boredom at some time, if their general perception is that their work is boring most of the time, their wellbeing is jeopardised. The research findings presented in this document suggest that to counter the undesired feeling of being bored at work, individuals who feel their work lacks meaning will engage in PWU to higher levels than those who perceive their work as meaningful. This motivational push to engage in PWU provided by experienced boredom may be balanced by a motivational pull to refrain from doing so by individuals' moral approval of PWU. While influencing their employees' moral norms is a possibility, addressing of workplace boredom would have potentially wider-ranging benefits. Reduction in workplace boredom not only reduces excessive PWU levels and the negative consequences these levels can have for organisations and individuals, but also promotes improvement in the quality of employees' working lives.

The best strategy for organisations to reduce PWU levels may not be through the introduction of yet more sophisticated PWU control mechanisms, but through addressing more fundamental issues of the working environment. The most effective approach would be one that examines the degree of meaning a job has to the job incumbent. For example, to reduce experiences of workplace boredom, management may want to look at investigating which job characteristics create the perception of boredom and address those.

Addressing the issue of workplace boredom may then involve redesigning job tasks so they carry the potential for meaning to those who engage in them (i.e. job enrichment).

Managers may also want to evaluate the person-job fit. Such evaluations may result in assisting individuals to move to better fitting jobs or positions, or in changing the person-requirements and subsequently adjusting the selection criteria.

At the same time, situational factors may need to be attended to as well. The best designed jobs and most enriched tasks will not be sufficient to increase employee wellbeing on their own. Jobs and tasks need to be embedded in work situations that foster encouragement, appreciation, acknowledgement, trust and respect. Such situations can be established on the one hand through appropriate policies, procedures and communications. On the other hand, it may also require careful selection and training of team leaders, supervisors and managers to ensure the consistency and continuity of the desired organisational climate.

Overall, the findings of this study imply that PWU is not necessarily 'just another' organisational misbehaviour by disgruntled individual employees grabbing every opportunity given to indulge in excessive levels of online activities for personal interest. The results of this study suggest the possibility that differences between individuals' PWU are determined by the functions PWU can have for different people. For many employees PWU apparently serves as boredom relief, and different activities and levels of PWU durations may also have different specific functions. These functions are most likely peoples' responses to their work characteristics, and the level of these responses depends on the individual's moral norms regarding PWU. The practical implication of this research, therefore, is that managerial attention to the work characteristics (i.e. job design and organisational climate), rather than the introduction of sophisticated electronic monitoring systems, may be the most effective way to keep PWU within an acceptable level and improve employee wellbeing.

9.9 A contextual model of PWU

When bringing together the results of this research project, a picture emerged that went beyond identifying psychological and workplace attributes that influence differences in individuals' PWU. This picture suggested that to better understand PWU and why individuals differ in their PWU, researchers and practitioners are advised to look at the behaviour in its context of organisational culture. In doing so, they may need to examine how the culture is manifested, and how those manifestations effect workplace attributes and trigger different levels of psychological attributes that influence PWU. It may also be advisable to take a look at the consequences of PWU within a given organisational culture.

Inspired by the findings of this research project, and in combination with those reported by previous studies (discussed in chapter 2), Figure 9.1 captures these ideas visually in a contextual model of PWU.

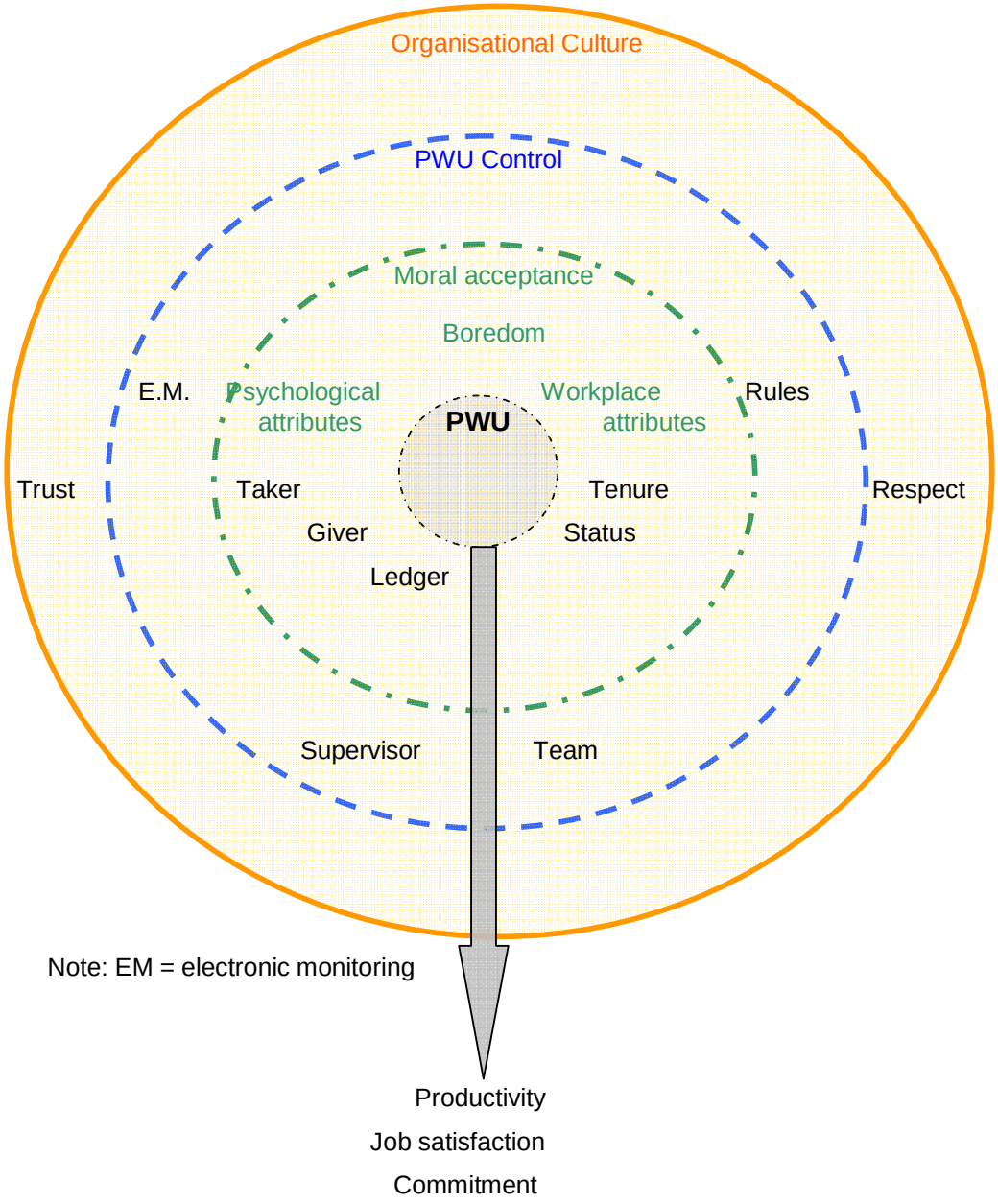


Figure 9.1: A contextual model of PWU

This contextual model (Figure 9.1) links together different aspects of PWU that emerged during the process of this research project, and aims to present a holistic view of the behaviour that may possibly serve as a conceptual starting point for future PWU research. The model may also assist practitioners in understanding how PWU can be used as a diagnostic tool for a variety of organisational 'ailments'.

At the centre of the model is a grey circle representing the behaviour under investigation: PWU. To understand PWU, the behaviour is best considered it in its wider context of organisational culture, shown by the large orange circle. In the participants' comments the organisational climate components of respect and trust were those that emerged as important to gain an understanding of why individuals differ in PWU. Although it is not always clear whether trust and respect are parts of organisational culture or climate, to emphasise their importance, in the model presented here (Figure 9.1) they are depicted as parts of the more enduring concept of culture. Trust and respect are, therefore, shown in the outer circle symbolising organisational culture. The characteristic of organisational culture to permeate all aspects of organisational life is symbolised by the lightly orange tinted surface of the model, and the dotted lines of the blue, green and grey inner circles.

Enclosed in the orange circle is a blue circle, representing the idea that organisational cultures are expressed through PWU control strategies. Individuals tend to experience organisational culture, with regard to PWU, through their organisations' PWU controls (i.e. electronic monitoring), their supervisors' behaviours and team member expectations. Organisations high in trust and respect can generally be expected to have relatively self-managing PWU control strategies. Organisations with a culture akin to McGregor's (1960) Theory X (i.e. employees cannot be trusted), on the other hand, are most likely ones that adopt very strict and relatively limiting PWU control strategies.

The experiences of PWU control, however, are only part of how organisational culture manifests itself. Organisational culture can, for example, manifest itself in the psychological and workplace attributes that influence differences in the facets of PWU (shown within the green circle). For example, the way work tasks are structured and assigned can be an expression of organisational culture. Work design can be done with the aim of limiting or fostering workplace boredom and thus influence the individuals' sense of meaning of work. For example, organisational cultures embracing the notion of respect are more likely to ensure that individuals are matched with jobs that have some meaning for them, and are subsequently perceived as less boring, than those with a culture characterised by a lack of respect for its individual employees.

Organisational culture also impacts on workplace attributes such as status and tenure through its general policies and expectations as well as through its PWU controls – thus placing the green circle of attributes influencing PWU inside the blue circle of PWU control. Organisations emphasising trust and respect, for example, may have strict PWU controls for new employees, and relax those once the employee has been socialised into the organisation and a level of mutual trust and respect has been established. The same organisations may also decide to allow all staff members access to the Internet, regardless of their position and associated status. In response, PWU levels in organisations with such workplace attributes are more likely to be acceptable than in organisations with differing working situations.

Organisational culture is not only reflected in workplace attributes, but also influences how the psychological attributes of employees are expressed. Employees can, for example, experience organisational culture supporting their moral norms through PWU control strategies (i.e. banning access to sexually explicit websites), which may in turn result in acceptance of organisational PWU control strategies. Similarly, perceptions of respect and trust can affect the expression of giver and taker attitudes and use of the ledger neutralisation strategy (symbolically placed within the green circle). For example, organisations high in respect and trust, and with self-managing PWU control strategies, are most likely perceived by individuals to provide a fair working environment. In such environments, even employees with relatively high taker attitudes and use of the ledger strategy will have relatively little need to address their equity balance through PWU. The model thus indicates that in a holistic approach to PWU, organisational climate and culture, through their manifestations in procedures and behaviours, can impact on the psychological and workplace attributes found to influence individual differences in PWU.

The context of PWU not only includes antecedent factors of PWU, but also the consequences of the behaviour. For example, differences in organisational culture and PWU control structures may not only effect the psychological and workplace attributes that influence PWU, but also lead to differences in the consequences of PWU: employee productivity, job satisfaction and organisational commitment (placed at the end of the long grey arrow from PWU to these consequences). Applying the proposed contextual model of PWU to research and practice then suggests that differences in the levels of these consequences may lead to investigating not only differences in PWU levels, but also the organisational culture and its different manifestations.

With the contextual model of PWU (Figure 9.1) I am building on and extending the existing literature on PWU by placing PWU within the wider context of organisational culture. Conceptualised in this way, PWU is one of many organisational behaviours that are affected by characteristics of the individual and the workplace. With its findings and the

contextual model of PWU this research project contributes to the emerging field of PWU research a number of theoretical arguments and empirical evidence indicating that whether PWU is an organisational misbehaviour (e.g. Lim, 2002; Lim & Teo, 2005; Vardi & Weitz, 2002, 2004) with negative consequences, or whether it leads to outcomes that are positive for the individual and the organisation (e.g. Anandarajan & Simmers, 2004; Mahatanankoon & Igbaria, 2002) depends on the function of PWU, and on the context in which PWU takes place.

9.10 Future research directions

The findings and limitations presented in this study can serve as starting points for future research aiming to understand why individuals differ in their PWU. Future research directions could (a) have a combination of quantitative and qualitative research methods, (b) follow up on the moral and ethical issues of PWU, (c) further explore boredom in relationship to PWU, (d) clarify the nature of the workload–PWU relationship, and (e) further explore the role PWU can play in stress management and the maintenance of a work-life balance.

9.10.1 Combining quantitative and qualitative methods

In this research the original theoretical model was developed based on statistical results presented in previous studies and a number of theoretical arguments. The contextual model, in turn, was based on the results of statistical analyses of questionnaire responses and thematic analysis of comments given to narrowly defined open-response survey questions. Although these approaches yielded new and interesting information, future research may want to consider including different qualitative methods, such as focus groups or one-on-one interviews. These methods would allow the development of more specific measures, and further in-depth explorations of statistical analyses results.

Many measures used in this research, as well as in the reviewed PWU studies, were adapted from other fields and had been developed for other purposes. Frequently the adaptations involved the changing of words to make the measure appear relevant to PWU (e.g. the social desirability measure in the present study, or the ethical norms measure used by Anandarajan and Simmers, 2002). However, the adaptations possibly resulted in loss of content validity and in tools that did not precisely measure what their original intent were or their ‘label’ said. Future research may, therefore, want to use focus groups or

interviews to identify more accurately the details of the issues at hand, before deciding on the most appropriate variable name. Being clearer and more precise in the nature of the variables of interest may then lead to either more appropriate measurement choices or the development of new measures.

As is not uncommon in a relatively new field of study, the results of future PWU research may not support the carefully developed hypotheses of research projects. Although this can possibly be explained with alternative hypotheses or the methodology used, it is feasible to gain a wider understanding of such findings through listening to the people who engage in PWU and who responded to the initial survey. Acknowledging constraints placed on researchers by time, budget and participant accessibility, interviews and focus groups would be ideal alternatives to the addition of open-response survey questions. These qualitative data collection techniques allow the researcher to probe and gain an even wider understanding of the phenomenon in question. Two future research directions that would benefit from such a combination of quantitative and qualitative data are further investigations into the two main influences on PWU identified by this study's model testing: moral approval of PWU and workplace boredom.

9.10.2 The moral issue

Including the present research, three studies have investigated moral issues influencing individuals' PWU. From the results of these studies we learned that the degree to which one morally approves of organisational PWU control, measures impacts on PWU (Anandarajan & Simmers, 2002). We also learned that, according this study's results, the degree to which individuals approve of PWU as organisational behaviour, and specifically of certain online activities, influences the degree to which they engage in PWU. Additionally, it was suggested that these moral influences may take a back seat to opportunity (Lee, Lee & Kim, 2004). Although each of the different researchers has identified PWU as a morally debatable behaviour, their approaches to defining the moral question and measuring it were very different. These differences resulted in a relatively fragmented picture of the moral issues impacting on PWU which could be completed by future research.

Such future research could, for example by using focus groups and interviews as well as questionnaire data, examine whether differences in moral norms regarding PWU are based on differences in religious or spiritual values. It would also be of interest to investigate whether work group norms play a part in development and/or expression of individuals' moral approval of PWU. Future research could also investigate whether personal moral norms regarding PWU are fixed or if they change with the increasing

blurring of personal and work lives. Furthermore, a small number of respondents in this research indicated that they felt guilty engaging in PWU. It would be interesting to follow this lead and investigate further the role guilt may (or may not) play when engaging in PWU in electronically monitored working environments.

Such investigations into the moral issues impaction on individuals' PWU levels could have theoretical and empirical aspects. For example, it would be interesting to more closely examine the nature of guilt. Guilt is an evaluative emotion that has been linked to those of shame and pride (e.g. Taylor, 1985). How prevalent is guilt as an emotion experienced by individuals engaging in PWU? How does it develop in an organisational context? Is it associated with certain personality characteristics or the holding of certain values? How do feelings of guilt surface? Which environmental factors present in the work situation determine whether and to what degree individuals experience guilt when engaging in PWU? To answer these questions, a review of the literature on emotions at work with focus on guilt and shame is most likely of interest.

If guilt is identified as a fairly common emotion for individuals engaging in PWU, it would then be interesting to examine its association with accessing certain websites, duration of PWU, frequency of PWU or the fact that one is expected not to engage in PWU in one's organisation. To answer these questions, future studies could possibly make further use of the IT ethical behaviour model (Banerjee, Cronan & Jones, 1998), as well as drawing on existing ethical decision-making models such as the interactionist model by Trevino (1986) or the more behaviour-focused model by Bommer and colleagues (1987). A better understanding of the moral complexities around PWU may, in turn, assist in developing PWU control strategies that are accepted and supported by individuals.

9.10.3 Boredom and PWU

Traditionally, when investigating workplace boredom, authors (e.g. Hulin & Blood, 1968; Smith, 1955) focused on the aspects of repetition and monotony for low skilled, short-cycle jobs, assuming that white collar jobs contain little or no reasons to be bored. Only in fairly recent years, researchers have started to re-examine the nature of boredom at work. Consequently, boredom is no longer seen as influenced only by the repetitive nature of work tasks, but also by their complexity (Fisher, 1993). Additionally, it has been proposed that boredom is a state as well as a trait (e.g. Kass, Vodanovich, Callender, 2001; Mikulas & Vodanovich, 1993), and that boredom prone employees may be better motivated by extrinsic than by intrinsic rewards (e.g. Vodanovich, Weddle & Piotrowski, 1997). In the process of this research project, workplace boredom was defined as a lack of

meaning and purpose (Svendsen, 2005), typically experienced through work that seems repetitive, lacking in mental stimulation, and containing the ‘so what?’ effect. This definition allowed me to focus on workplace boredom of white collar workers, specifically those who work on Internet-enabled workstations. Seeing that workplace boredom appeared to be a strong influence on why individuals differ in their PWU, future research may want to continue this investigation.

These investigations could include theoretical and measurement components. It would, for example, be of interest to gain further insights into the nature of workplace boredom influencing PWU. In this context it would be interesting to further test whether workplace boredom is associated with a lack of meaningful and exciting work tasks, as this is the understanding of workplace boredom expressed in the present study. This could possibly be achieved through a longitudinal, experimental study. Here the PWU of individuals working on tasks they perceive as meaningless (high boredom) could be measured. After some time their tasks would then be changed to be more meaningful, interesting and exciting for them, and their PWU levels would be measured again. Theoretically, and based on the research findings presented earlier in this document, the PWU levels after the task redesign would be expected to be lower than in the original work situation. Such an outcome would provide support not only to the statistical results presented in this study, but also to the earlier suggested implications of the results for the well-being of individuals at work.

Further research directions could include the question of whether the state or the trait aspect of boredom is more influential, or whether they work together in predisposing to PWU? Is the experience of workplace boredom a universal phenomenon, or does it vary in nature and intensity depending on cultural, religious and economic differences? For example, do individuals in relatively collectivistic cultures with families whose livelihoods depend on their income, and in economic situations with high unemployment, experience workplace boredom similarly to those with the opposite characteristics and circumstances? And if workplace boredom in those opposing circumstances is experienced similarly, are individuals engaging in similar degrees of PWU? Why or why not? Investigation of these and other questions into workplace boredom and PWU may possibly benefit from the development of new workplace boredom measures.

Only one published measure of perceived workplace boredom for non-assembly line workers could be found (Lee, 1986). However, this measure focuses strongly on the monotony and repetition aspects of boredom and does not explicitly examine a lack of

meaning as possible reason for ‘feeling mentally sluggish’ or ‘time going by slowly’. In the absence of alternative self-report measures, parts of Lee’s (1986) boredom scale were used in this study’s questionnaire survey. Future research may want to develop a measure of workplace boredom that considers not only recent philosophical approaches to boredom (e.g. Svendsen, 2005), but also focuses on the way boredom is experienced in modern workplaces. A new measure of boredom at work could include traditional aspects such as lack of work, monotony, and repetition, as well as assess what work in general and the job in particular mean for the person (e.g. income, excitement, challenge, increased self-worth, companionship). These meanings could, in the first instance, be drawn from Maslow’s (1968) needs theory and its later revisions. The development and use of a new measure of job boredom may, in turn, validate and extend the findings of the present research which showed boredom to be a strong influence on PWU.

9.10.4. PWU and workload

In most peoples’ mind, boredom and workload are linked. Typically, it is assumed that one is bored when one has little to do at work. However, as mentioned earlier, more recent definitions of boredom have pointed out that it is not necessarily identical to low workloads. Therefore, future studies may want to investigate the link between workload and PWU as a separate issue.

In this study the suggestion originally was that low workloads provide the motivational push to engage in PWU. The data analysis results were followed by speculations that it may be more likely that stress aspects of high workloads provide such a motivational push. With the help of focus groups it may be possible to more clearly identify the role workload plays in PWU. One focus group could consist of high personal web users, one of low personal web users, and one of medium level personal web users. Through leading structured group discussions one may find answers to questions such as whether individuals who have little to do, and individuals who have a lot to do engage in similar levels of PWU. It may also be possible to ascertain a level of workplace boredom that is typically associated with low workload. The insights gained from these focus groups could then serve as the basis for developing a questionnaire that aims to gather quantitative data, and testing hypotheses resulting from the focus groups and preceding literature research.

Issues discussed in these focus groups could possibly include what it is that influences how a person perceives to have a high workload. One person may, for example, experience a workload as high because the deadlines to complete the tasks are set very tightly. Another person may perceive workload as high because he or she perceives to be lacking a set of skills necessary to accomplish the assigned tasks in less time. A third

person may, in turn, perceive a workload to be high because of conflicting demands placed upon him or her. Depending on the reasons for why the workload is seen as high, the purposes of PWU in these situations may also differ. They may range then from stress relief, to gaining skills and information, to attempting accomplishment of work and personal tasks at approximately the same time.

Although in laymen's terms often linked with each other, high workload and stress are related concepts that originate from different theoretical perspectives. High workload is an important but not critical aspect of stress, similar to low workload being an important but not critical aspect to boredom. It is, for example, possible to accomplish a high workload without experiencing the physical and psychosomatic side effects associated with negative stress (Gaillard, 1993). Future research into the link between PWU and workload may thus also inspire additional investigations into PWU, stress and work-life balance.

9.10.5 PWU, stress and work-life balance

A number of participants indicated in the open-response questions that for them engagement in PWU is a type of stress management technique providing micro breaks. At the same time, respondents also suggested that with increasingly blurred lines between working and private lives, engaging in PWU may be justified, and the levels of PWU should not be an issue at all. Future research efforts may want to explore these directions further.

One question that could be approached is: Why is PWU seen as stress relief? It is especially intriguing that individuals working on the computer, who are experiencing stress while working on their tasks at their computer, chose to take their micro breaks in the same environment. Stress management techniques based on the 'fight or flight' principle, for example suggest that removing oneself for a short period of time from the situation and environment associated with the experienced stress (which in this case would be the computer) is one of the most effective relief strategies. Future research may therefore want to investigate whether the stress relief function of PWU is 'only' perceived or is an actual, measurable phenomenon.

It would also be interesting to find out what it is about PWU that provides (or appears to provide) that relief better, or equal to, more traditional stress responses such as eating, walking to the water cooler, smoking, talking to others, or stretching exercises. Further questions worth exploring a possible association between stress and PWU are: Is there a certain type or level of stress that is typically reached before PWU is engaged in? Does PWU act as stress relief up to a certain level of stress and does it lose its relief

function beyond this level? Researchers focusing on workplace stress might be interested in exploring these and similar research directions.

Future research may also want to investigate further the definition of PWU within the context of modern, flexible working arrangements. As it is defined at the moment, PWU is hard to identify for individuals with blurred lines between working and private lives. Some individuals, for example, may engage in online activities that are, under the current definition of PWU, identified as personal web use. The employees themselves and possibly their organisations, however, may not see their online activities as PWU as it is defined at the moment. For example, work-related Internet access may also serve personal interests or passions, or work time as such may not be clearly separated from personal time. It would be interesting to examine what these individuals do. Do they take micro breaks as suggested above? Do they take care of personal business like shopping and banking? Are they reading the news online? These interruptions of the work routine or work tasks are a personal use of the Internet. The question is, however, do they happen in working time, or are individuals in certain working situations unable to define working time and non-working time due to the ease of those times flowing in and out of each other? If that is the case, are differences in the personal Internet use of these individuals influenced by the same or different factors as the PWU of the participants in the present research? The research-based answers to questions like these could be further linked to examinations of alternative work situations in general, and their impact on organisations and individuals wellbeing at work.

9.6 Conclusion

With this research project I set out to investigate why individuals differ in their PWU by testing a theoretical model of influences on PWU. The components included in this model were based on a number of different social psychology theories, and on previous research findings in the fields of psychology and management studies. In the past, the prevalent concept of PWU was one that focused on the negative aspects of PWU, in particular on the cost of excessive levels of PWU, and the need to monitor and control the behaviour. With few exceptions, up to now, PWU has generally been conceptualised as a behaviour whose purpose it is to give the employee benefits that really are not his or hers to have.

The results of this project's statistical and qualitative data analyses extend the existing literature on PWU by suggesting that it is less a socially driven behaviour than one that is influenced by individuals' moral compass and the interaction between them and their work. In contrast to a number of past publications, and based on the earlier presented

research findings, the function of PWU appears to be less one of taking, in reaction to perceived organisational unfairness, than one of responding to a perceived lack of meaning in one's working tasks. At the same time, during the discussion of the data analysis results I highlighted the possibility that PWU has a function of balancing the demands of individuals' working and private lives, rather than the sometimes implied function of taking as much as possible from one's employing organisation. With these findings I encourage a shift in perspective on PWU.

This conceptual shift necessitates that PWU is no longer seen as an organisational misbehaviour by default, but as a behaviour with different purposes that can have positive as well as negative consequences for individuals and their organisations. The nature of these consequences depends on the individuals involved and their working circumstances. Individuals differ in their PWU, regardless of the facet measured, due to differences in their moral approval of PWU and in perceptions of workplace boredom, within the perimeters given by their organisational climate. Subsequently, a conceptual shift in understanding and investigating PWU should entail a move away from concentrating on individual and workplace characteristics that focus on supporting PWU control mechanisms and strategies. Instead, a more effective focus would be one that views PWU as the attempt of individuals to alleviate workplace boredom and potentially to address issues of stress and wellbeing. Conceptualised in such a way, researchers and practitioners alike may come to view PWU less as a behaviour that needs to be prevented and limited at all costs, and more as an opportunity for explorations into the creation of workplaces that foster the wellbeing of employees as well as the achievement of organisational goals.

APPENDICES

Appendix A: Models of influences on PWU used in previous studies (reviewed in chapter 2)

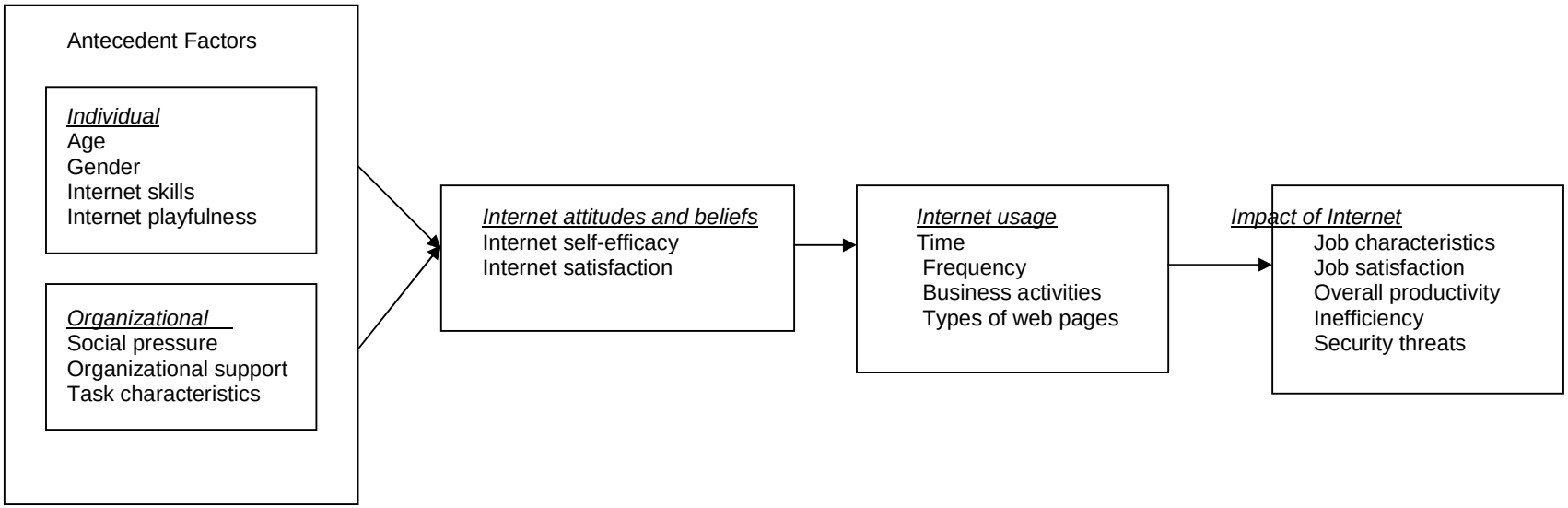


Figure A2.1: Theoretical model proposed by Anandarajan, Simmers and Igbaria (2000) picturing the factors and processes leading to Internet usage, including personal web use (seen as the accessing of personal interest types of web pages at work) and its impact on organisational and individual outcomes.

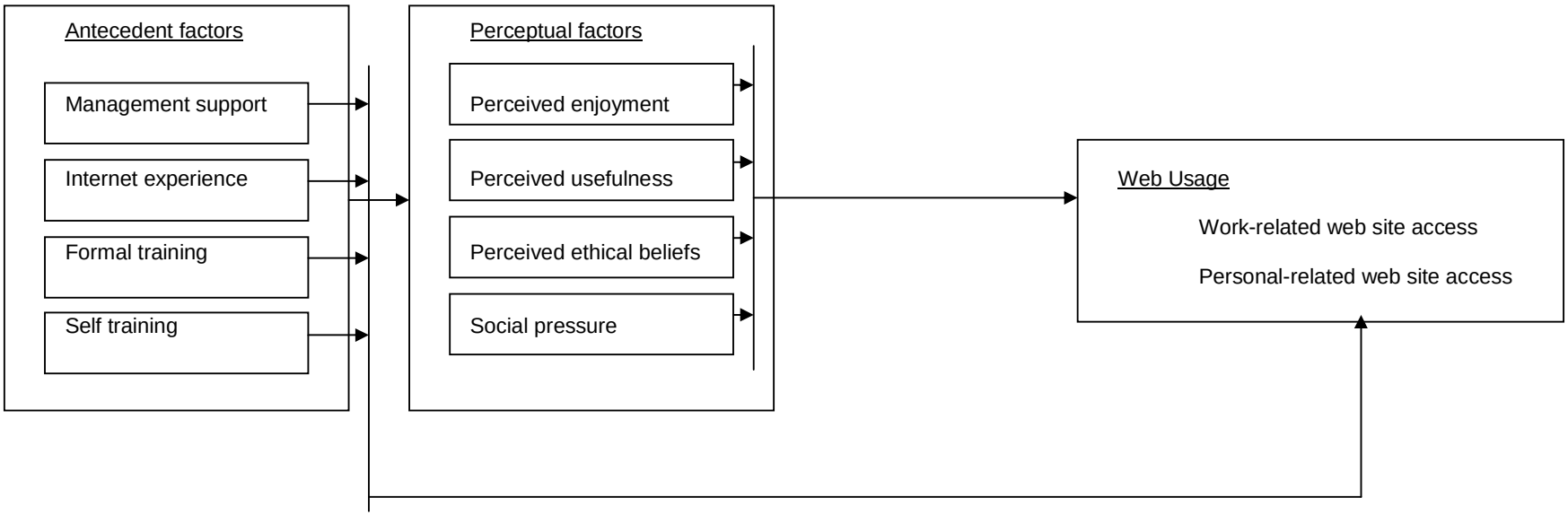


Figure A2.2: Theoretical model by Anandarajan and Simmers (2002) picturing the hypothesised direct antecedents' relationship with web use (PWU at work as well as work-related web use, and the hypothesised relationship between the antecedents and web use mediated by perceptual factors.

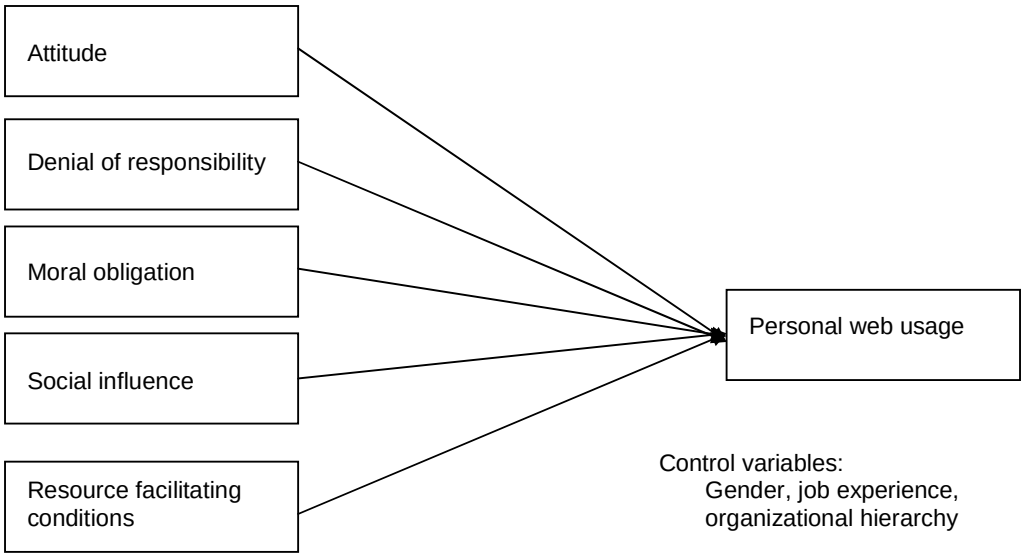


Figure A2.3: Lee, Lee and Kim's (2004) theoretical model of hypothesised direct influences on PWU

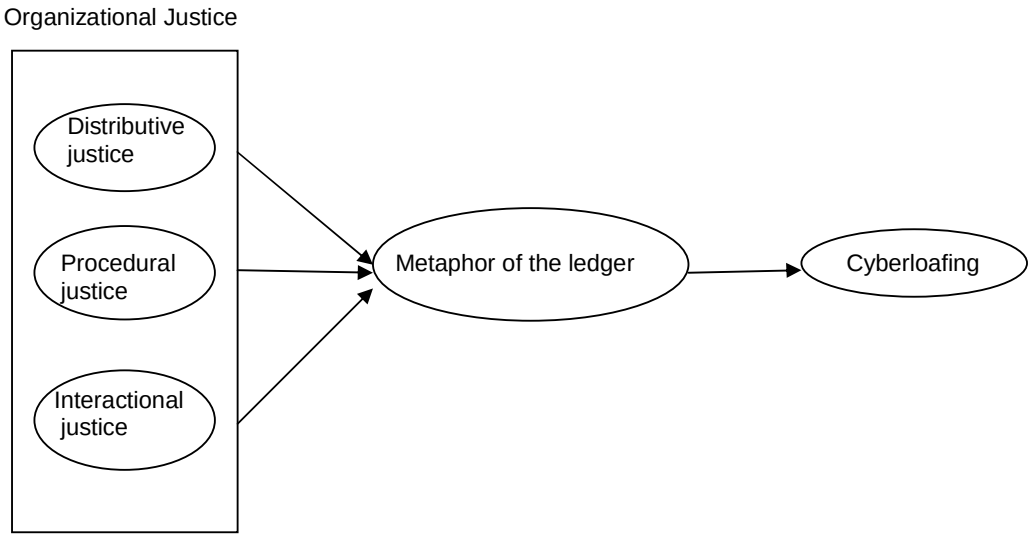


Figure A2.4: Lim's (2002) theoretical model of the relationship between organisational justice and cyberloafing, mediated by the use of the metaphor-of-the-ledger neutralization technique

Appendix B: Investigating attitudes towards personal web use at work and electronic monitoring

Summary of an unpublished study by Andrea Polzer-Debruyne (2002).

B3.1 Purpose and aim of the study

At the beginning of 2002 almost no scientific studies were published reporting research into why employees engaged in non-work related Internet activities while at work, or which websites they visited to do so. Personal web use, together with the impact electronic monitoring of workstations has on employee's attitudes and behaviours, interested me and eventually became my PhD topic. In order to complement the rather sketchy picture of the field at that time, I collected lay theories about personal web use from a group of Internet using students. Additionally, I wanted to find out which non-work related Internet sites employees use when they stray from their work tasks. The final aim of my study was to collect descriptive information about possible reasons for accessing non-work related websites during working time, as well as moral norms regarding PWU present among the participating students.

B3.2 Participants

One hundred and twenty three undergraduate students of a university in metropolitan New Zealand were invited to participate in the paper-and-pencil survey during class time. The students attended Stage 3 lectures either on organisational psychology or human resource management. One hundred and one students returned their questionnaire, a response rate of 84%. Through earlier in-class exercises it had been established that a large proportion of these students (73%) were in either full-time or part-time employment with possible Internet access, and all students had Internet access through the university. No demographic data such as age, gender, place of employment and job type had been collected to protect the anonymity of the participants who were students in the author's Stage 3 classes.

B3.3 Measures

The survey was completely anonymous and asked the participants to express their attitudes and beliefs to six open-ended questions. Three questions asked about the participants' general attitude towards using the Internet at work for personal interest, what might prompt participants to engage in non-work online activities, and which barriers to do so may exist for employees, if any. Two questions elicited participants' attitudes to electronic monitoring and possible reasons for organisations to use that technology. The final question asked participants to list those personal-interest web sites they were most likely to access at work or university computers.

B3.4 Results

Content analysis of the written answers to questions asking why individuals engage in PWU revealed that the majority of participants felt employees access non-work web sites at work mainly because it is cheaper, faster, and more private than at home (51%). The second most mentioned reason (33%) was the suggestions that employees feel bored with their task, closely followed by the idea that personal web use is a result of feeling resentful and unhappy with the organisation, the supervisor, or work in general (15%).

About 58% of the participants expressed a negative attitude towards personal web use. These respondents described it as being unethical, unacceptable, or dishonest. At the same time, 40% of the respondents felt it was a reasonably okay practice, if it does not harm anybody. Only two respondents elaborated on the 'harm' aspect saying that it related to not being offensive to others or not involving activities that could be seen as offensive, such as visiting adult websites or sending on explicit photos and jokes. None of the respondents mentioned potential harm to the organisation.

Of those participants who perceived barriers to engage in PWU in their organisation, the majority (84%) indicated that the main barrier was what others may think about them, and the possible disapproval of their peers and supervisors. Only a small group of people (5%) felt that no or very few barriers exist to PWU in their organisation. No respondent mentioned his or her personal web use being affected by electronic monitoring.

The majority of respondents (51%) reported some degree of understanding that organisations feel the need to use electronic monitoring to control what employees do on the Internet at work. However, almost as many (48%) respondents expressed opinions showing that they either did not approve of the practice or that they felt it was unnecessary. A small number of respondents (n = 8) used phrases like ‘spying’, ‘Nazi methods’, and ‘Big Brother’ to describe the practice of electronic monitoring. However, only 11 indicated that they heard of or experienced electronic monitoring in a work setting.

The most frequently accessed web sites for personal interest were Internet-based email sites such as Hotmail, Excite and Yahoo! (n = 98), followed by text messaging (n = 63), and the accessing of job search sites (n = 46) and game sites (n = 38).

B3.5 Summary and implication for the thesis

The purpose of the study was to collect laymen’s theories, experiences, and opinions about why employees engage in personal web use, what they do when they access the Internet at work for personal reasons and what impact electronic monitoring has on their activities. The responses in the brief, relatively informal study suggested that the participants were split fairly evenly in their opinion as to whether personal web use is an acceptable practice or not, with only a slight majority disapproving of the behaviours. The fact that the respondents were relatively disapproving of personal web use was interesting, as I would have expected the majority to indicate that it is an acceptable practice. Subsequently I decided to test in my thesis whether moral approval of personal web use influences the degree to which one engages in it.

The main reason for engaging in personal web use was boredom at work, and dissatisfaction with the organisation or the supervisor. Intuitively these reasons for the practice made sense, and I decided to consider measures of workplace boredom and supervisor relationship for my planned investigation into determinants of personal web use.

It was interesting to find that the main reasons for abstaining from or engaging in personal web use were not organisational rules or electronic monitoring, but what others thought about it. One reason for this finding might have been the influence group norms have on organisational behaviours. Another reason, however, might have been a lack of rules in organisations or a lack of knowledge about these rules. I therefore decided to investigate in my thesis the impact work group norms have on

individuals' personal web use. At the same time, I became interested in how many organisations actually have regulations monitoring and limiting personal web use, how aware employees are of these, and whether they have an impact on an employee's level of personal web use.

The comments made by the respondents could not be generalised to the whole population of individuals who worked at Internet-enabled workstations and engaged in personal web use, for two main reasons. Firstly, the respondents were at least part-time students at a University, and the study therefore did not include opinions of non-student employees. Secondly, no data about psychological or workplace characteristics were collected, and differences in any of these might have influenced differences and/or similarities in the opinions expressed. It should be pointed out, however, that in spite of the lack of formal generalisability of the findings, the results of the unpublished study were generally in line with research findings published later in 2002 and in 2004 (e.g. Lim, 2002; Mahatanankoon, Anandarajan& Igbaria, 2004), and reviewed in chapter 2 of this dissertation. Some of the comments made by research participants in the study were used in the current thesis to illustrate arguments from the perspective of individuals engaging in PWU.

Note: Originally the focus of my PhD was electronic monitoring and the impact it has on personal web use, as well as on work-related attitudes and behaviours. Therefore, the study summarised here attempted to elicit opinions only on PWU and electronic monitoring. However, as the research project developed, the focus shifted to the one on psychological and workplace attributes influencing PWU, as it is presented in this thesis.

Appendix C: Copy of the on-line questionnaire

Personal Internet Use at the Workplace

School of Psychology
Massey University, New Zealand

Thank you for your interest in this investigation into Internet Use at the workplace!

Some call it "surfing at work" others "cyberloafing" or "wage compensation", and most people who have access to the Internet at work do it. Why? What makes us click that button and disappear into cyber space on company time? And why do only some of us do it? The reasons for this may be within us, our habits, our attitudes, or maybe in our job and work environment.

As part of my PhD study I want to learn more about these aspects - and You can be part of this exploration by participating in the survey below.

And what is in it for you?
Well, you have a 1 in 30 chance to win a mini digital camera, or a walkman or a fully equipped picnic backpack or one of similar 10 prizes. The webmaster will randomly select one in 30 people, send a message asking for a mailing address and once you have supplied it the gift is on its way to you!
Yes, I will send it all around the world (it just might take a bit longer to get there)!

This survey should take you about 25 to 30 minutes to fill out. It is important for you to know that there are no "right" or "wrong" answers in this questionnaire. Your answers will be confidential and used for research purposes only. Any results will be reported as group averages only and your individual response cannot be identified or traced back to you!

Completion of the questionnaire implies consent, and of course you have the right to decline to answer any particular question.

If you have any questions about this study you may contact myself (Andrea Polzer-Debruyne) or my supervisor Dr Stuart Carr, at Massey University, College of Humanities and Social Sciences, School of Psychology, Private Bag 102 904, Auckland, New Zealand. Or alternatively via email: a.polzer-debruyne@massey.ac.nz and s.c.carr@massy.ac.nz

A summary of the findings of this research will be available to you upon completion. If you would like to receive a copy, please feel free to contact me via email: Andrea Polzer-Debruyne a.polzer-debruyne@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Protocol No: MUHEC 03/074

If you have any concerns about the conduct of this research, please contact Professor Brian Murphy, Massey University Campus, Human Ethics Committee: Albany, Tel. 09 414 0800 ext 9251, email B.Murphy@massey.ac.nz

Do you currently have Internet access at work,have had it over the last two weeks and will continue to have it over the next three weeks?

If your answer is "No",
then thank you very much for your interest in this study,
but unfortunately you are not part of our target sample.

Please do not continue yourself, but send the link to this survey on to other people you know and who have Internet access at work.

Thank you very much!

If you have Internet access, please continue.

PLEASE NOTE:
If at any stage you would like check your previous answers, please scroll up and down the document. Do not use the back-button on your tool bar, as this will take you out of this survey without saving your answers.

The first set of questions investigates some of your current habits regarding Internet use in your current work environment.

And please remember, none of your answers will be reported anywhere as individual answers.

1	Can you please give an estimate how often you have accessed the Internet for personal interest during work time over the past 2 weeks?	○ *Never* ○ *Only once* ○ *2-4 times* ○ *5-7 times* ○ *8-10 times* ○ *11-13 times* ○ *14-16 times* ○ *17-19 times* ○ *20-25 times* ○ *25-39 times* ○ *over 30 times*
2	In an average week, how often do you access the Internet at work for personal interest during work time, just out of habit?	○ *Never* ○ *Only once* ○ *2-4 times* ○ *5-7 times* ○ *8-10 times* ○ *11-13 times* ○ *14-16 times* ○ *17-19 times* ○ *20-25 times* ○ *25-39 times* ○ *over 30 times*
3	Can you please give an estimate of how much time, on average, you spend accessing the Internet for personal interest during work time in one week?	_____ *hours* _____ *minutes*

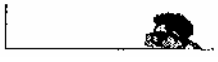
Please indicate for each activity below, how often during the last two (2) weeks you have engaged in these activities on a computer at work:

Note: Please select the button corresponding to these codes
Never (1) Occasionally (2) Sometimes (3) Quite often (4) Very frequently (5)

Activity Description		1	2	3	4	5
4	Used personal web-based email such as hotmail, yahoo, etc	○	○	○	○	○
5	Sent or forwarded non-work related email	○	○	○	○	○
6	Sent e-cards, e-flowers, e-gifts etc to friends and family	○	○	○	○	○
7	Read news on general news sites, including sports, weather, etc	○	○	○	○	○
8	Scanned through adult-oriented (sexually explicit) web sites	○	○	○	○	○
9	Researched personal hobbies and interests	○	○	○	○	○
10	Conducted personal travel or recreation activites	○	○	○	○	○
11	Shopped on-line for personal goods	○	○	○	○	○
12	Conducted personal, external business	○	○	○	○	○
13	Conducted personal, investment and banking activities	○	○	○	○	○
14	Viewed entertainment related web sites	○	○	○	○	○

15	I intend to access the Internet at work for personal interest during work time in the next week	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
16	I plan to access the Internet for personal interest during work in the next week	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure

For this next question,
please indicate along the scale between the two opposing adjectives,
the degree to which they most clearly express your personal opinion.



My accessing the Internet / email at work for personal interest during work time in the next three weeks would be:

		1	2	3	4	5	6	
17	Good	○	○	○	○	○	○	Bad
18	Wrong	○	○	○	○	○	○	Right
19	Disrespectful	○	○	○	○	○	○	Respectful
20	Okay	○	○	○	○	○	○	Not Okay
21	Unethical	○	○	○	○	○	○	Ethical
22	Cool	○	○	○	○	○	○	Uncool
23	Unacceptable	○	○	○	○	○	○	Acceptable
24	Appropriate	○	○	○	○	○	○	Inappropriate
25	Dishonest	○	○	○	○	○	○	Honest
26	Sneaky	○	○	○	○	○	○	Straight
27	Wise	○	○	○	○	○	○	Foolish

28	For me to access the Internet at work for personal interest during work time in the next week would be impossible	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
29	If I wanted to, I could access the Internet at work for personal interest during work time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
30	Company guidelines about employee access of the Internet for personal interest during work time prevent me from doing so in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
31	Electronic monitoring of my workstation is very effective in stopping me from accessing the Internet for personal reasons during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure ○ My workstation is not monitored
32	I simply do not have the time to access the Internet for personal interest during working time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
33	I cannot afford to take the risk of losing my job over accessing the Internet at work for personal reasons during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure

People in different situations think differently about [redacted]

80	...I were asked to do excessive amounts of work without proper compensation	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
81	...I have to put in extra time at work to get the job done	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
82	... I feel stressed at work and need to switch off for a while	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
83	... I feel bored in my work	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
84	...I feel that I have not been rewarded appropriately for the amount of effort I put in	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure

Most of us work with supervisors who give feedback to us as well as oversee our work.

The next set of statements explores some of these relationship aspects of your working life.

85	My supervisor treats me with kindness and consideration	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
86	My supervisor makes an effort to deal with me in an honest way.	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
87	My supervisor considers my view point	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree

accessing the Internet at work for personal interest. 

Please indicate how much you agree or disagree with the following statements.

34	Accessing the Internet at work for personal interest during work time in the next three weeks would go against my principles	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
35	I would feel guilty accessing the Internet / email at work for personal interest during work time in the next three weeks	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
36	It would be morally wrong for me to access the Internet at work for personal interest during work time in the next three weeks.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
37	People in my personal life, whose opinion I value, access the Internet at work for personal interest during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure ○ My workstation is not monitored
38	The people in my personal life, whose opinion I value, think it would be okay for me to access the Internet for personal interest during working time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
39	My colleagues at work access the Internet for personal interest during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
40	My colleagues at work would approve if I access the Internet for personal interest during work time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
41	My supervisor accesses the Internet at work for personal interest during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
42	My supervisor does not mind if we use the Internet at work for personal reasons during work time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree

		○ Strongly agree ○ I am not sure
43	My subordinates access the Internet at work for personal reasons during work time.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure ○ I have no subordinates
44	My subordinates think it is okay if I use the Internet at work for personal reasons during work time in the next week.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure ○ I have no subordinates

Thank you very much!
You are now more than 1/3 through the survey.

Listed below are five statements about how we tend to communicate with others via the Internet.

How much is each statement True or False for you?

45	I am always courteous to people on the Internet, even to people who are disagreeable.	○ Definitely true ○ Mostly true ○ Don't know ○ Mostly false ○ Definitely false
46	There have been occasions when I took advantage of someone over the Internet.	○ Definitely true ○ Mostly true ○ Don't know ○ Mostly false ○ Definitely false
47	I sometimes try to get even rather than forgive and forget over the Internet.	○ Definitely true ○ Mostly true ○ Don't know ○ Mostly false ○ Definitely false
48	I sometimes feel resentful when I don't get my way in communication over the Internet.	○ Definitely true ○ Mostly true ○ Don't know ○ Mostly false ○ Definitely false
49	No matter to whom I am emailing, I am always very attentive and mindful of what they are writing to me.	○ Definitely true ○ Mostly true ○ Don't know ○ Mostly false ○ Definitely false

Most workplaces have established procedures and guidelines, including possible consequences, concerning the use of the Internet for personal interest during work time.

58 How much to you trust these monitoring procedures?

- Do not trust at all
- Do not trust somewhat
- Do not trust
- Trust
- Trust somewhat
- Trust very much
- Does not apply

Work is not the same for everybody. How people react and think often depends on how they feel about their daily work.

Please indicate on the appropriate scales how you currently feel about your present job

Strongly disagree (1), moderately disagree (2), disagree (3), agree (4), moderately agree (5), strongly agree (6)

		1	2	3	4	5	6
59	I often get bored at work	○	○	○	○	○	○
60	My work is monotonous	○	○	○	○	○	○
61	I find my job dull	○	○	○	○	○	○
62	My work goes by too slowly	○	○	○	○	○	○
63	I get mentally sluggish during the day	○	○	○	○	○	○
64	Time seems to go by slowly at work	○	○	○	○	○	○
65	There are long periods of boredom at my work	○	○	○	○	○	○
66	The job seems to be repetitive	○	○	○	○	○	○
67	Over the last 2 weeks my current job has been very stressful for me	○	○	○	○	○	○
68	Over the last 2 weeks I felt that I needed to put in more than I got out of my job	○	○	○	○	○	○

69 How often does your job require you to work very fast?

- Less than once per month or never
- Once or twice per month
- Once or twice per week
- Once or twice per day
- Several times per day

70 How often does your job require you to work very hard?

- Less than once per month or never
- Once or twice per month
- Once or twice per week
- Once or twice per day
- Several times per day

71 How often does your job leave you with little time to get things done?

- Less than once per month or never
- Once or twice per month
- Once or twice per week
- Once or twice per day
- Several times per day

72 How often is there a great deal to be done?

- Less than once per month or never
- Once or twice per month
- Once or twice per week
- Once or twice per day
- Several times per day

73 How often do you have to do more work than you can do well?

- Less than once per month or never
- Once or twice per month
- Once or twice per week
- Once or twice per day
- Several times per day

'Sooner or later, Clive, someone is going to find out.'

Please indicate how established such guidelines and procedures are at your organisation and how you feel about them.

50	At your place of work, are there clear guidelines regarding the use of the Internet (including its email facilities) for personal interest?	○ Yes ○ No ○ I am not sure
51	How satisfied are you with these guidelines regarding Internet use for personal interest at your place of work?	○ Very dissatisfied ○ Somewhat dissatisfied ○ Dissatisfied ○ Satisfied ○ Somewhat satisfied ○ Very satisfied ○ Does not apply
52	How effective or ineffective do you think the guidelines regarding Internet use for personal interest during work hours are at your work?	○ Very ineffective ○ Somewhat ineffective ○ Ineffective ○ Effective ○ Somewhat effective ○ Very effective ○ Does not apply
53	In our work group we share access to work stations.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
54	In your company, is the Internet access from workstations electronically monitored?	○ Yes ○ No ○ I am not sure
55	The control systems in place at our organisation cannot identify exactly who in a work group is accessing the Internet.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
56	Statistics on personal Internet use gathered via electronic monitoring of our workstations are collected periodically.	○ Strongly disagree ○ Moderately disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
57	How satisfied are you with these monitoring procedures?	○ Very dissatisfied ○ Somewhat dissatisfied ○ Dissatisfied ○ Satisfied ○ Somewhat satisfied ○ Very satisfied ○ Does not apply

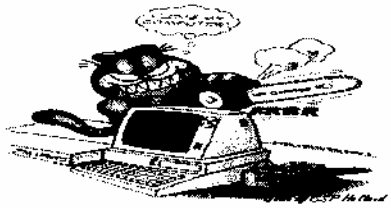
		○ Strongly agree ○ I am not sure
88	My supervisor provides me with timely feedback about decisions and their implications	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
89	My supervisor monitors my computer activities	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure
90	My supervisor receives reports of my computer activities generated by electronic monitoring	○ Strongly disagree ○ Moderately Disagree ○ Disagree ○ Agree ○ Moderately agree ○ Strongly agree ○ I am not sure

People differ in how they usually react to certain situations and in which values they find important. This following segment of the survey explores some of these aspects.

At this point let me re-assure you, that your answers in this survey are completely anonymous and will be reported as group data only.

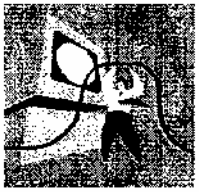
Note: Please select the button corresponding to these codes
Strongly disagree (1) Disagree (2) Neither agree nor disagree (3) Agree (4) Strongly agree (5)

		1	2	3	4	5
91	I prefer to do as little as possible at work while getting as much as I can from my employer	○	○	○	○	○
92	I am most satisfied at work when I have to do as little as possible	○	○	○	○	○
93	When I am at my job, I think of ways to get out of work	○	○	○	○	○
94	If I could get away with it, I would try to work just a bit slower than the boss expects	○	○	○	○	○
95	It is really satisfying for me when I can get something for nothing at work	○	○	○	○	○
96	It is the smart employee who gets as much as he/she can while giving as little as possible in return	○	○	○	○	○
97	Employees who are more concerned about what they can get from their employer, rather than what they can give to their employer, are the wise ones	○	○	○	○	○
98	When I have completed my task for the day, I help out other employees who have yet to complete their task	○	○	○	○	○
	Note: Please select the button corresponding to these codes *Strongly disagree (1) Disagree (2) Neither agree nor disagree (3) Agree (4) Strongly agree (5)*	1	2	3	4	5
99	Even if I receive low wages and poor benefits from my employer, I would still try to do my best at my job	○	○	○	○	○
100	If I had to work hard all day at my job, I would probably quit	○	○	○	○	○
101	I feel obliged to do more than I am paid to do at work	○	○	○	○	○
102	At work, my greatest concern is whether or not I am doing the best job I can	○	○	○	○	○
103	A job which requires me to be busy during the day is better than a job which allows me a lot of loafing	○	○	○	○	○
104	At work, I feel uneasy when there is little work for me to do	○	○	○	○	○
105	I would become very dissatisfied with my job if I had little or no work to do	○	○	○	○	○
106	All other things being equal, it is better to have a job with a lot of duties and responsibilities than one with few duties and responsibilities	○	○	○	○	○



	Note: Please select the button corresponding to these codes *Strongly disagree (1) Disagree (2) Neither agree nor disagree (3) Agree (4) Strongly agree (5)*	1	2	3	4	5
107	Instructions and commitments trigger strong resistance in me	○	○	○	○	○
108	I like the thrill of opposing others	○	○	○	○	○
109	With my behaviours I rarely follow the conceptions of others.	○	○	○	○	○
110	The idea of being dependent on others is very uncomfortable for me	○	○	○	○	○
111	I tend to interpret advice as patronising.	○	○	○	○	○
112	If something is prohibited, I have an attitude of 'now I will do it for sure'	○	○	○	○	○
113	To be able to make free and independent decisions is more important to me than to most other people	○	○	○	○	○
114	I often lose interest in doing things just because it is expected of me by others.	○	○	○	○	○
115	I react by getting rather touchy when someone tries to curb my freedom in decision making.	○	○	○	○	○
116	Advice and recommendations often lead me to doing just the opposite	○	○	○	○	○
117	Only those things that I do out of my own free will actually turn out well.	○	○	○	○	○
118	I energetically oppose any attempts to influence me.	○	○	○	○	○
119	It annoys me when I am presented with another person as an example.	○	○	○	○	○
120	If someone pressures me not to do something I want to do it for sure.	○	○	○	○	○
121	I delight in seeing others ignore societal norms and constraints.	○	○	○	○	○
122	I easily mistrust strong praise.	○	○	○	○	○
123	I react very touchy if someone wants to tell me what I should do or should not do.	○	○	○	○	○

Thank you very much for your participation; you have nearly reached the end of the questionnaire.



Would you now please supply us with some demographic information about yourself?

This information, again, will be kept completely confidential and will be used only to create groups of respondents, to help us analyse the data and report the information gained.

124	Gender	○ Male ○ Female
125	Please indicate your age	Years
126	Your country of residence	New Zealand
127	With which cultural group do you identify the most?	
128	What is your current occupational level?	Entrance level
129	What type of organisation do you work for? (e.g. manufacturing, IT, legal, university, etc)	
130	How long have you been in your current position?	Years Months
	Please indicate both month and year. If one or the other is not applicable, please enter '0'.	

*31	Please indicate the size of your work group.	Members
*32	How many people with Internet access are in your immediate work group?	People
*33	Where did you complete this survey?	At a computer at work At a computer at home Other
134	Do you work in an open-plan office environment?	All the time Frequently Sometimes Occasionally Never

When exploring a new concept, it is important to also know about aspects that cannot be captured by tick-box type surveys. So there follow two questions encouraging you to share more of what you have experienced, witnessed or heard of in regards to Internet access for personal interest.

Please remember, none of your answers will be linked with you as a person and all your replies will be treated in strictest confidence!

135 Can you please, in brief sentences, describe an incident where electronic monitoring, company guidelines, or your supervisor's behaviour in relation to Internet access at work, had a positive outcome. Please briefly describe the situation, the behaviour and the positive outcome or result.

136 And now, can you please, in brief sentences, describe an incident where electronic monitoring, company guidelines, or your supervisor's behaviour in relation to Internet access at work, had a negative outcome. Please briefly describe the situation, the behaviour and the negative outcome or result.

PLEASE NOTE:
If you would like check your previous answers, please scroll up and down the document.
Do not use the back-button on your tool bar,
as this will take you out of this survey without saving your answers.

For you to enter the prize draw, please click YES in the box below and supply us with your email address. You then will also be invited to participate in the second, much shorter, part of this study. And as before, you are free to decline to participate. Entry into the prize draw will not be affected by your decision to participate (or not) with this small followup survey.

In one week's time, you will be notified of a brief, 5 minute follow-up survey about your habits and behaviours regarding Internet access at work in the week since today. You will be provided with an ID code in this notification message to correlate data with this part of the study.

If you are one of the lucky winners of the prize draw, you will be asked by an independent webmaster to supply us with a mailing address so we can send your prize to you.

Your email contact information will be held by an independent third party until the conclusion of the follow up survey, when it will be deleted from all records. It will not be linked to the data you provide and your anonymity in this survey is assured.

Yes, I wish to participate in the follow up survey	Email address
No, I do not wish to participate in the follow-up survey	

With submission of this data, you agree that the information supplied is used in the study described. If participation in the survey caused you any distress, you are encouraged to seek professional advice and help.

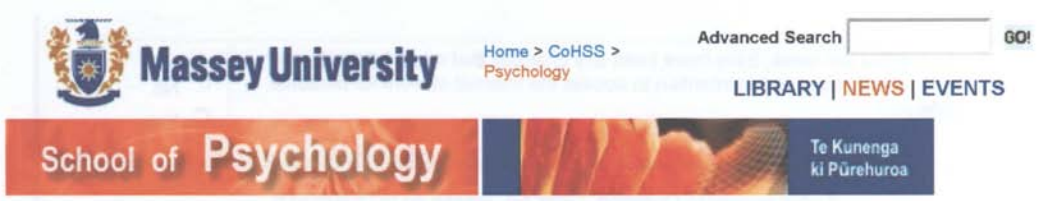
To submit your results, please click on the *Submit this information* button.
If you wish to wipe your answers, click on the *Clear your answers* button.
With submission of your answers, you imply consent to participate in this study.

Submit this information. | Clear your answers.

Without volunteers like yourself, it would not be possible to conduct research like this, which gives us valuable insights into electronic monitoring and Internet use at work.

Thank you very much for your participation in this survey.

Appendix D: Copy of the on-line follow-up questionnaire



Personal Internet Use at the Workplace

School of Psychology
Massey University, New Zealand

Welcome back to our research survey on Personal Internet Use and Electronic Monitoring at work and employees' attitudes to it.

Last week ago you indicated your willingness to participate in this short follow-up survey. It should take you no more than 5 minutes to complete. The replies given in the following questions will be incorporated into the information you have given us before. Of course, you have the right not to answer any of these questions. Rest assured that all data is reported only as group data and neither you nor your answers can be identified, or linked back to you. Your email contact information will be held by an independent webmaster until the conclusion of this follow-up survey, when it will be deleted from all records. It will not be linked to the data you provide and your anonymity in this survey is assured.

If you have any questions about this study you may contact myself (Andrea Polzer-Debruyne) or my supervisor Dr Stuart Carr, at Massey University, College of Humanities and Social Sciences, School of Psychology, Private Bag 102 904, Auckland, New Zealand. Or alternatively via email: a.polzer-debruyne@massey.ac.nz and s.c.carr@massy.ac.nz

A summary of the findings of this research will be made available to you upon completion. If you wish to receive a copy, please contact me via email: Andrea Polzer-Debruyne a.polzer-debruyne@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Protocol No: MUHEC 03/074

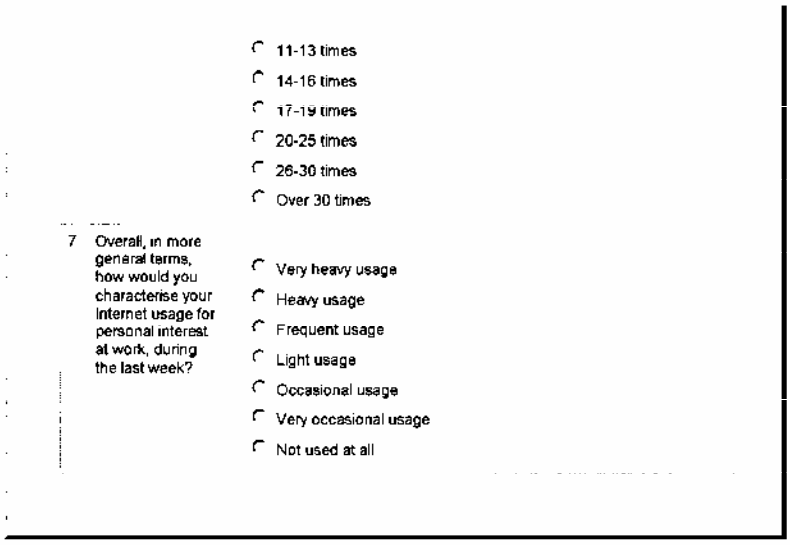
If you have any concerns about the conduct of this research, please contact Professor Brian Murphy, Massey University Campus, Human Ethics Committee: Albany, Tel. 09 414 0800 ext 9251, email B.Murphy@massey.ac.nz

1	Please enter the ID code provided to you in the follow-up email message which directed you to this site..	

2	During the last week, have there been any changes that could have affected your previously reported intention to access the Internet at work for personal interest?	○ No ○ Yes

If your answer to Question 2 was No, please go to Question 6.

3	Please indicate the area(s) in which the changes were most noticeable	☐ Company guidelines ☐ Electronic monitoring ☐ Consequences of Internet use ☐ People important to me ☐ People at work ☐ My supervisor ☐ My subordinates ☐ My work itself ☐ Other
4	Did any of these events change your attitude towards accessing the Internet at work for personal interest?	○ No - please go to Question 6 ○ Yes -Please continue below.
	If Yes, please briefly describe the event, why and how it changed your attitude	
5	Did any of these events change your previously stated intention regarding accessing the Internet at work for personal interest?	○ No ○ Yes
	If Yes, Please briefly describe the event, why and how it changed your attitude	
6	How often have you accessed the Internet at work for personal interest during the last week?	○ Never ○ 0-1 times ○ 2-4 times ○ 5-7 times ○ 8-10 times



- 11-13 times
- 14-16 times
- 17-19 times
- 20-25 times
- 26-30 times
- Over 30 times

7 Overall, in more general terms, how would you characterise your Internet usage for personal interest at work, during the last week?

- Very heavy usage
- Heavy usage
- Frequent usage
- Light usage
- Occasional usage
- Very occasional usage
- Not used at all

To submit your results, please click on the ***Submit this information*** button
If you wish to wipe your answers, click on the ***Clear your answers*** button
With submission of your answers, you imply consent to participate in this study.

[redacted]

Without volunteers like yourself, it would not be possible to conduct research like this, which gives us valuable insights into electronic monitoring and Internet use at work!

Thank you very much for your participation in this survey.

Appendix E: Results of Principal Component Analyses examining the measures in the on-line questionnaire (Ch 5)

E5.3.1 Protocol for PCA investigating the measures

Principal components analysis (PCA) is a statistical technique that linearly transforms an original set of variables into a smaller set of uncorrelated variables representing most of the information of the original variable set in condensed form (Dunteman, 1994). PCA is commonly used in scale development and evaluation.

Because the dataset included a number of randomly missing values, and data analysis with missing values is troublesome, cases with missing values were excluded from the PCA. This is termed listwise deletion of missing values, since a case is eliminated if it has a missing value for any variable on the list. The practice is common in psychometric testing because it stabilises results for a set of items. It also means that items with poor response rates had to be excluded to meet the sample size requirements for PCA.

PCA was used, rather than factor analysis (FA), because it provides an exploratory look at the inter-relationships among the sets of variables believed to be aspects of the measures used. PCA is a multivariate statistical tool that gives a summary overview of what is observed when exploring whether the hypothesized components are accountable for the variation in the data under investigation. PCA tries to explain all the variation in the data. As a consequence, PCA allows the production of new variables as linear functions of the original variables.

In contrast to PCA, FA is based on a statistical model and is more concerned with co-variances between original variables than with explaining variances. FA also tries to describe each of the original variables in terms of a smaller number of latent variables (Tabachnick & Fidell, 1996).

Single factor solutions were expected on theoretical or empirical grounds with two exceptions. These were PWU activities and attitude towards work, where two factors were expected. In some cases exploratory two-factor work lies behind the single factor solutions, for example in the case of attitudes towards the ledger strategy, were the initial factor solution suggested two underlying concepts (attitude towards the ledger strategy based on work issues, attitude towards the strategy based on feelings

about working conditions). However, forcing PCA to calculate a one-factor solution, as theoretically expected, also delivered acceptable results. Therefore the one-factor solution was retained on theoretical grounds.

In the cases of the two factor structures rotation was required and the direct oblimin strategy was adopted. The reason for this choice was that the strategy recognises that subscales within a measure of a unitary construct are likely to be correlated (Tabachnick & Fidell, 1996). Rotation does not change the underlying solution of the factor structure; it rather presents the patterns of loadings in a manner that is easier to interpret.

Items that had PCA factor loadings less than .4 were automatically excluded from further consideration as were items loading onto more than one factor.

E5.3.2 Summary of the PCA results

Table E5.2.1. PCA result for activity type while engaging in PWU in the two weeks prior to completion of the survey (Questions 4-14; Q 8, browsing sexually explicit web sites, is excluded)

Items	Factor 1 Contact-seeking	Factor 2 Information-seeking
Send e-cards	0.79	
Personal, external business	0.75	
Shopping online	0.63	
Non-work related emailing	0.53	
Hotmail, Yahoo etc	0.52	
Research personal hobbies	0.50	
Read news, sports, weather		0.83
View entertainment		0.79
Personal banking		0.51
Travel or recreation arrangements		0.43

N=239. Total variance explained: 48%

Table E5.2.2: PCA result for moral norms regarding PWU (Questions 34, 35, 36)

Items	Factor 1
Would go against principles	0.93
Would feel guilty	0.92
Would be wrong for me	0.92

N=265. Total variance explained: 85.4%

Table E5.2.3: PCA result for acceptance of Ledger neutralisation strategy (Questions 79-84)

Items	Factor 1
Excessive amounts of work without compensation	0.89
Not rewarded for effort	0.81
Extra work due to lack of help and equipment	0.80
Extra time to get job done	0.76
Stressed at work and need to switch off	0.69
Bored in my work	0.49

N=262. Total variance explained: 56.1%

Table E5.2.4: PCA results for work group norm regarding PWU (Questions 39-42)

Items	Factor 1
Supervisor does not mind	0.80
Supervisor engages in PWU	0.79
Colleagues would approve	0.77
Colleagues engage in PWU	0.66

N=257. Total variance explained: 57.80%

Table E5.2.5: PCA results for perceived workload (Questions 69-73)

Items	Factor 1
Job leaves little time to get things done	0.88
Great deal to be done	0.87
Working very hard	0.85
More work than can do well	0.74
Required to work very fast	0.74

N=263. Total variance explained: 67%

Table E5.2.6: PCA results for attitude towards work effort in general (Q's 91-106)

Items	Factor1 Taker	Factor2 Giver
It is really satisfying when I can get something for nothing at work	0.74	
It is the smart employee who gets as much as he/she can while giving as little as possible in return	0.74	
When I am at my job I think of ways to get out	0.72	
Prefer to do as little as possible while getting as much as I can from my employer	0.70	
If I could get away with it, I would try to work just a bit slower than the boss expects		
Most satisfied when I have to do as little as possible	0.57	
All other things being equal it is better to have a job with a lot of duties and responsibilities		-0.82
Better to have a job that requires me to be busy than one that allows loafing		-0.81
I would become dissatisfied if had little work to do		-0.79
I feel uneasy when there is little work to do		-0.73
My greatest concern is whether or not do the best job I can		-0.58

N=262. Total variance explained: 50.6%

Table E5.2.7: PCA results for trait reactance (Questions 107-123)

Items	Factor 1
Advice and recommendations often lead me to doing just the opposite	0.76
If someone pressures me not to do something I want to do it for sure	0.76
I energetically oppose any attempts to influence me	0.75
I react very touchy if someone wants to tell me what I should do or should not do	0.74
Only those things that I do our of my own free will actually turn out well	0.73
I often lose interest in doing things just because it is expected of me by others	0.71
I tend to interpret advice as patronising	0.70
If something is prohibited, I have an attitude of 'now I will do it for sure'	0.69
I react by getting rather touchy when someone tries to curb my freedom in decision making	0.63
I delight in seeing others ignore societal norms and constraints	0.61
It annoys me when I am presented with another person as an example	0.60
To be able to make free and independent decisions is more important to me than to most other people	0.60
With my behaviors I rarely follow the conceptions of others	0.60
Instructions and commitments trigger strong resistance in me	0.53
I like the thrill of opposing others	0.50
I easily mistrust strong praise	0.49
The idea of being dependent on others is very uncomfortable to me	0.41

N=256. Total variance explained: 41.6%

Table E5.2.8: PCA results for perception of supervisor treatment (Questions 85-88)

Items	Factor 1
Supervisor makes effort to deal with me in an honest way	0.91
Supervisor treats me with kindness and consideration	0.90
Supervisor considers my view point	0.90
Supervisor provides me with timely feedback about decisions and their implications	0.80

N=265. Total variance explained: 77.2%

Table E5.2.9: PCA results for attitude towards the PWU management (Questions 51, 52, 57, 58)

Items	Factor 1
Degree of trust in monitoring procedures	0.79
Degree of satisfaction with monitoring procedures	0.78
Degree of satisfaction with PWU guidelines	0.75
Perceived degree of effectiveness of PWU guidelines	0.52

N=201. Total variance explained: 51.6%

Table E5.2.10: PCA results for boredom at work (Questions 59-66)

Items	Factor 1
There are long periods of boredom at my work	0.90
Time seems to go by slowly at work	0.90
My work goes by too slowly	0.90
I find my job dull	0.88
My work is monotonous	0.85
I often get bored at work	0.82
The job seems to be repetitive	0.82
I get mentally sluggish during the day	0.67

N=260. Total variance explained: 71.4%

Appendix F: Cross-tabulations and box plots of participants' PWU patterns (CH6)

Table F6.1: PWU Frequency*PWU habit frequency cross-tabulation

		PWU average habit						Total
		never	only once	2-4 times	5-10 times	11-20 times	over 20 times	
PWU Frequency	almost never (1)	11	11	3	0	0	0	25
		44.0%	44.0%	12.0%	.0%	.0%	.0%	100.0%
	2-7 times (2)	6	12	49	9	1	0	77
		7.8%	15.6%	63.6%	11.7%	1.3%	.0%	100.0%
	8-25 times (3)	5	0	10	37	14	3	69
		7.2%	.0%	14.5%	53.6%	20.3%	4.3%	100.0%
	over 25 times (4)	0	0	1	4	9	15	29
		.0%	.0%	3.4%	13.8%	31.0%	51.7%	100.0%
Total		22	23	63	50	24	18	200
		11.0%	11.5%	31.5%	25.0%	12.0%	9.0%	100.0%

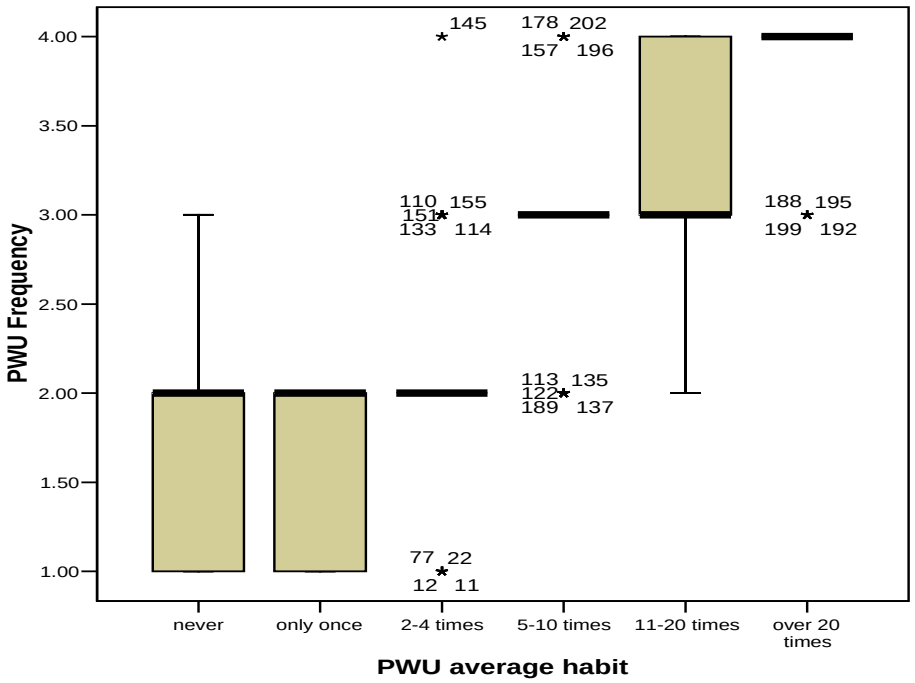


Figure F6.1: Boxplot of the PWU frequency – PWU habit relationship

Table F6.2: PWU frequency*PWU average duration cross-tabulation

		PWU average duration					Total
		virtually never	up to half an hour	up to one hour	up to two hours	over two hours	
PWU Frequency	almost never (1)	17	5	2	1	0	25
		50.0%	9.3%	5.0%	3.4%	.0%	12.5%
	2-7 times (2)	13	37	16	7	4	77
		38.2%	68.5%	40.0%	24.1%	9.3%	38.5%
	8-25 times (3)	4	12	20	11	22	69
		11.8%	22.2%	50.0%	37.9%	51.2%	34.5%
	over 25 times (4)	0	0	2	10	17	29
		.0%	.0%	5.0%	34.5%	39.5%	14.5%
Total		34	54	40	29	43	200
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

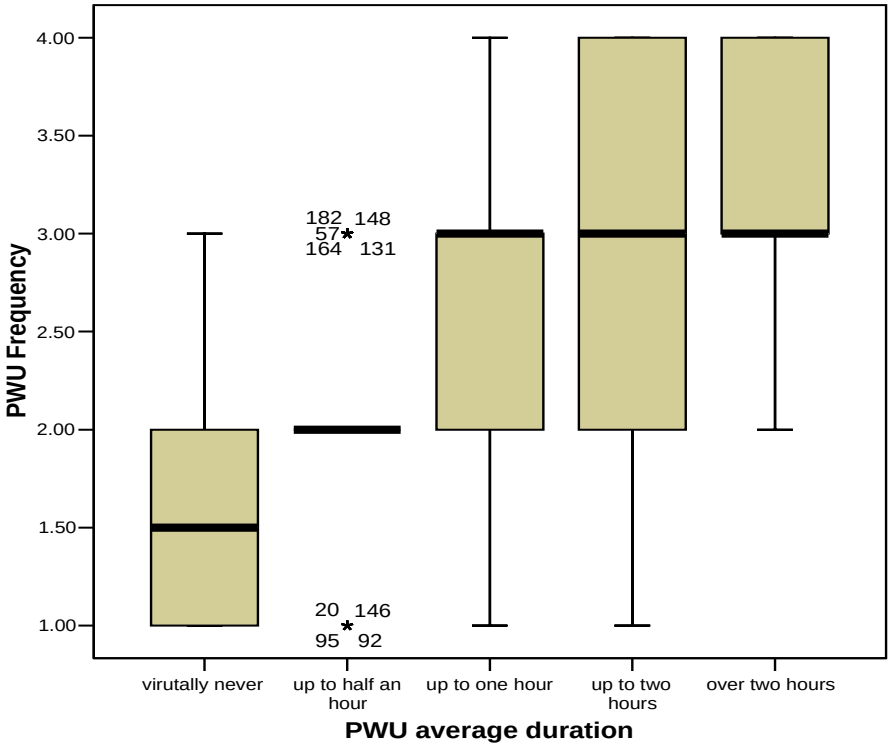


Figure F6.2: Boxplot of the PWU frequency–PWU average duration relationship

Table F6.3: PWU average duration*PWU average habit cross-tabulation

		PWU average duration					Total
		virtually never	up to half an hour	up to one hour	up to two hours	over two hours	
PWU average habit	Never (1)	14	4	2	1	1	22
		41.2%	7.4%	5.0%	3.4%	2.3%	11.0%
	only once (2)	9	10	3	1	0	23
		26.5%	18.5%	7.5%	3.4%	.0%	11.5%
	2-4 times (3)	10	27	15	7	4	63
		29.4%	50.0%	37.5%	24.1%	9.3%	31.5%
	5-10 times (4)	1	11	14	9	15	50
		2.9%	20.4%	35.0%	31.0%	34.9%	25.0%
	11-20 times (5)	0	2	5	7	10	24
		.0%	3.7%	12.5%	24.1%	23.3%	12.0%
	over 20 times (6)	0	0	1	4	13	18
		.0%	.0%	2.5%	13.8%	30.2%	9.0%
Total		34	54	40	29	43	200
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

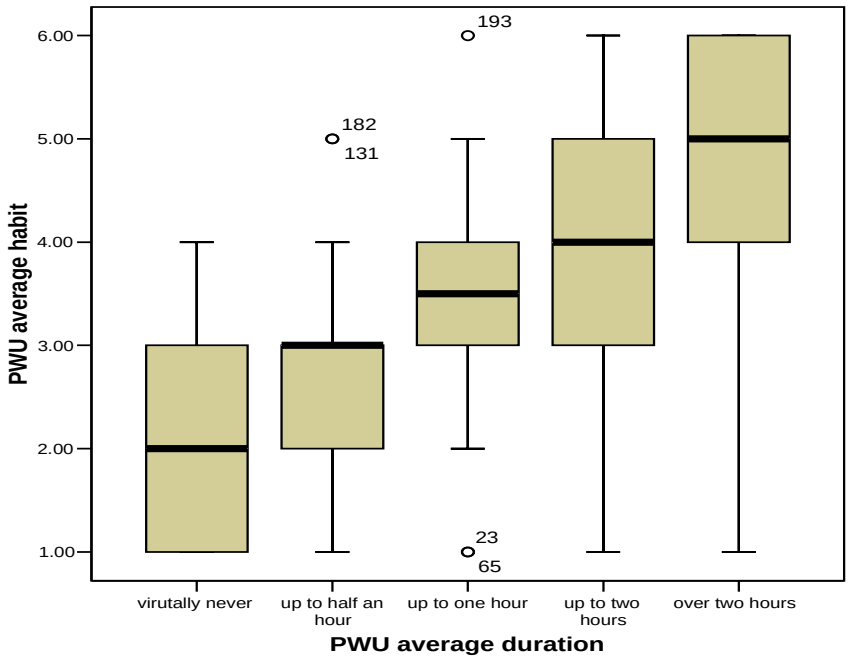


Figure F6.3: **Box plot of the PWU average habitual frequency–PWU average duration relationship**

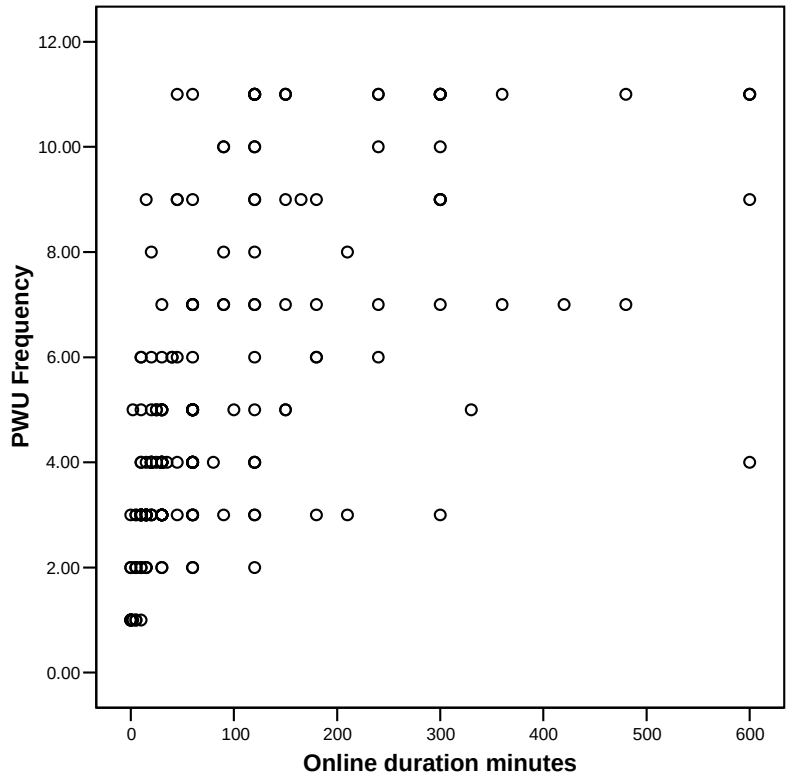


Figure F6.4: Scatterplot of the non-manipulated PWU frequency and online duration (in minutes) data

Appendix G: Trimmed model regression results and summary of supported hypotheses (Ch 7)

Table G7.1: Summarising the results of the trimmed model regression examining the Boredom*Giver interaction for PWU frequency (N=259)

Variable	B	SE B	ß	p
Moral norms	-.18	.03	-.35	<.001
Boredom	.16	.03	.25	<.001
Giver attitude	-.02	.07	-.02	.79
Job status	-.07	.04	-.11	.06
Job tenure	-.08	.03	-.16	<.01
Boredom * Giver	-.11	.05	-.13	.02
Adjusted R^2 = .26, F(258) = 15.62				<.001

Table G7.2: Summary of the multiple regression analysis results for the trimmed model of variables predicting average habitual PWU frequency (N=259)

Variable	B	SE B	ß	p
Moral norms	-.28	.05	-.34	<.001
Workload	-.03	.10	-.02	.72
Boredom	.23	.07	.24	<.001
Giver attitude	.08	.12	.04	.52
Job tenure	-.17	.05	-.21	<.001
Workload * Giver	.22	.12	.11	.06
Adjusted R^2 = .22, F(258) = 12.99				<.001

Table G7.3: Summarising the results of the trimmed model regression examining the interactions of Moral norms * Ledger acceptance, and Boredom * Job status for IPWU frequency (N=257)

Variable	B	SE B	ß	p
Moral norms	-.20	.04	-.28	<.001
Boredom	.17	.05	.19	<.01
Acceptance of ledger strategy	.17	.06	.18	<.01
Job status	.01	.05	.01	.82
Moral norms * Ledger	.07	.03	.14	.01
Boredom * Status	-.08	.03	-.15	.01
Adjusted R^2 = .21, F(256) = 12.14				<.001

Table G7.4: Summarising the hypotheses and showing which were supported by the study's data

Hypothesis	PWU measure	Main effect	Interaction effect
H1: Increasing acceptance of PWU predisposes to increases in PWU. This moral norm-PWU link is moderated by acceptance of the ledger strategy	PWU frequency	Supported	
	PWU habit	Supported	
	PWU duration	Supported	
	CPWU	Supported	
	IPWU	Supported	Supported
H2: Increasing approval of PWU by work group predisposes to increases in PWU. This workgroup norm-PWU link is moderated by level of certainty about the PWU rules	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H3a(new): Increasing workload predisposes to increases in PWU. This link between workload and PWU is moderated by giver attitude to Work effort	PWU frequency		
	PWU habit		Supported
	PWU duration		
	CPWU		
	IPWU		
H3b(new): The link between workload and PWU is moderated by taker attitude to work effort	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H3c: The link between workload and PWU is moderated by trait reactance	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H3d: The link between workload and PWU is moderated by attitude towards the treatment received by one's supervisor	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		

Table G7.4: continued

Hypothesis	PWU measure	Main effect	Interaction effect
H3e: The link between workload and PWU is moderated by attitude towards PWU management	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H4a(new): Increases in boredom predispose to increases in PWU. This boredom-PWU link is moderated by giver attitude	PWU frequency	Supported	Supported
	PWU habit	Supported	
	PWU duration	Supported	
	CPWU	Supported	
	IPWU	Supported	
H4b(new): The boredom-PWU link is moderated by taker attitude	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H4c: The boredom-PWU link is moderated by job status	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		Supported
H4d: The boredom-PWU link is moderated by job tenure	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		
H4e: The boredom-PWU link is moderated by social loafing risk	PWU frequency		
	PWU habit		
	PWU duration		
	CPWU		
	IPWU		

Appendix H: Demographics and t-test results (Ch 8)

Table H8.1 Demographics of respondents who commented in Q's 135 and / or 136 (N=119)

Variable		Frequency (n)	Valid percent (%)
Gender	(0 missing)		
	Males	54	45.4
	Females	65	54.6
Age	(2 missing)		
	20-25	9	7.7
	26-30	19	16.2
	31-35	23	19.7
	36-40	12	10.3
	41-45	12	10.3
	46-50	17	14.5
	51-55	11	9.4
	56-60	11	9.4
	60+	3	2.6
Ethnicity	(23 missing)		
	NZ European	42	43.8
	European	23	24.0
	New Zealander	14	14.6
	Others (individually identified)	17	17.6
Place of work	(4 missing)		
	University	42	36.5
	Professional services	13	11.3
	Government	10	8.6
	IT/ Telecommunication	9	7.8
	Education / Training	5	4.3
	Healthcare	8	7.0
	Hospitality / Tourism	4	3.5
	Media	7	6.1
	Banking / Finance	8	7.0
	Legal professions	2	1.8
	Engineering	1	0.9
	Research institutes	3	2.6
Tenure			
	3 months and under	5	4.2
	4-6 months	8	6.7
	7-12 months	15	12.6
	13-30 months	36	30.3
	31-60 months	19	16.0
	61-96 months	12	10.1
	97-180 months	15	12.6
	< 180 months	9	7.6

Table H8.2: Means, standard deviations and t-tests of variables relevant to the thematic analysis for respondents and non-respondents

	Comment made yes(1) or no(2)	Mean	Std. Deviation	Std. Error Mean	t-statistics respondents and non-respondents
PWU frequency	1	2.47	.87	.08	
	2	2.62	.95	.08	
					t(265) = -1.351, p=.178
Habit frequency	1	3.49	1.44	.13	
	2	3.51	1.52	.12	
					t(265) = -.137, p=.891
PWU duration	1	3.01	1.41	.13	
	2	3.06	1.41	.11	
					t(261)= -.279, p=.780
Companionship - related PWU	1	3.30	1.19	.11	
	2	3.25	1.35	.11	
					t(263) = .278, p=.781
Information - seeking PWU	1	3.25	1.27	.12	
	2	3.34	1.30	.11	
					t(262) = -.547, p=.585
Moral norms	1	3.38	1.73	.16	
	2	3.79	1.84	.15	
					t(251.6) = -1.840, p=.067
Workplace boredom	1	3.34	1.37	.13	
	2	3.49	1.57	.13	
					t(258) = -.828, p=.409
Attitude to PWU management	1	4.50	.82	.08	
	2	4.38	.77	.06	
					t(250)=1.144, p=.254
Attitude to supervisor	1	5.53	1.25	1.21	
	2	5.51	1.13	.09	
					t(250)=.176, p=.860
Certainty about PWU	1	1.33	.28	.03	
	2	1.37	.31	.03	
					t(265) = -1.144, p=.254

Table H8.2 continued

	Comment made yes(1) or no(2)	Mean	Std. Deviation	Std. Error Mean	t-statistics respondents vs. non-respondents
Gender	1	1.57	.50	.05	
	2	1.62	.49	.04	
					t(265) = -.835, p=.405
Age groups	1	4.49	2.25	.21	
	2	4.42	2.35	.19	
					t(260) = .247, p=.805
Cultural grouping	1	2.48	2.30	.24	
	2	3.36	10.25	.93	
					t(211) = -.803), p=.423
Job status	1	3.25	1.41	.13	
	2	2.93	1.55	.13	
					t(265) = 1.731, p=.085
Job tenure	1	4.70	1.83	.17	
	2	4.71	1.77	.14	
					t(264) = -.039, p=.969
Type of organisation	1	5.14	4.72	.51	
	2	4.90	4.64	.43	
					t(2630) = .352, p=.725

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