# Taking leisure seriously:

# An investigation of leisure to work enrichment

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# Abstract

Leisure is under-researched in the enrichment and work-life interface literature, despite the fact that it is an increasingly valued life domain among employees. This thesis seeks to address the lack of work in this area by examining the effects of leisure on work through the lens of serious leisure.

This thesis has three principal aims: 1) To examine whether serious leisure generates psychological and affective resources 2) To examine whether serious leisure activities improve work performance via these psychological resources 3) To explore the impact of individual episodes of serious leisure activity on work performance and compare this to the impact of habitual patterns of engagement over a longer time scale. I refer to these different approaches as episodic and habitual serious leisure respectively.

To address the aims of the thesis I carried out a 10-day daily diary to assess the effects of episodic serious leisure, and a monthly survey over 7 months to assess habitual serious leisure. I found that serious leisure was related to increased self-efficacy, but the pattern of enrichment was different for episodic verses habitual leisure. There was a direct positive effect of time spent in episodic serious leisure on self-efficacy. In contrast to this, the effect of time spent in habitual leisure on self-efficacy was only present for individuals when their work roles were less similar to their leisure roles. I also found differences in the relationship between serious leisure and work and the relationship between casual leisure and work.

These findings indicate that leisure is an influential non-work activity for work-life enrichment and our understanding of these relationships is improved by considering the meaning and motivation behind the pursuit of leisure. Additionally this thesis highlights the importance of considering the time scales which are involved in the process of enrichment.

# Conference papers and posters arising from this thesis

**Kelly, C.**, Strauss, K., & Arnold, J. (2013) "Can leisure fuel proactive work behaviour?" Poster presented at the *White Rose Doctoral Conference*, Leeds, UK.

**Kelly, C.**, Strauss, K., & Arnold, J. (2013) "Resource management across leisure and work domains". Poster presented at the *6th Annual Positive Occupational Health Psychology Conference*, Leuven, Belgium.

**Kelly, C.**, (2014). Is mastery a risky recovery strategy? A proposition of two potential moderators between mastery experiences and recovery. Paper presented at the *Institute of Work Psychology International Conference*, Sheffield.

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"The secret of being miserable is to have leisure to bother about whether you are happy or not. The cure for it is occupation, because occupation means pre-occupation; and the pre-occupied person is neither happy nor unhappy, but simply alive and active. That is why it is necessary to happiness that one should be tired."

G B Shaw

"We do not know a man until we know how he spends his leisure."

 L Yutang, "The Importance of Living"

# Chapter 1: Thesis Overview

This thesis examines the experiences which people seek in their leisure time and how those experiences influence their working lives. Leisure was previously a vibrant topic of research during the time when researchers assumed that the increasing levels of automation of work would rapidly lead to vast increases in the volume of time available for leisure (Haworth & Lewis, 2005). This expectation led to an interest in how to maintain a sense of purpose and well-being within society without the structure of paid work. Additionally there was an optimistic sense of opportunity for humans to engage in more creative and innovative behaviour, particularly those behaviours which would enhance our collective well-being (Haworth & Lewis, 2005). While there has been an increase in leisure time over the past five decades (Aguiar & Hurst, 2007), it has not approached the level of gains that had been forecasted. As a result leisure and its interactions with work is a topic which has been relatively neglected.

This thesis seeks to address this issue by examining the enriching effects of leisure on work and employing the concept of serious leisure to examine these effects. To do this I apply the enrichment framework created by Greenhaus and Powell (2006) to identify the resources which may be generated by engaging in serious leisure. I focus on the within-person process which is characterised by the effects that varying patterns of leisure pursuit over time have on individuals. For example, I investigate the effects of spending more or less time than usual in a serious leisure activity on the following day's work. By taking a within-person

view of the enriching effects of leisure this research seeks to move our understanding of enrichment beyond that reached through previous examinations of leisure and work, which relied heavily on between-person differences (Maertz & Boyar, 2010). At the same time this thesis adds to research on recovery from work by providing an additional lens, that of serious leisure, to the way we examine daily experiences outside of work.

This remainder of this chapter summarises each chapter of the thesis to provide an outline of the body of work including the data collected and conclusions drawn.

Chapter 2 of the thesis outlines the background literature on leisure and the work-life interface. It begins with an explanation of the evolution of work-life interface research from family conflict to enrichment and then identifies leisure as an area which is  important to employees and yet under-researched as topic for work-life interface, and enrichment more specifically. In the latter part of this chapter I review what research there is on the influence of leisure on work and propose that this line of research would be improved by drawing more from leisure-specific literature. I reviewed a range of leisure definitions, typologies and categorisations and introduce the concept of serious leisure and how it relates to work. The end of this chapter introduces the research questions of this thesis in the context of the literature already reviewed.

Chapter 3 introduces episodic and habitual leisure as an approach to examining leisure work enrichment with a discussion on the relevance of time

scales in the examination of processes such as enrichment. I review resource theories to establish the motivating and behavioural effects of resource gain and resource loss and discuss why serious leisure may result in the creation of resources based on Conservation of Resource theory. I also examine alternative resources theories and suggest that episodic and habitual leisure may have different patterns of enrichment due to potential differences in the process over multiple time scales. I then review the literature on episodic leisure and enrichment with a focus on the influence of mastery experiences within studies of daily work recovery. Finally I contrast this with a review of habitual leisure to work enrichment research.

Chapter 4 details the methodology chosen to investigate the research questions outlined in Chapter 2. It includes a discussion of the philosophical underpinnings of the chosen approach and discusses the utility of intensive longitudinal methods for the study of within-person research questions. The latter part of this chapter outlines the procedures used to recruit participants and collect data, including detailed information on the scales used in each study.

Chapter 5 is the first of my empirical chapters and outlines Study 1, the study of episodic serious leisure. This is a ten day diary study of individuals' episodic experience of serious and casual leisure. It outlines a model of episodic serious leisure to work enrichment, which includes an instrumental, affective, and cognitive affective pathway.

Chapter 6 is the second empirical chapter and documents Study 2, an investigation of habitual serious leisure. This is a longitudinal study over 7 months which examines how time spent over the course of a month impacts resources and work behaviours. The findings from this study are contrasted with those of the episodic study to gain insight into potential differences across these times scales.

Chapter 7 is the final chapter and includes a summary and discussion of the findings of both longitudinal studies. It then discusses the theoretical implications of these findings for enrichment theory and the field of leisure research. There is a short discussion of methodological contributions followed by the practical implications and limitations identified during the research process.

# Chapter 2: Work-life Interface; Enrichment and the Leisure Domain

Throughout the late 20th century, work-family conflict had been the dominant focus of the work-life interface research (Barnett, 1998). This was partly attributable to changing demographics in the workplace and changing gender roles in society (Barnett & Hyde, 2001). For example, this period marked the beginning of the trend for women to remain in the workplace following marriage and parenthood (Gordon & Kammeyer, 1980). Consequently, the number and content of life roles that workers were taking on also began to change. This was reflected in increasing interest within the academic literature in the potential impacts of these changes on families, societies and the workplace and an appreciation of an emerging need for new models of work-life interaction which incorporated these changes (Greenhaus & Beutell, 1985). The most pressing consequence of changing roles was the potential conflict between the demands of the family and the workplace (Greenhaus & Beutell, 1985).

However, during this time it was also suggested that the benefits of multiple roles should not be overlooked (Seiber, 1974) and researchers began to theorise and investigate potential gains resulting from engaging in multiple life domains. This investigation of the potential positive interactions between work and other aspects of life was further bolstered by the advancement of the positive psychology movement, which focuses its efforts on understanding causal processes which underpin human thriving, rather than focusing exclusively on the alleviation of suffering (Seligman & Csikszentmihalyi, 2000).

## 2.1 Enrichment

The process of generating gains as a result of engaging in roles and activities across multiple domains (e.g. work, family, leisure) has been approached using a number of concepts, the principal three being enrichment, facilitation and positive spillover.

Greenhaus and Powell's (2006) model of enrichment describes how performance-enhancing resources can be generated and applied by individuals in multiple domains. In this model they define enrichment as "the extent to which experiences in one role improve the quality of life in the other role" (Greenhaus & Powell, 2006, p. 73). The enrichment model explains positive outcomes of work-life interface as a process where resources and affect move between domains.

Positive spillover can be seen as a subtype of enrichment. Spillover relates to the effect of one domain mirroring another domain in terms of behaviours and outcomes for an individual (Edwards & Rothbard, 2000; Staines, 1980). For example an individual may find that his or her family responsibilities require high levels of personal organisation and that this behaviour becomes a habit that they begin to apply in their work role (Ruderman, Ohlott, Panzer, & King, 2002). Affective spillover refers to moods which are generated in one domain but persist when an individual engages in another domain. For example, when a sales rep is in a good mood as a result of winning a contract, this good mood may persist throughout the evening as a result of affective spillover. The concept of spillover is largely subsumed within Greenhaus and Powell's (2006) model of enrichment. Beneficial behaviours, cognitions and values, which spill

over from one domain to another are regarded as resources, which are instrumental in producing the effects of enrichment. Similarly affective spillover is included as a specific pathway to achieving enrichment, where positive mood generated in one domain facilitates performance in another domain (see Figure 1).

Like enrichment and spillover, facilitation between life domains also seeks to explain personal gains for individuals (Hanson, Hammer, & Colton, 2006). However in contrast to enrichment and spillover, facilitation includes the advantages created for the entire system around an individual as a result of their involvement in multiple domains (Wayne, Grzywacz, Carlson, & Kacmar, 2007). As such facilitation as a concept goes beyond the individual when examining work-life interaction, and encompasses multiple levels of analysis.

This thesis applies the theoretical framework of enrichment, rather than facilitation or spillover, to an examination of the positive interaction between leisure and work. The terms facilitation and spillover have, at times, been used interchangeably with enrichment (Wayne et al., 2007). However as enrichment theory combines elements of facilitation and spillover it is generally considered the dominant construct for explaining the positive interactions between life domains (Crain & Hammer, 2013; Maertz & Boyar, 2010). It is particularly appropriate in this instance as this thesis examines the effects of leisure on individuals' work performance, which is conceptualised at the individual level of analysis.

The introduction of a model of enrichment between work and non-work was intended to facilitate a more balanced investigation of the interaction between domains, particularly work and family (Greenhaus & Powell, 2006). Due to the nascent nature of enrichment research much of the empirical work in this area has focused on establishing the phenomenon in the field and identifying family and work factors which act as antecedents and outcomes. A recent meta-analysis (McNall, Nicklin, & Masuda, 2010) and systematic review of work-family enrichment (Crain & Hammer, 2013) have gathered this empirical work, establishing the effects of enrichment between life domains. The meta-analysis included a variety of measures of enrichment and found that enrichment from work to family (WFE) and family to work (FWE) has positive associations with job satisfaction, affective job commitment and family satisfaction (McNall et al., 2010). The effect sizes between the types of enrichment and outcomes ranged from small to large and were stronger when the originating domain matched the outcome domain, i.e. family to work enrichment was more strongly associated with family satisfaction than work to family enrichment.

Individual studies have also reported that work-family and family-work enrichment is positively associated with work behaviours such as organisational citizenship behaviours (Bhargava & Baral, 2009) and work effort (Wayne, Musisca, & Fleeson, 2004), and personal outcomes such as vigor (Cinamon & Rich, 2010), positive mood (Carlson, Hunter, Ferguson, & Whitten, 2011; Carlson, Zivnuska, Kacmar, Ferguson, & Whitten, 2011), stamina (van Steenbergen & Ellemers, 2009) and overall health (Stoddard & Madsen, 2007).

Despite the generally positive findings relating to enrichment research much of the work has been cross-sectional and almost exclusively focuses on the family domain (Crain & Hammer, 2013). Therefore there is much knowledge still to be gained by focusing on the broader elements of individuals' non-work lives, specifically those within the domain of leisure.

2.1.2 The relationship between enrichment and conflict

Enrichment theory suggests that there is potentially an abundance of resources that can flow between domains and accumulate in a positive spiral (Greenhaus & Powell, 2006). In contrast to this, conflict emerges when resources are limited and this scarcity approach to the work home interface focuses on the process of dividing these resources between valued domains. When enrichment and conflict have been examined simultaneously there is evidence that they are not two ends of a continuum but parallel pathways which can operate simultaneously (Z. Chen & Powell, 2012; Z. Chen, Powell, & Cui, 2014). This means there are multiple ways in which domains can interact. Individuals may experience both enrichment and conflict between two domains simultaneously, they may experience enrichment of resources as a buffer against conflict and they may find that despite experiencing enrichment there may be an overall negative relationship between domains when the conflicting demands outweigh the positive (Weer, Greenhaus, & Linnehan, 2010).

## 2.2 A critical view of enrichment research

Greenhaus and Powell outline two pathways through which resources can be transferred between work and non-work roles; an instrumental and an affective path (see Figure 1). The instrumental pathway (Pathway 1 in Figure 1) operates by directly applying the resources generated through the enactment of one role to enrich the performance within a second role. For example, leadership skills developed through captaining a football team could be used to improve performance within a supervisory role at work. This is a direct application of resources from one domain to another. The second pathway to enrichment is via affective experiences. Emotions generated in one domain of life can spill over into other domains, influencing experiences and behaviour (Edwards & Rothbard, 2000). The affective pathway operates via two processes. Positive affect is experienced when an individual performs well in their role (Greenhaus & Powell, 2006) or when they perceive themselves to have accumulated valued resources (Hobfoll, 1989).
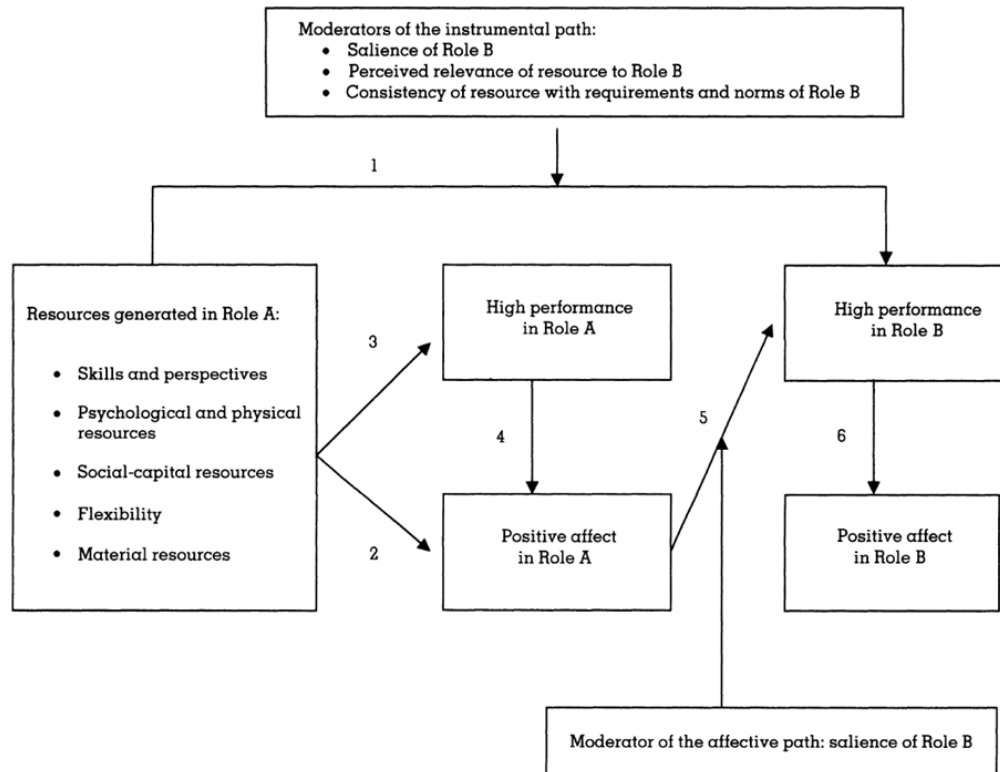
**Figure 1 Work Enrichment Model** Reprinted from Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, *31*(1), 72–92. Copyright 2006 Academy of Management Review

Currently the model suggests that the enrichment process is the same for all non-work roles and the foundations of the model draw heavily from the work-family literature. In this thesis I outline a model which draws from Greenhaus and Powell but considers the role of leisure in the enrichment process. The domain of leisure is increasingly relevant due to changing employee values and demographics. For example, generation Y individuals (i.e. those born between 1982 and 1999) have been found to value leisure more highly than previous generations (Twenge, Campbell, Hoffman, & Lance, 2010). Their romantic partnerships are shorter in duration and begin later in life, and in a similar vein they are waiting longer than previous generations before having children

(Beaujouan & Ní Bhrolcháin, 2011). The implication of these trends is that there are increasing numbers of employees who are not dealing with the same family issues as they would have been in the past, while at the same time they increasingly value their leisure time. In the future organisations will thus require a sound understanding of how leisure and work interact when planning talent recruitment and retention. The interface between leisure and work thus represents a pressing research lacuna (Hall, Kossek, Briscoe, Pichler, & Lee, 2013; V. A. Parker & Hall, 1992).

Additionally field research has indicated a need for a fuller representation of life beyond work and family in order to interpret and predict the impacts of different domains. For example, when researchers mapped the full range of demands and resources affecting the work-life fit of Australian construction workers within the categories of work, family and community domains they found that these categories did not adequately account for the full range of relevant influences reported by participants. As a result they included a fourth "personal domain" (Turner & Lingard, 2014, p. 6) which included "undertaking health and fitness activities, participating in self-interest activities and time for self". The need to create a more nuanced view of the non-work domain has been noted by Parker and Hall (1992) and Hall, Kossek, Briscoe, Pitcher and Lee (2013). Accordingly, this thesis seeks to address this need by expanding our knowledge of individuals' non-work lives beyond work-family research.

There are also conceptual issues raised from the measurement, and therefore interpretation of enrichment in past research. Conceptually, enrichment

is a multistep process which involves spending time in a role in the originating domain (e.g. parent). This role involvement produces resources, which are applied to the target domain. This application of resources should result in improved outcomes in the target domain in order for enrichment to have occurred. Quantitative studies of enrichment have predominantly assessed the whole enrichment process within a single measure. For example a popular scale of enrichment developed by Carlson, Kacmar, Wayne, and Grzywacz (2006, p.144) assesses resource generation in the originating domain, as well as improved functioning in the target domain (e.g. "my involvement in my work [originating domain] helps me to develop my abilities [resource generation] and this helps me be a better family member [improved performance]"). Other measures assess whether resources are created in the originating domain which are generally useful for the target domain (e.g. "Being a parent develops skills in me that are useful at work" Kirchmeyer, 1992a, p794). These measures which only assess whether the resources created are generally useful for the target domain have been criticised because they do not assess whether the application of resources has actually resulted in improved functioning. Thus they do not address the full concept of enrichment based on Greenhaus and Powell's (2006) definition (Carlson et al., 2006). Due to the potential mix of originating domains (including work, family, home, leisure, personal), resources created (e.g. skills, status, behaviours, mood, security, confidence) and conceptualisation of improved functioning in the target domain, the existing research on enrichment is conceptually difficult to synthesise (McNall et al., 2010).

One of the aims of this thesis is to investigate enrichment by disaggregating these elements of enrichment and assessing the relationships between them separately, in order to avoid a reliance on individuals' innate beliefs about the enrichment process. This will be discussed further during the introduction of resource theories in Chapter 3.

The following sections examine the phenomenon of the leisure-work interface more closely to provide a frame of reference for how leisure-work enrichment can tell us more about the work-life interface. To do this I will 1) discuss past research on leisure and work from psychology and management and then discuss the ways leisure is conceptualised within the field of leisure research. In Chapter 3 I will discuss how theories of resource creation may move this research forward and introduce the concepts of episodic and habitual serious leisure. This work will address the lack of existing enrichment research regarding the time scales required for successful production, transfer and application of resources between domains.

## 2.3 Research on leisure-work interface

As noted in the introduction, work-life interface researchers have been more active in examining whether and how family commitments rather than leisure activities influence working lives. There was however a concentrated burst of interest in the links between work and leisure beginning in the 1970s. According to Haworth and Veal (2004, p. 3) "the work–leisure nexus was pushed to the fore because of issues raised by the emerging abundance of leisure" at this

time. This research stream sought to identify a single dominant pattern of the interaction between leisure and work (Banner & LaVan, 1985; Kabanoff, 1986; Kirchmeyer, 1992a; Kirkcaldy, Shepard, & Cooper, 1993; Near & Sorcinelli, 1986; Staines, 1980). Empirical studies reported mixed results regarding how people experience and manage the interface between their work and leisure. This may be due in part to differences in the variables which were compared across domains. Some studies compared characteristics of the job and leisure activity such as level of competitiveness (Kirkcaldy & Cooper, 1992; Kirkcaldy, Shepard, & Cooper, 1993), while other studies focused on attitudes, such as work and leisure satisfaction (Banner & LaVan, 1985; Near & Sorcinelli, 1986). The difficulty in ascertaining clear patterns of behaviour and preferences between individuals' leisure and work led to calls for increased theoretical clarity on the nature of the leisure work interface (Banner, 1985) and for studies which examined whether there were identifiable conditions under which multiple patterns of interaction between work and leisure could be isolated (Elizur, 1991; Snir & Harpaz, 2002). These calls indicate that research in this area would benefit from a framework which outlines the conditions under which different patterns of interaction may be expected between leisure and work. This thesis will seek to address this by examining the type of leisure which fosters enrichment and key boundary conditions which may influence the process.

More recent research, within the management and psychology literature, addresses how leisure influences work by including leisure as a domain of interest along with other non-work domains, such as family. This approach represents a

broader examination of the non-work domain, rather than a specific focus on the effects of leisure. A strong theme in this literature is the investigation of multiple roles and the impact that these have on work performance and life satisfaction. These studies provide some insight into the process of work-life enrichment beyond family.

### 2.3.1 Recreation, memberships and personal benefit activities

In a cross-sectional study, Kirchmeyer (1992b) examined the role of identity in the relationship between the domains of recreation and work. In this study recreation was defined as "involvement in recognized groups such as sports teams, social clubs, and hobby associations". Kirchmeyer (1992b, p.781) tested whether quality and not just quantity of life roles would influence the effects from role accumulation in a small sample of 110 alumni of a Canadian business school. The results showed that the extent to which participants felt their identity was related to their involvement in recreation was positively correlated with their perceptions of resource enrichment, i.e. the extent to which they felt resources generated in their recreation were positively influencing their work role.

In a similar study Allis and O'Driscoll (2008) investigated the relationships between psychological involvement in personal benefit activities and enrichment of work in 938 New Zealand local government employees. "Personal benefit activities" is a wide category that covers a number of leisure related non-work activities such as "physical fitness, maintaining one's health, spiritual commitments, hobbies, craft work, reading, and study" (Allis & Driscoll, 2008, p. 275). Psychological involvement refers to an individual's engagement with a

particular domain. It can also be referred to as commitment or investment. Enrichment was operationalised using the same measure as Kirchmeyer's (1992a) study of recreation and enrichment where enrichment involves increased role privileges, status security, status enhancement and enrichment of personality. The authors found that psychological involvement in personal benefit activities was positively related to resource enrichment in terms of feelings of enhanced role privileges, status security, status enhancement and enrichment of personality and skills. However, they found no direct relationship between individuals' psychological involvement in personal benefit activities and workplace well-being, despite the reported increase in work related resources.

The role of identity in the work-life interface was also investigated by Weer, Greenhaus and Linnehan (2010). They assessed whether high commitment to *multiple* non-work roles (family, community, student, leisure and religious roles) would result in increased enrichment and conflict between domains. In order to assess multiple role commitment they created an aggregate measure of overall commitment across multiple roles. This was the aggregate score created from commitment ratings to family, community, religious, student, and leisure roles. The study was designed to test the competing scarcity and abundance hypotheses of commitment to multiple roles. The scarcity hypothesis proposes that the resources necessary for performance and well-being are fixed and therefore increasing commitments and involvement will deplete resources, causing conflict. In contrast to this the abundance hypothesis suggests that resources can be generated via domain involvement and that this can increase the overall ability to

deal with increasing demands caused by increasing commitments (Marks, 1977). Weer et al. (2010) found that higher overall commitment in the non-work domain was related to higher resource acquisition and this mediated the positive relationship with job performance, indicating that non-work to work enrichment is boosted by increasing the number of roles, favouring the abundance hypothesis. However, unlike other studies (Allis & Driscoll, 2008; Kirchmeyer, 1992b) this paper does not distinguish between the influence of different non-work roles, making it difficult to determine the specific impact of the leisure domain on the enrichment process.

The influence of identity relevant leisure engagement on work was also uncovered in a qualitative study of multiple callings. Callings were defined as "an occupation that an individual (1) feels drawn to pursue, (2) expects to be intrinsically enjoyable and meaningful, and (3) sees as a central part of his or her identity" (Berg, Grant, & Johnson, 2010, p. 973). In cases where individuals felt they had multiple callings, or callings they had not pursued in the work domain, they provided examples of pursuing these activities in their leisure time. Some participants went even further and provided examples of how they drew skills and perspectives from their leisure activities and applied them to their jobs in ways they felt were beneficial for their performance. For example, an amateur musician described how he used his stage craft to better engage his students in his professional teaching role (Berg, Grant, & Johnson, 2010, p.982).

In summary, the scarce research on leisure to work enrichment suggests that high involvement, commitment  and identification  with leisure increases

experiences of enrichment (Allis & Driscoll, 2008; Kirchmeyer, 1992a, 1992b), commitment to multiple roles is related to resource acquisition, performance and well-being (Weer et al., 2010) and sports, recreation and fitness are related to positive emotional spillover (Hecht & Boies, 2009).

These studies provide support for a relationship between individuals' experience of leisure and their work attitudes and experiences, but suggest that this relationship is nuanced. No connection was found between personal benefit activities and workplace well-being, yet there is evidence for a relationship between personal benefit activities and enrichment, and enrichment and workplace wellbeing (Allis & Driscoll, 2008). The cross-sectional designs employed in these studies further compound the difficulty in interpreting the results in relation to their theoretical frameworks. With the exception of Weer et al., (2010) the enrichment studies use measures of enrichment which rely on the perceptions of participants of the extent to which benefits are drawn from specific domains. They can only provide preliminary information about the nature of the relationship between work and non-work domains, as they lack specificity regarding leisure, in addition to raising questions over the temporal order of the causal processes. However, the positive relationships involving psychological involvement, and the examples provided by research on callings, give reason to explore further the role of identity and psychological involvement in the interaction between leisure and work.

As leisure has historically been seen as peripheral to more prominent life roles, such as work and family, much of the research which includes leisure

focuses on role accumulation, i.e., leisure tends to be included when accumulation of roles is a key element of the research. As such, many studies focus on two research questions: how the total *number* of roles embodied by a person effects the work domain, or how the *relative importance* of non-work roles to the individual impacts their work role. These studies were designed to answer questions regarding the interaction between non-work and work domains. Therefore the nuances inherent within an individual's experience of the leisure domain are rarely, if ever, considered. While this research provides some initial indications of how leisure and work interact, they are limited by blunt or broad conceptualisations of leisure. For example, studies investigate limited representations of the full leisure domain, such as membership in recreation groups (Kirchmeyer, 1992b), or include leisure activities within broader categories such as "personal benefit activities" (Allis & Driscoll, 2008). Nevertheless, these findings provide some orientation around potential relationships of interest between the two domains.

### 2.3.2 Instrumental use of leisure time to influence work

Research examining the influence of non-work activities has also examined incidences of individuals deliberately using their non-work time to gain work related outcomes. Two studies specifically examine the effect of gym usage on individuals' work lives (Stewart, Smith, & Moroney, 2012; Waring, 2008). A study of City of London workers explored the ambiguity of exercise as a leisure experience. From the perspective of many workers their time at the gym was as duty bound as their time at work. From this perspective there is an expectation of enrichment between the gym experience and the work experience although it is

not necessarily primarily concerned with employee wellbeing. According to the authors "many participants talked in detail about how a physically fit and able body was important when working in the city as an individual's health status is socially and culturally linked to the ability to perform in a work context" (Waring, 2008, p. 303).

In the second gym based study, a sample of gym users in Melbourne reported that their fitness sessions built their confidence, self-efficacy and emotional resilience and a quarter of the respondents reported using gym work as a tool to improve their productivity (Stewart et al., 2012). The authors conclude that the immediate positive feelings associated with this activity are a primary driver of participants' involvement but that it provides them with the opportunity to build a stock of positive psychological states that "enables them to better manage…in the wider world" (Stewart et al., 2012, p.16). These two examples suggest that even within similar activities there are multiple approaches and motivations for engaging in activities outside of the work domain and that well-being and productivity can be deliberate aims of engaging in leisure.

The instrumental use of leisure in response to work has also been documented recently with the advancement of the concept of leisure crafting. Leisure crafting has been defined as "the proactive pursuit and enactment of leisure activities targeted at goal setting, human connection, learning and personal development" (Petrou & Bakker, 2015, p.508). The findings of a study of 80 employees over three weeks demonstrated positive links between job demands and leisure crafting. Leisure crafting was also related to need fulfilment. Thus the

authors suggest that leisure crafting is a compensatory mechanism which allows individuals to address needs which are unfulfilled within the work domain.

Although these studies suggest that people may experience their leisure activities as enriching, other qualitative work has pointed out that this is not necessarily the case for everyone. A well cited study of managerial women reported that when considering the non-work roles which contributed to their leadership performance and well-being the most commonly reported roles were: occupational, marital, parental, community and friendship (Ruderman et al., 2002). Leisure activities were mentioned by participants but did not feature strongly in comparison to the roles listed above. While this does not rule out the influence of leisure roles it does highlight that for some people these may not be experienced as particularly enriching.

The research reviewed here summarises the links between leisure and work which have been investigated within the management and psychology literature. The main themes in this area relate to multiple roles, the influence of identity and the way in which individuals deliberately craft their non-work time to benefit their work. The weaknesses in this research are the treatment of leisure as a singular domain and the approach to enrichment between leisure and work which focuses on the outcomes rather than the process of enrichment or on leisure as purely instrumental in its relationship to work. Therefore in the next section I examine how leisure is conceptualised within the leisure literature to establish whether there are more nuanced concepts of leisure in order to create a more systematic view of how leisure and work may interact.

## 2.4 Defining the leisure domain

Within this field of work-life interface research, leisure is often conceptualised in a relatively simplistic way. There is, however, a rich literature in the field of leisure research which considers exactly what defines leisure, as well as considering the effects of differences between individuals' experiences within this domain. The leisure literature contains multiple views of what constitutes leisure and what distinguishes it from other areas of life. Haywood et al. (1995) identified four general themes in the conceptualisation of leisure. The first theme represents leisure as any time that one is not in a formal work role, i.e. "residual time". This is most similar to what previous research on non-work and work domains has used, where leisure is often time that is not spent at work or with family. The second conceptualisation is leisure as particular activities that are commonly seen as fun or pleasurable, for example sports, theatre or outdoor pursuits. The third sees leisure as a means to a more functional end - either for recovery from work or as a means to achieving desired social outcomes such as health or a cohesive community. The last is simply leisure as time which represents freedom and autonomy.

Two characteristics which are often cited by individuals when identifying an activity or experience as leisure are that it involves a sense of freedom and an element of intrinsic motivation (Tinsley & Tinsley, 1986). Research has provided support for these as key elements of what people consider to be leisure. In a qualitative study of adolescents the main characteristics overarching the description of all types of leisure was the requirement of activities to be freely chosen and enjoyable (Passmore & French, 2001). Common themes in

what constitutes leisure in relation to other domains are activities that are freely chosen, generally perceived as enjoyable, and that participation does not result in financial rewards.

However, one difficulty with the concept of freedom and autonomy that has not been addressed is the absolute levels of autonomy versus relative autonomy. It is well-established that there are barriers to engaging in leisure activities. Therefore it is likely that when individuals cite autonomy as a defining feature of leisure, it is a relative autonomy. For example a person is freer to choose not to engage in any particular leisure activity than they are to choose not to engage in work or family commitments. Therefore the freedom is relative to more duty bound life domains. However within an individual leisure activity it is likely that there are barriers or constraints around participating. For example, an individual who engages in a group activity will be constrained by the timetable of the group, and so for each individual instance of that activity they are not engaging in it in a fully autonomous way.

Therefore leisure is characterised by increased freedom, but primarily *in relation to other areas of life*. This supports the validity of examining leisure as a distinct area of life, separate from family and work. However, viewing leisure as a domain which produces largely homogenous experiences would neglect the complexity of individuals' experiences *within* their leisure activities. By focusing on leisure specifically I am able to take a more nuanced view of the potentially enriching effects of leisure on work by examining whether different types of

leisure are more or less enriching, allowing me to research life experiences which have been previously under-explored in relation to the work role.

Numerous typologies of leisure have been attempted in order to make sense of the leisure experience (Kabanoff & O'Brien, 1980; Spokane & Holland, 1995; Tinsley, Hinson, Tinsley, & Holt, 1993). According to Haywood et al. (1995, p.36) leisure activities can be distinguished using a continuum ranging from active production to passive consumption. Leisure activities have also been examined from the perspective of need fulfilment, personality and interests, and leisure characteristics.

### 2.4.1 Need Fulfilment

Tinsley and Eldredge (1995) identified 11 needs that can be filled through the enactment of leisure; agency, novelty, belongingness, service, sensual enjoyment, cognitive stimulation, self-expression, creativity, competition, vicarious competition and relaxation. The list of 11 needs has been developed over the course of a 20 year programme of research (Tinsley, 1995) from an original list of 44 needs (Driver, Tinsley, & Manfredo, 1991). Participants rated 82 activities based on their potential to fulfil these needs. They were asked to rate activities that they had a working knowledge of in order to reduce the potential for stereotypes of the activity to influence the ratings as differences in ratings were found between experienced and naïve raters of less widely practiced activities (e.g. stamp collecting, Tinsley & Bowman, 1986). Tinsley and Eldredge used their participant ratings of activities to classify the activities into twelve clusters. These clusters represented activities which displayed similar patterns of need fulfilment.

Tinsley and Eldredge's (1995) needs based approach is limited in its utility for research on the interface between leisure and work. The list of needs produced from this research makes no inference about the nature of the needs identified. For example, there is no discussion of the effects of meeting or neglecting the needs they have identified, or even any indication as to whether individuals require all 11 needs to be met.   This limits the ability of this approach to contribute meaningful arguments about the effects of leisure on work.

### 2.4.2 Personality based interests

Holland created a comprehensive list of leisure activities which are divided according to the six personality categories from his Self-Directed Search tool. The Self-Directed Search is a self-assessment career guidance tool which matches personality types to the occupations that best fit those types (Spokane & Holland, 1995). The leisure activities finder attempts to do the same thing for the leisure domain. To create the leisure activities finder, experts assigned 760 activities with a code which matches the activity to two of the six personality categories. These six categories were realistic, investigative, artistic, social, entertaining, and conventional. Unfortunately, the reliability of the codes for matching the actual activities of people in the general population with their personality profile has been modest (Miller & Weiss, 1982) to non-existent  (Long, 1996). Additionally the typology is intended to be used to assist in career and leisure counselling and not necessarily as a research tool.

Both Holland's types and Tinsley and Eldredge's need typologies attempt to distinguish between the varieties of individual experience within activities in order to assist in counselling people towards activities that will "fit" them.

## 2.4.3 Leisure or Work Characteristics

A third approach to examining leisure is to use the same concepts that have been applied to the workplace such as job characteristics (Rousseau, 1978) or general task attributes (Kabanoff & O'Brien, 1980) The original job characteristics were deemed important on the bases that they facilitated certain "critical psychological states" (Hackman & Oldham, 1975). These states were described as; experienced meaningfulness of the work, responsibility for and knowledge of the outcomes of the job.

Rousseau (1978) studied the relationship between work and non-work using the job diagnostic survey (Hackman & Oldham, 1975). The job diagnostic survey is a method of calculating the quality of a particular job by looking at the extent of certain characteristics present in the role. Some of these were adjusted by Rousseau (1978) for the non-work domain. The non-work questionnaire included physical variety as well as skill variety, and a scale assessing the extent that the activity is associated with dealing with others. The study aimed to identify whether there were any observable patterns between the characteristics of work and the characteristics of leisure. In addition Rousseau examined the relationships between these characteristics and well-being indicators such as stress and job satisfaction. The findings indicated that participants with a higher quality non-work experience, measured by the average of the scores for the non-work

characteristics, also reported less stress and absenteeism. These findings provide some information about the impact of work relative to non-work but they do not distinguish between different activities in the non-work domain.

Kabanoff and O'Brien (1980) used task attributes to analyse leisure activities. The specific attributes measured in the study were skill utilization, influence (autonomy), variety, pressure, and interaction. They reasoned that a leisure activity is essentially a task chosen by person in their free time. Like Rousseau's (1978) study, this research aimed to understand the relationship between work and leisure. They failed to find any clear pattern of influence of work characteristics on leisure characteristics which would indicate that these domains do not affect one another. One exception to these findings was skill utilization. Participants with medium to high skill utilization scores in the work domain reported higher skill utilization in their leisure. The authors also examined the characteristics of groups with certain patterns of involvement in work and leisure. Those with high scores on their leisure- and work characteristics tended to report intrinsic motivations toward their work, whereas those with high leisure- and low work characteristic scores reported lower extrinsic motivation toward their work. The authors make reference to the theoretical overlap with the needs approach to leisure research in that the characteristics are desirable due to their ability to fulfil needs, such as a sense of meaning and control. They acknowledged that each activity can have unique meaning to an individual but also contend that certain task characteristics are known to have "psychological and behavioural

consequences" for a person, reflecting the critical psychological states from job design theory (Kabanoff & O'Brien, 1980, p. 600).

Despite Kabanoff and O'Brien's contention that the meaning of a leisure activity is not an influential element of the leisure experience , it can be seen from the existing research on leisure and work that identity (Berg et al., 2010; Kirchmeyer, 1992b; Weer et al., 2010) and instrumental or goal-oriented activities (Petrou & Bakker, 2016; Stewart et al., 2012; Waring, 2008) are particularly relevant to work performance and well-being. These two aspects of leisure activities are brought together within the concept of serious leisure. In the following section I will describe the serious leisure perspective on leisure and how serious leisure is a useful lens to examine the ways in which leisure may be enriching for work.

### 2.4.4 Leisure-work enrichment: The serious leisure perspective

The serious leisure perspective acknowledges that there are complexities in individuals' approach to their leisure activities. Via ethnographic observation of people engaging in leisure activities it was established that there needed to be a category of leisure which acknowledged an approach to activities which was not purely defined by pleasure and freedom but which took into account more committed and developmentally oriented approaches to activities (Stebbins, 1982). By examining leisure activities through the serious leisure perspective we can go beyond the assumption of pure, hedonic enjoyment within leisure time and examine more complex and meaningful activities. Serious leisure involves "the systematic pursuit of an amateur, hobbyist, or volunteer activity sufficiently

substantial and interesting for the participant to find a career there in the acquisition and expression of a combination of its special skills, knowledge, and experience" (Stebbins, 1982, p.3). Its distinguishing characteristics include perseverance, continued involvement (often referred to as a leisure career), effort to acquire skills and knowledge, unique ethos, and the most overarching characteristic is that the participant identifies strongly with their chosen activity (Stebbins, 2011, p. 11).

Serious leisure, as a style of leisure engagement demonstrating these characteristics, has been identified within a range of activities such as shag dancing (Brown, 2007), dog breeding (Baldwin & Norris, 1999), kayaking (Kane & Zink, 2004), running (Major, 2001), and bird watching (Lee & Scott, 2006). It is proposed to be the most effective way of garnering enduring benefits from leisure (Stebbins, 1982). Serious leisure is contrasted with "casual leisure" which is defined as "immediately, intrinsically rewarding, relatively short-lived pleasurable activity requiring little or no special training to enjoy it" (Stebbins, 1997, p. 18).

There has been active debate within the leisure literature around whether serious leisure is a way to categorise leisure activities themselves, or a category of individuals' approaches to the activities (Veal, 2016). Stebbins (1992) has suggested particular activities which he considers to be serious activities, essentially creating a typology of activities. Activities included within his category of serious leisure include arts, science and sports. However it has been argued that serious and casual leisure are more akin to a continuum rather than discrete and

categorically different experiences (Shen & Yarnal, 2010). From this perspective certain types of leisure activities may lend themselves to a serious approach. For example most sporting activities require some acquisition of skills and encourage persistence to produce improvements in performance. This does not mean that taking part in a particular activity means that it is a serious leisure. This approach has been validated with a number of studies showing that different individuals can engage in the same activity in either a serious or casual way (Brown, 2007; Kim, Heo, Lee, & Kim, 2015).

The distinctions between serious and casual leisure reflect distinctions drawn between hedonic and eudaimonic experiences within the positive psychology literature. Hedonic and eudaimonic experiences are respectively characterized by pure pleasure and personal growth and fulfilment (Ryan & Deci, 2001). Waterman (2005) investigated the differential impact of hedonic and eudaimonic leisure by distinguishing between leisure activities which were either high or low in effort. Distinguishing activities based on the level of effort involved reflects the distinction based on perseverance that is made between serious and casual leisure, in that high effort and perseverance reflect an experience which contained an element of difficulty. Waterman reported that enjoyable high effort activities were associated with greater interest, flow, perceived competence, and higher scores for both self-realization values and importance than activities which were enjoyable but low effort.

Stebbins (1982) argued that a serious approach to leisure was a key aspect of creating the beneficial resources from the experience of leisure. A range

of benefits have been identified as resulting from engagement in serious leisure including positive affect, skill recognition and improved social relationships (Baldwin & Norris, 1999), a sense of meaning and deeper understanding of self (Phillips & Fairley, 2014). In a recent set of quantitative studies of taekwondo, a serious approach to the activity was positively related to personal growth, increased happiness and life satisfaction and improved health (Kim, Dattilo, & Heo, 2011; Kim et al., 2015). Although there is some evidence that engagement in serious leisure is beneficial for individuals, to my knowledge there are no studies which examine whether serious leisure may, as a result of these benefits, enrich work performance. Here, I argue that serious leisure results in increased psychological resources which leads to increased performance.

### Serious Leisure and Volunteering

I make a distinction between volunteering and leisure and focus on the effects of serious leisure specifically. I do this for two reasons. The first reason is that generally the ultimate goals of volunteering are prosocial (Hecht & Boies, 2009). In contrast there may or may not be a prosocial element to serious leisure, but it is not a defining characteristic of the activity. Additionally, leisure activities inherently have at least some element of hedonic enjoyment associated with them. They may at times present difficulties and require perseverance (Stebbins, 2007) but an element of intrinsic enjoyment is assumed. Volunteering may not involve pleasant experiences at all as an individual carries out the jobs required to best meet the requirements of the external goal they are working towards. For example, volunteers cleaning up after an oil spill may be required to do work which is physically unpleasant but necessary to ensure ecological protection, or a secretary

of a charity or club may be required to do extensive and tedious administrative work. Of course there are likely to be some links with volunteering, however given the early stage of work in the area of leisure and enrichment it is more informative to take a detailed examination of leisure as a single phenomenon, differentiated from other areas, in order to ascertain whether there are unique patterns of enrichment evident between domains. Where research has separated volunteering and recreation they have found different patterns of spillover (Kirchmeyer, 1992b), lending weight to the argument for examining these domains separately.

In this thesis I will identify individuals with serious leisure activities and examine whether these activities generate a process of leisure to work enrichment. The following chapter will consider how serious leisure might generate psychological resources that enrich the work role and why it is important to examine the process of enrichment across different time scales.

# Chapter 3: Enrichment via Episodic and Habitual Serious Leisure

As noted in the previous chapter, one of the weaknesses of existing enrichment theory is that it does not consider the relevant time scales in relation to the enrichment process. Maertz and Boyar (2010, p. 74) have suggested that it would be useful to consider the difference between episodes and levels of enrichment. In their review of conflict, enrichment and work-life balance they found that the effects of episodes of enrichment had not been empirically tested, even within the work-family enrichment literature. From their overview of the current state of knowledge in the field of enrichment they concluded that examining episodes of enrichment would be "the most fruitful path forward". To address this, I will examine episodes of serious leisure engagement with regards to their effects on leisure to work enrichment.

There are three approaches to examining episodes. The first is examining immediate reactions to an episode, the second is an end of day consolidation of the experience, and the third is a global assessment across many days (Williams & Alliger, 1994). Serious leisure is more easily defined into discrete episodes than work and family, as it is represented by specific activities such as attending a dance class. Therefore, the daily consolidation of experience, in this instance will likely capture both individual episodes of serious leisure and their immediate impact on both resources and work behaviour.

Maertz and Boyer (2010) describe levels of enrichment as a global, rather than episode specific, assessment of the amount of enrichment that an individual experiences. In this thesis I will also explore the levels of serious leisure to work enrichment by examining the enriching effects of habitual serious leisure. I define habitual serious leisure as the amount of time spent in serious leisure over the course of a month. The comparison of episodic and habitual serious leisure is aimed at differentiating between episodes and levels of enrichment.

Although there have been many studies examining the levels of enrichment between work and family (Crain & Hammer, 2013), there is a lack of research on serious leisure to work enrichment. An insight into the habitual effects of serious leisure which can be contrasted with those of episodic leisure will provide a picture of how individuals' experiences of enrichment differ between time scales. These two levels of analysis, episodic and habitual, allow me to compare the effects of immediate experiences of enrichment and those which accrue over time. This approach is supported by the model representing how levels of work-life balance change over time in response to the collective episodes of conflict and enrichment an individual experiences during the intervening period (Maertz & Boyar, 2010).

## 3.1 Resource generation from serious leisure

In examining whether, and how, leisure may be a source of enrichment for the work role it is necessary to establish how resources are generated via engagement in both episodic and habitual serious leisure. The enrichment framework outlined by Greenhaus and Powell (2006) does not refer to resource

generation. The framework focuses solely on the pathways which link resources from one domain to their effects in another domain. However, the authors noted that a more robust approach to enrichment would also consider the generation of resources and then assess their subsequent effects in the target domain. My approach to enrichment in this thesis therefore includes this first step of identifying the resources which are likely to be generated by serious leisure and testing whether they are linked to engagement in a serious leisure activity.

Much of the previous research on enrichment relies on individuals accurately attributing resource generation to specific domains as well as assessing the strength of the resources' impact on another domain. An example of the type of question which characterizes this approach to enrichment asks individuals to indicate the extent to which they agree with the statement "My involvement in my family helps me acquire skills and this helps me be a better worker" (Carlson et al., 2006). This type of research produces results which can have multiple interpretations. When a participant responds to an item for a family-work enrichment scale, such as Carlson et al.'s, a low score may indicate that their family roles do not generate skills, *or* that skills generated do not influence their work. Equally, a high score may indicate that their family role has generated the resource in question, or that they consider that the resources generated have had an effect on the target domain, or both. However a positive response would only truly represent enrichment if their answer refers to *both* of these effects occurring. In order to provide clarity on this aspect of the enrichment process I will include the process of resources generation in my model of serious leisure to work enrichment.

Maertz and Boyer (2010, p. 85) also note this issue in work-life conflict research when they state that "To what people attribute WF [work family] conflicts and how they make such attributions must be studied rather than assumed". My research will avoid the problem of attribution by completely separating the assessment of individuals' engagement in the serious leisure domain, their resources and their work behaviour. This removes the need for conscious attribution of enrichment from one domain to another, which may be difficult for individuals to assess, particularly with regard to psychological resources (Greenhaus & Powell, 2006)

The following sections will examine research on the effects of daily non-work experiences on resources and work performance in order to investigate the extent to which non-work domains influence work on the day-level and examine the types of resources created. Then research examining longitudinal effects of non-work on resources and work performance will be explored to identify any contrasts with the daily effects.

## 3.2 Episodic serious leisure and the enrichment process
### 3.2.1 Resource recovery

One field of research which examines resources in relation to work and non-work activities is that of recovery research. Recovery research aims to compare different types of non-work activities and experiences, and assess the extent to which engaging in these activities is beneficial or detrimental to the process of regaining resources lost during work. A primary difference between the

enrichment and recovery approaches lies in their conceptualisation of the phenomenon. As noted above, much of the research on enrichment across domains assesses individuals perceptions of the extent to which they have transferred resources from one domain to the other (Greenhaus & Powell, 2006; Maertz & Boyar, 2010). In contrast, most recovery studies measure all variables separately over the time frame in which they are hypothesised to change, e.g., over the evening and into the next work day (e.g. Bakker, Demerouti, Oerlemans, & Sonnentag, 2013; Fritz & Sonnentag, 2006). In this way they rely less on people's own perception of causality. Studies in this area are therefore well placed to provide complementary information on what kinds of non-work activities produce resources and in what way.

Mastery experiences are one suggested mechanism for the recovery of resources lost through the demands imposed by daily working life. They have been defined as "activities that act as an individual challenge or that offer the possibility to learn new skills, such as taking language classes, learning a new sport, or undertaking a mountain expedition" (Fritz & Sonnentag, 2006, p.938). Mastery experiences therefore share similarities with serious leisure, specifically on learning and challenge. The principal difference is that mastery experiences are not necessarily related to an individual's identity and that they are not future focused, i.e., they are not necessarily linked to a commitment to a particular activity. There has been a substantial and increasing amount of research examining whether mastery experiences contribute to recovery (Binnewies, Sonnentag, & Mojza, 2010; Kinnunen, Feldt, Siltaloppi, & Sonnentag, 2011; van

Hooff, 2013), how different types of activities are associated with recovery experiences (Mojza, Sonnentag, & Bornemann, 2011; ten Brummelhuis & Bakker, 2012b), and whether recovery impacts work behaviours and attitudes (Fritz & Sonnentag, 2005; Sonnentag, Mojza, Demerouti, & Bakker, 2012).

Reviewing the findings on mastery experiences provides a mixed view of their impact on recovery and other outcomes. Diary studies of daily recovery have found mastery to be related to positive activation but not to serenity the following morning (Sonnentag, Binnewies, & Mojza, 2008). In contrast to this, mastery experiences during leisure time had no identifiable effect on measures of affect or active listening at the end of the work day (Mojza et al., 2011). Studies of recovery during the weekend found that mastery experiences are related to feelings of joviality, self-assurance and serenity at the end of the weekend (Fritz, Sonnentag, Spector, & Mcinroe, 2010), in addition to feelings of being adequately recovered on Monday morning (Binnewies et al., 2010). However, the relationship between mastery and Monday morning recovery was small and was not significant when tested using multi-level structural equation modelling (Binnewies et al., 2010). Additional studies of weekend experiences have failed to find a relationship between mastery experiences and vigor or exhaustion (Marzuq & Drach-Zahavy, 2012).

These mixed findings regarding how mastery experiences influence resource recovery may be due to a lack of distinction between once off engagement in novel and challenging activities versus a consistent developmental relationship with an activity, which is relevant to one's identity. Therefore as a

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category of experience which is not captured within recovery studies serious leisure would provide additional insight into these short term processes.

Mastery represents a subjective experience of any activity in the non-work domain. Other studies of daily or episodic non-work activities have examined the type of activity based on characteristics such physical and social activities. Physical activity has been found to positively relate to positive affect on the evening it was engaged in (Feuerhahn, Sonnentag, & Woll, 2012), as well as being positively related to feelings of vigor the following morning (ten Brummelhuis & Bakker, 2012b). In addition to this, physical leisure activities have been shown to influence work related outcomes such as active listening and negative affect at work on the day following the activity (Mojza et al., 2011). While there has been significantly more research on physical activities, other after-work activities have also been linked to improved resources. Social activities have been associated with daily well-being (Sonnentag, 2001) and evening happiness and vigor but not with recovery (Bakker et al., 2013) . Volunteering has been related to reduced negative affect at work (Mojza et al., 2011).

This indicates that daily changes in non-work activities are linked to increasing resources. However, these effects were not reliably found across all studies. Distinguishing between serious leisure and casual leisure may help to clarify these findings by illuminating aspects of the non-work experience which are defined not by their characteristics (e.g., physical or social) but by an individual's ongoing relationship with the activity (e.g., development and perseverance and integration into an individual's identity).

## 3.3 Habitual serious leisure and the enrichment process

As mentioned in the previous chapter the resources and benefits associated with serious leisure are predominantly examined with cross-sectional and qualitative research. Having a serious leisure activity is associated with personal growth (Kim et al., 2011, 2015), positive affect, skill recognition and improved social relationships (Baldwin & Norris, 1999). However, the potential for serious leisure to impact functioning in the workplace has not been investigated.

Activities and experiences during leisure time have been examined for their longitudinal effects on work related variables. A study of employees in a Canadian university found that if participants indicated that they had participated in sports, recreation and fitness in the past year they also reported positive non-work to work emotional spillover, but no links with performance or work satisfaction (Hecht & Boies, 2009).

One longitudinal study demonstrated a link between the successful recovery of resources during leisure time and participants' self-efficacy six months later. This effect mediated the relationship between leisure time recovery and job performance (Binnewies, Sonnentag, & Mojza, 2009). In contrast, in a study of the immediate effects of weekend recovery through mastery experiences, mastery experiences did not impact either recovery or work performance during the week (Binnewies et al., 2010), suggesting that it may be important to examine differences in the process of enrichment between leisure and work over different time scales. This is further supported by findings of an intervention study which

developed eudaimonic experiences over the course of a ten-day intervention (Huta & Ryan, 2009). The effects of the eudaimonic intervention on well-being were only apparent at the three month follow-up, whereas the hedonic group reported an immediate impact from their intervention. The researchers concluded that the effects of eudaimonic experiences could be delayed or cumulative. This is particularly relevant as serious leisure is an activity which is likely to include a mix of hedonic (pleasurable) and eudaimonic (meaningful, self-developing) experiences. Based on this research it seems likely that the effects of serious leisure do not fully unfold at an episodic level.

## 3.4 Resource Theories

Resource theories provide some guidance regarding the generation of resources through engagement in serious leisure and how this may lead to enrichment of the work role. Conservation of resources (COR) theory focuses on behaviour in relation to resources. Within COR, resources have been defined as "those objects, personal characteristics, conditions or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions or energies" (Hobfoll, 1989, p. 516). This definition highlights the broad nature of the concept of resources. Greenhaus and Powell's (2006) model of the enrichment process suggests six categories of resources which can be generated by a role – skills and perspectives, psychological and physical resources, social capital, flexibility (of scheduling) and material resources.

This thesis however, concentrates on psychological resources. Due to the lack of previous research addressing enrichment between leisure and work,

particularly serious leisure and work, this thesis will investigate resources which are most likely to be related to all serious leisure activities, as well as those resources which are most impactful in a work setting. The development of psychological resources is associated with experiences such as challenge, and opportunities for skill development (Luthans, 2006) These experiences are central characteristics of serious leisure. Additionally, there is a demonstrated link between psychological resources such as self-efficacy and work performance (e.g. Luthans, Avey, Avolio, & Peterson, 2010; Luthans, Avolio, Avey, & Norman, 2007). Based on these factors I have chosen to focus on these resources.

COR's central precept is that individuals are motivated to protect their resources. From this perspective COR theory seeks to explain stress as a reaction to the loss of, or threat to resources.  In addition, the theory proposes that during stress-free periods, individuals take opportunities to develop their resources further (Hobfoll, 1989, 2002). More recently the theory has been extended to suggest that resources, such as self-efficacy or self-esteem, can be reciprocally related. This means that increasing resources can boost further resource gain forming upward spirals (Hobfoll, 2002). This effect was demonstrated in a longitudinal study in a Dutch sample of chemical company workers whose opportunities for recovery were positively related to autonomy and feedback, and negatively related to workload, but whose autonomy, feedback and workload at Time 1 were also related to their opportunity for recovery at Time 2 (Rodriguez-Muñoz, Sanz-Vergel, Demerouti, & Bakker, 2012). Another study found that job resources positively predicted the extent to which participants sought out new and

challenging non-work experiences 12 months later (Kinnunen & Feldt, 2013). These findings support the idea that when individuals do not perceive a threat to their resources they take the opportunity to invest in further resource development, via, for example, mastery experiences.

COR theory suggests that individuals are inherently protective of their resources and that they react strongly to actual or anticipated loss of resources. Resource loss causes emotional strain. This, in turn, can cause the loss of further resources, creating a downward spiral (Halbesleben, Wheeler, & Paustian-Underdahl, 2013). When individuals experience resource loss they may also avoid activities that require investment in an attempt to protect remaining resources. This effect was demonstrated in a study of junior doctors. When provided with additional nursing support the doctors who were not experiencing resource threat or loss used the additional nursing resource to proactively increase their skills, a resource accumulation behaviour. In contrast to this, junior doctors who were experiencing resource threat used the additional resources to reduce role overload, a resource protection behaviour (Parker, Johnson, Collins, & Nguyen, 2012). COR theory includes all types of resources available to an individual and therefore is not restricted to psychological resources. However, as mentioned above it indicates that the stress caused by resource loss or threat can cause a downward spiral of psychological resources.

COR is an increasingly popular resource theory for examining behaviour inside and outside of work. Its strengths lie primarily around the fact that it is a motivational theory of behaviour, in that it seeks to explain what individuals will

do when certain circumstances occur (e.g. they will protect resources when they sense actual or potential loss) as well as how they will feel when certain contexts occur (e.g. individuals will feel stressed when they lose resources). In this way it brings more explanatory power than other theories such as the effort recovery model (Meijman & Mulder, 1998) which describes the outcomes of over-exertion or a lack of recovery time. In comparison COR acknowledges the agency and reactivity of individuals within their environments and creates propositions following from this. As a result of this, COR can be a useful lens from which to address complex situations, such as the interaction between leisure and work.

However, like most theoretical frameworks COR also has some weaknesses. Recent conceptual work has sought to address some of these weaknesses. One of the primary criticisms of COR is that the definition of resources is so broad that it can potentially encompass anything. This can be seen in the definition provided by Hobfoll of resources being "objects, personal characteristics, conditions or energies that are valued by the individual or that serve as a means for attainment  of these objects, personal characteristics, conditions or energies" (Hobfoll, 1989, p. 516). This definition encompasses anything valued by an individual as well as anything which can be used to obtain a valued end. This combination of both means and end as resource undermines research in the area by confounding predictors and outcomes (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). For example in a study of valued leisure activities in which the participant also values high performance in their work role, a researcher may, according to this definition, cast the leisure activity itself as a

resource, as well as any positive outcomes of the leisure activity (skills, positive mood, etc.) in addition to the work performance due to their value to the individual. If all elements of the model are resources it becomes difficult to apply the propositions of the theory in a coherent way. Halbesleben et al., (2014, p. 1338) have attempted to clarify this issue with COR by focusing the definition of resources on "anything perceived by the individual to help attain his or her goals". This definition is still broad but reduces the issue of confounding resources with the outcome of resource application.

An additional strength and limitation of COR is that it proposes a dynamic process of evaluation and action between an individual and their environment. This is a strength in that, as observed in the preceding paragraph, the ability to address dynamic processes allows for a consideration of the complexity of issues around resource gain and loss. However, as with any process theory, the challenge of applying it in an observational study is to establish the point in the process that an individual is currently inhabiting. An additional challenge arising from the dynamic nature of COR is that, despite proposing dynamic processes, COR does not make any clear propositions with respect to the timing of resource gain, loss or application. Halbesleben et al. (2014) suggest that one way to deal with these issues is to combine the tenets of COR with other useful theories which speak to processes such as motivation. This is the approach which will be taken in this thesis where theories which speak to identity and enrichment will be combined with COR in order to underpin the models and hypotheses which are tested within Study 1 and 2.

Serious leisure, when considered from the perspective of COR, is likely to involve both investment and generation of psychological resources. There are two reasons for this. First, a serious leisure activity forms a part of an individual's sense of identity (Stebbins, 1982). Therefore, engaging serious leisure would be self-concordant and valued as an end in itself, worthy of the investment of other resources such as time and energy (Sheldon & Elliot, 1999). This contrasts with other approaches to non-work activities where engagement in activities is motivated by the outcomes in an instrumental way. Instrumental approaches to leisure include situations such as leisure crafting where individuals choose their leisure with the specific aim of gaining new resources (Petrou & Bakker, 2016) or instances where individuals are specifically aiming to recover lost work resources (Sonnentag & Fritz, 2007). The identity element of the non-work domain has also been shown to play an important role in the links between the work and non-work domains in literature reviewed in the previous chapter (e.g. Allis & Driscoll, 2008; Kirchmeyer, 1992a; Weer et al., 2010) .

COR suggests that when resources are invested they can produce further resources in a positive spiral. Based on this theory the basic reservoir of resources available to an individual can be expanded. However, there are alternative theories which consider resources to be finite and to require specific steps to be taken to aid their recovery once depleted. According to the effort-recovery model, expending effort during the working day depletes finite resources (Meijman & Mulder, 1998). This theory considers the physical processes of depletion such as hormonal changes (e.g., increased adrenaline levels), and how these processes

occur. In order for individuals to feel that their reservoir of resources has been replenished they require a period of time off from high levels of activation. If the levels of activation during the day stay within reasonable parameters then less intensive recovery is required.

The concept of ego depletion is similar to the effort-recovery model in that it presupposes a finite, biologically based, resource. These resource theories are the closest to the concept of physical energy as a resource. Ego depletion theory (Baumeister, Bratslavsky, Muraven, & Tice, 1998) suggests a common resource is required to regulate behaviour. The ability to self-regulate behaviour becomes weaker when it is called on repeatedly or when an individual is already fatigued (Muraven, Tice, & Baumeister, 1998).

Due to the focus on effort, development and identity in serious leisure activities these theories of resource generation and depletion may provide greater explanatory power depending on the time scale by which we view them. In the short term individual instances of serious leisure may require self-control, or the use of resources already depleted within the work domain, reducing the potential for daily enrichment between leisure and work. In contrast, habitual engagement in serious leisure may provide meaningful experiences which over time provide an accumulation of resources which support workplace performance.

The work-home resources model (W-HR; ten Brummelhuis & Bakker, 2012a) draws on COR theory to propose how enrichment and conflict unfold over time. The W-HR model organises the categories of resources suggested by COR

theory into a matrix based on the transience and source of the resource. By clearly stating where a resource comes from, and how robust it is to the passage of time, the work-home resources model makes predictions about how resources can be transferred between domains. It also facilitates predictions about resources on different time scales. This addresses one of the previously noted weaknesses of other enrichment models. The W-HR model differentiates volatile resources from structural resources, where volatile resources are those which can be depleted, such as energy or focus, as well as resources which fluctuate such as mood (ten Brummelhuis & Bakker, 2012a). Structural resources are those which are more enduring such as social networks and skills. The authors of the WH-R model propose that in the short term "work–home conflict and enrichment reflect daily processes between the work and home domains, whereby volatile contextual demands and resources from one domain affect daily outcomes in the other domain through a change in volatile personal resources" (ten Brummelhuis & Bakker, 2012, p. 8). This represents an episodic view of enrichment and is based upon the tenets of COR theory and the need to consider the time scales around which enrichment between domains unfolds.

From the perspective of COR the experience of gaining resources in serious leisure may display specific dynamics for habitual and episodic leisure. Resources which are invested in serious leisure, such as energy and effort, facilitate the development of resources such as self-efficacy and resilience. This resource gain may then prompt a positive spiral of resource investment followed by further resource gain. Equally in a situation where individuals are under

resource threat they may reduce the resources they are investing in their serious leisure activity, prompting a short term conservation of their resources, but a long term decline due to the loss of the specific psychological resources that were generated during their leisure experience.

## 3.5 Enrichment and Work Performance

In order for enrichment to have occurred there must be evidence of improved performance in the target domain (Greenhaus & Powell, 2006). This occurs via the application of resources via two pathways; instrumental and affective. Prior research has provided support for the positive effects of increased resources on work performance. Increased psychological resources, such as self-efficacy and resilience, have been shown to positively impact performance ( Luthans et al., 2007; Stajkovic & Luthans, 1998). Building on the arguments I have made for episodic and habitual serious leisure as sources of resource generation I will fully explore the enrichment process by examining the effect of these resources on work performance. Work performance can be considered from core role perspective (e.g. task proficiency) and an extra role perspective (e.g. proactive behaviours) (Griffin, Neal, & Parker, 2007). In Chapter 5 I will discuss the potential impacts of serious leisure on these different elements of performance via an increase in resources.

## 3.6 Conclusion and Research Questions

Serious leisure constitutes an interesting category of non-work activity because of its potential to greatly affect an individual's resources. The learning and enjoyment inherent in a serious leisure activity provides the potential for the recovery and development of resources. However, serious leisure also demands

commitment and effort which means it has the potential to deplete resources that are required in work. In this thesis I draw on resource theories and on the interaction of work and non-work domains to examine how serious leisure affects work behaviour via the development and consumption of resources. The following three principal research questions will be addressed by two studies.

*Research question 1*: What are the effects of spending time in serious leisure on psychological and affective resources?

*Research question 2*: What are the effects of spending time on serious leisure on the process of leisure-work enrichment and what role do psychological and affective resources play in this process?

*Research question 3:* What are the similarities and differences between episodic and habitual leisure-work relationships?

# Chapter 4: Methodology

This thesis aims to investigate the impact of leisure activities on performance in the workplace via the effects on psychological and affective resources. This chapter outlines the methodology that will be applied to these research questions. There is an initial consideration of the philosophical assumptions and resulting approach to data collection. The methods proposed for data collection are also described along with a brief outline of the statistical analysis. Finally the major strengths and limitations of the proposed methods are discussed.

## 4.1 Philosophical Assumptions

The proposed research aims to identify patterns of experience and behaviour which are both generalizable to a broader population while also taking into account contextual variables which may influence these patterns. A quantitative approach is deemed the most appropriate in order to investigate this research question.

Both the research question and proposed methodology reflect a realist epistemology. The realist perspective asserts that there is an objective reality separate from those observing it and therefore it is possible to study that reality in order to gain greater understanding of the world (Bryman & Bell, 2011). This contrasts with other views such as constructivism. Constructivism considers that reality cannot be separated from the social meaning ascribed to it and as such reality is open to being created and recreated through this social lens. Realism

shares more common ground with positivism, particularly in the belief that there is an objective reality. However it differs from the positivist perspective in that realism, particularly critical realism, does not contend that researchers are necessarily capable of measuring reality exactly how it is. The critical realist epistemology allows for the study of variables that are not directly observable (Bryman & Bell, 2011).

However, it is still important to strive for rigor in this research approach (Esterby-Smith, Thorpe, & Jackson, 2008). In addition replicability and generalization are core aims of realist research. Realism differs from positivism in that it does not attempt to find basic universal laws of cause and effect but takes into account other contextual or unobservable variables that might affect observed relationships between variables.

In line with the aims and philosophical stance of the research a quantitative approach will provide the most appropriate data. From a practical perspective a quantitative approach allows for the sampling of many participants and many data points over time. The statistical analysis of this form of data will provide information on the probability that the observed patterns are really present in the population rather than a chance anomaly in the survey sample. The longitudinal application also facilitates a partial test of causality. In contrast to this a qualitative design would provide fewer but more detail rich accounts of the phenomenon of interest. This would be limited in terms of generalizability and due to practical constraints would be likely to rely on retrospective accounts of experiences and causal mechanisms for behaviour. This is less reliable than the

quantitative diary method which is proposed here for the mechanisms being studied.

## 4.2 Method

The specific method being employed in the two studies in this thesis is an intensive longitudinal survey (Bolger & Laurenceau, 2013). In Study 1, the measures are repeated on a daily basis. This approach is often referred to as a diary study, experience sampling or day reconstruction (Beal, 2015; Ohly, Sonnentag, Niessen, & Zapf, 2010). For clarity I will refer to it as a diary study throughout. In study 2 the measures are repeated once a month.

The main strength of intensive longitudinal surveys is the depth of information they provide about within-person processes. Traditional longitudinal designs model a process only by comparing patterns of data between participants. In contrast, a diary study facilitates the analysis of fluctuations within each individual, in addition to the traditional between individual processes (Beal, 2015). The study of leisure-work interface benefits from this approach because a within-person analysis can filter out the effects of individual differences and other trait level variables which may influence the between person relationships.

The following sections outline the procedures used to recruit participants and collect data, and the measures used to gather data, first for Study1 and then Study 2.

### 4.2.1 Sample recruitment

The central aim of the two studies was to assess within-individual fluctuations due to serious leisure episodes. Therefore participant recruitment was designed to target individuals who were likely to have a serious leisure activity in which they are currently actively participating. The sample was recruited in two ways; first, the study was advertised online via a number of websites and social media channels. An advertisement was placed on the website and Facebook page of the British Mountaineering Council (BMC). The BMC is an outdoor pursuits association that supports activities such as hill walking, climbing and mountaineering. Its current membership level stands at approximately 70,000 members. An advertisement was also placed on the UK climbing forum and on the Facebook pages of groups relating to table top gaming, musical theatre, choral singing, and circus skills. Individuals were invited to click on a link which brought them to a page with the participant information sheet (see Appendix 1) and a box for registering their email address. For the second recruitment method I approached people in person at the Great Yorkshire run, a road race in Sheffield, and at activity venues such as indoor climbing walls and circus skills classes in the Yorkshire area. Individuals who were interested in taking part were asked to enter their email address into a spreadsheet on a handheld tablet computer. These methods allowed me to create a list of interested participants which I then randomly allocated to either Study 1 or 2.

## 4.3 Study 1; Procedure

An initial survey was sent to participants to collect demographic information and assess trait variables. Three days after the survey email, reminders were sent to participants who had not completed the initial survey. This initial email also contained written instructions for taking part in the diary study as well as a link to a video containing the same instructions.

Participants were told they would receive a survey each morning and late afternoon. There were asked to fill these in before they began their day's work and before they went home in the evening, respectively. This allowed a separation between the assessment of independent and dependent variables which reduces problems of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and means that the dependent variable is collected at the points which correspond to their hypothesised temporal location in the causal process.

The morning survey measured psychological resources (self-efficacy, positive affect and fatigue) and recorded participants' leisure activities from the previous day. The end of work survey recorded work performance.

Emails were sent each morning to participants with a link to the survey. Qualtrics survey software was used for all data collection. A text message alert was used to prompt participants to check their emails for the survey link. The survey was available to participants for a limited time during the morning to prevent participants filling in multiple surveys at once or out of sequence. The same procedure was followed for the end of work survey in the evening. This was repeated over the following 9 working days.

***Participant retention*** Intensive quantitative diary methods often use financial incentives to recruit participants and reduce attrition. The current project was limited in its resources, so a number of alternative methods were used to increase retention. The instructional video was intended to create a more personal link between the participants and the research project by providing a personal link to the researcher behind the surveys and increase motivation to participate in the full diary period. Additionally the text messages and invitation emails were written in an informal and friendly style, with emphasis on the value of participation in terms each individual's membership of, and contribution to, the project. This highlighted their individual role in creating new knowledge and positive impact through their participation. This approach was taken in order to increase participants' intrinsic motivation for the surveys.

### 4.3.1 Study 1 Sample and Data

170 people were invited to take part in the research project from the list of individuals who registered their interest. Of the 170 participants 95 responded to an invitation to fill in the initial survey. Level 2 sample sizes of greater than 50 have been shown to be sufficient for accurate estimation of regression coefficients and variances (Maas & Hox, 2005). Participants were then emailed a morning and end of work survey for ten working days. I received 721 valid morning surveys and 647 valid evening surveys. This provided 588 days with data from both surveys. The means and standard deviations of the study variables can be found in table 1.

The sample had an average age of 36.5 (*SD* 9.64) and 53% of respondents were male. Mean income level was £58,000 per year (*SD* 33,694). The majority of the sample had obtained Masters level qualifications or above and were married or living with a partner. A range of occupations were present in the sample including administrator, university lecturer, engineer and sales managers.

**Table 1 Study 1 Means and Standard Deviations**

|  | **Mean** | **Standard Deviation** |
|---|---|---|
| **Level 2 Variables** | | |
| Similarity between Serious Leisure and Work | 2.23 | .88 |
|  | | |
| **Level 1 Variables** | | |
| Serious Leisure Time (hours) | 0.78 | 1.46 |
| Casual Leisure Time (hours) | 0.85 | 1.39 |
| Success of Activity | 3.88 | 0.79 |
| Self-efficacy | 3.76 | .077 |
| Highly Activated Positive Affect | 2.71 | 1.04 |
| Positive Leisure Reflection | 3.29 | 1.17 |
| Fatigue | 2.06 | 1.04 |
| Task Proficiency | 4.09 | 0.78 |
| Personal Initiative | 3.78 | 0.79 |
| Task Proactivity | 3.66 | 0.85 |

## 4.3.2 Study 1 Measures

### *Leisure Activities*

In the initial survey participants were asked to list the three leisure activities they engaged in most frequently. The research design was intended to track and examine specific activities across days and as such I wanted to maximize the capture of regular activities rather than those which are engaged in only when circumstances allow, such as skiing or attending music festivals. I asked participants for information on three activities as previous research has indicated

that people list, on average, three activities when describing their regular leisure activities (Joudrey & Wallace, 2009).

In the initial survey the participants were given 3 open text boxes to list their leisure activities. Thus the information about the leisure activity was qualitative and open, rather than a forced choice. There was some variation in the exact wording participants used to describe similar activities. In order to facilitate analysis I standardised these activity variables so that, for example, all indoor and outdoor climbing and bouldering was recorded as "climbing" and jogging, outdoor running etc. was recorded for descriptive statistics as "running", and anything with family e.g. caring for children was recorded as "family time".

In the morning survey of the daily diary each participant was presented with the three activities they listed in the initial survey. Participants were asked to record how much time in hours and minutes that they spent the previous evening in each of these activities.

### Serious and Casual Leisure

In order to be able to assign the time spent in an activity to serious or casual leisure, I adapted a measure of serious leisure from Heo et al., (2010). This measure contained 4 items which reflect core concepts of the construct of serious leisure. I used a formative approach which assumes that the items each contribute to creating the construct rather than reflecting indicators of the construct (Diamantopoulos & Winklhofer, 2001). Other research in the area of serious leisure has used a similar approach by categorising serious leisure from a cluster analysis of the characteristics of serious leisure (e.g. Kim, Dattilo, & Heo, 2011).

The items were scored on a 5 point Likert scale ("Strongly Disagree" to "Strongly Agree"). Items included 'This activity is very important in describing who I am'. When assigning activities to either serious or casual leisure activity categories, I applied the same approach that Heo et al. (2010) used for dichotomizing flow experiences. Following their method, I calculated a composite measure of seriousness based on participant scores of individual items. When participants who agreed with every statement (an item response of 4 or above) it was labelled a serious leisure activity for that participant. This is a conservative measure of serious leisure and as such a stringent test of whether serious leisure is influential above and beyond casual leisure activities. The remaining activities were categorised as casual leisure.

Participants provided detailed information on time spent in 3 specific leisure activities for each day of the diary study. The time spent in participants' most serious leisure activity was used for analysis in cases where they had multiple serious leisure activities. I identified the most serious activity by calculating the sum of the serious leisure item scores. Using the most serious activity maintained the clarity of the relationships between the serious leisure activity and variables which were connected to specific activities, such as the similarity between serious leisure and work or the success of an episode of that activity. An alternative method of dealing with multiple serious leisure activities was to combine the time spent in any serious leisure activity into one variable. However this would necessitate creating an average "similarity between leisure and work" score across multiple serious leisure activities which may have reduced

the validity of that variable and increased the difficulty of interpreting findings. For example if one serious leisure activity was very similar and one very dissimilar to an individual's work then the resulting average would not accurately represent either activity and would lead to inaccurate interpretations of the resulting analysis.

A frequency table showing the full range of serious leisure activities and the frequencies that they were reported by participants can be seen in Table 2. The table shows that climbing and running are the most frequent activities reported by participants. The remaining activities cover a range of physical and non-physical activities including crafting, dancing and writing.

Table 2 Serious Leisure Activities in Study 1

| | Number of Participants | Percentage |
|---|---|---|
| Climbing | 17 | 25 |
| Running | 7 | 10.3 |
| Cycling | 3 | 4.4 |
| Gym | 3 | 4.4 |
| Improvisational Comedy | 3 | 4.4 |
| Amateur Dramatics | 2 | 2.9 |
| Circus | 2 | 2.9 |
| Hillwalking | 2 | 2.9 |
| Kayaking | 2 | 2.9 |
| Reading | 2 | 2.9 |
| Yoga | 2 | 2.9 |
| Bell Ringing | 1 | 1.5 |
| Capoeira | 1 | 1.5 |
| Choir | 1 | 1.5 |
| choral singing | 1 | 1.5 |
| Craft -sewing, making | 1 | 1.5 |
| Dancing | 1 | 1.5 |
| Explorer Scouting | 1 | 1.5 |
| Gym Classes | 1 | 1.5 |
| Horse riding | 1 | 1.5 |
| Horse-riding | 1 | 1.5 |
| Kettlebell Sport | 1 | 1.5 |
| Music | 1 | 1.5 |
| Needlework | 1 | 1.5 |
| Orienteering | 1 | 1.5 |
| Playing Gigs | 1 | 1.5 |
| Playing Music | 1 | 1.5 |
| Powerboat racing | 1 | 1.5 |
| Creating artworks, painting and installation artworks | 1 | 1.5 |
| Role-playing/drama | 1 | 1.5 |
| Sports | 1 | 1.5 |
| Swimming coach | 1 | 1.5 |
| Tennis | 1 | 1.5 |
| Writing | 1 | 1.5 |
| Total | 68 | 100 |

## *Type of Leisure activity*

In order to code participants' responses to the open ended questions regarding what their leisure activities were (e.g. running, singing), I examined existing typologies and categorisations used in the field of leisure research as well as those used in previous studies examining work-life interface. The categories which are often considered in work-life interface are physical activities, social activities, low effort activities and more recently creative activities. However, these are not mutually exclusive categories as a physical activity may also be social in nature and a social activity may also involve low effort for some and high effort for others. Leisure typologies such as that put forward by Ellis (1987) and Klieber, Larson and Csikszentmihalyi (1986) suggest that sports, arts and hobbies form a distinctive cluster of leisure activities, and that this cluster contrasts with relaxing leisure. This active/passive distinction is also present in other descriptions of leisure typologies (e.g. Haywood et al., 1995). Additionally, due to the importance of physical activity for well-being and associated resources such as positive affect and energy, the main focus of this coding was to identify activities which are physical in order to be able to model the effects of this type of activity in the analysis.

I used these categories as guides to abductively code the activities reported by participants and create a coding guide for additional raters to additionally assess the activities.

There were two coders, who were academics within the field of occupational psychology, as well as being the supervisors of this thesis. I

instructed the coders to allocate activities to one of two categories- physical

leisure which included activities sports and outdoor pursuits and creative pursuits

which include performing arts, gaming and hobbies. For potential future analyses

of this data set, I created a further sub-type in creative leisure which reflected

more passively consumed leisure - for example *acting* in a play would be

categorised within creative pursuits whereas *watching* a theatre performance

would fit with passive leisure. Krippendorf's alpha was calculated, via comparison

with the second coder, to be .95. This level of agreement is considered an adequate

level of interrater reliability (Hayes & Krippendorff, 2007).

### *Success of the Serious Leisure Activity*

I assessed participants' feelings of success following each of their leisure

activities by adapting Van den Broeck et al's (2010) measure of need satisfaction.

Specifically I used the measure of work competence and substituted references to

work with references to the specific leisure activity in question. Using the

Qualtrics survey software I could insert the relevant activity into the item

questions, based on what the participant entered as their activity in the initial

survey. An example item from this scale is "Yesterday, I was good at the things I

did during Activity 1", where Activity 1 would be displayed as the participants

actual activity (e.g. rugby). The activity rated as the most serious was the one

included in the analysis. Over the ten days of the diary study the average

Cronbach's alpha was 0.83 for Activity 1, 0.83 for Activity 2 and 0.91 for Activity

3.

*Similarity between work and leisure*

In order to assess the similarity between work and leisure roles a scale was constructed to reflect the content and demands of the work and leisure activities and included in the initial survey. It included four items which aimed to assess the similarity of demands and challenges within each role. These items assessed the tasks and skills required, in addition to the physical and mental demands. Example items include "My work tasks are similar to the activities I do while engaging in this activity" and "The physical demands of Activity 1 are like those of my work role". Responses were measured with a five point Likert response scale from "Strongly Disagree" (1) to "Strongly Agree" (5). As with the success measure, the activity which was rated as the most serious by the participant was the one included in the analysis. To reduce the survey burden on participants I only collected information about similarity for their first two activities. Since spending time in an activity can be an indicator of its importance to a person, and an important activity will be likely to come to mind before a less important activity, it was deemed unlikely that the third activity would be the participant's most serious activity. Therefore the risk of missing out important information by not collecting data on Activity three was balanced by the need to maintain participants' fully and committed participation. Cronbach's alpha was 0.77 for Activity 1 and 0.77 for Activity 2.

*Self-Efficacy*

Self-efficacy was measured with the four item daily self-efficacy scale adapted by Tims, Bakker, & Xanthopoulou (2011) from the original long form generalized self-efficacy scale (Schwarzer & Jerusalem, 1995). An example item

from this scale is "Today, I felt that whatever would happen, I could handle it."
Responses were scored on a five point Likert scale from "Strongly Disagree" (1) to "Strongly Agree" (5). The average Cronbach's alpha across the ten days was 0.93.

### Positive Leisure Reflection

To create a scale for positive leisure reflection I adapted the three item positive work reflection scale developed by Fritz and Sonnentag, (2006). To adapt the scale for the leisure domain the wording was changed so that work was replaced with leisure. For example, "During vacation, I thought about the positive points of my work" became "During work, I thought about the positive points of my hobbies/leisure activities". The average Cronbach's alpha was 0.95 over the ten days of the study.

### Positive Affect

I used Warr's (1990) measure of highly activated positive affect which asks participants to rate the extent to which they were currently feeling enthusiastic, excited, inspired and joyful on a 5 point Likert scale from very slightly or not at all (1) to extremely (5). Over the ten day diary the average Cronbach's alpha was 0.92.

### Fatigue

Fatigue was measured with four items from the Profiles of Mood Scales (McNair, Lorr, & Droppelman, 1971). Similar to the scale measuring positive affect, individuals were asked the extent to which they felt fatigued, tired, exhausted and spent on a 5 point Likert scale from "very slightly or not at all" (1) to "extremely" (5). The average Cronbach's alpha was 0.92

### Personal Initiative

Personal Initiative was measured using the seven item scale developed by Frese et al. (1997) which was adapted for daily diary usage. An example item from this scale is "Today, I actively attacked problems". Responses were scored on a five point Likert scale between "Strongly Disagree" (1) to "Strongly Agree" (5).The average Cronbach's alpha for this scale was 0.90.

### Task Proactivity

Task proactivity was measured with four items from the positive work behaviours scale developed by Griffin, Neal, & Parker (2007). An example item from this scale is "I thought about how to better perform my tasks". Participants could respond on five point Likert scale between "Strongly Disagree" (1) to "Strongly Agree" (5). Over the ten day diary study the average Cronbach's alpha was 0.71.

### Task Proficiency

The final work behaviour is task proficiency which Griffin et al. (2007) defined as effective performance which is primarily responsive to external requirements rather than being a discretionary activity such as those behaviours outlined above. This three item scale includes "Today I completed my core tasks well using the standard procedures" and responses were on a five point Likert scale from "Strongly Disagree" to "Strongly Agree". Cronbach's alpha for this scale averaged 0.89.

## 4.4 Study 2; Procedure

The participants of this study were randomly selected from the overall pool of individuals who signed up to take part in either study within the project. Both studies targeted people who were currently actively involved in leisure activities and therefore likely to consider themselves to have a serious leisure activity.

Data were collected via online surveys using Qualtrics software and links were emailed to participants. Participants were sent a survey once a month for seven months. I chose monthly survey intervals in order to capture a snapshot of the participants' habitual serious leisure engagement. By collecting data about a full month I aimed to capture the impact of frequent and repeated engagement in the activity (or lack thereof) rather than individual episodes of the activity. Periods of between 2 and 5 weeks have been used in previous research on habitual behaviour (Brickell, Chatzisarantis, & Pretty, 2006).

The first survey included additional measures regarding demographics and individual differences. A link was emailed to participants at monthly intervals for follow up surveys. These surveys contained measures of time spent in participants' leisure activities, measures of resources, and measures of work behaviours for the past month. I sent each participant a text message as an additional reminder to fill in the survey and as a precaution against emails being filtered into spam folders. I contacted each participant by phone prior to the second wave of data collection to remind them about the project and ensure that they had no questions or issues with participating in the study. Participants were given a week to fill in the survey before the link was deactivated. This was to ensure the surveys were filled in

during the appropriate month, with a standardized amount of time between each study wave. Two reminder emails were sent during each collection period. Participant retention was encouraged by offering a prize draw each month for a £20 Amazon voucher and a draw for an iPod mini following the final survey.

### 4.4.1 Sample and Data

286 people were invited to take part in Study 2, of whom 145 completed the initial survey. The response rate per time point averaged 120 and over the full 7 month survey period there were 837 survey responses. This represents the level 1 sample size, for testing within-person variables (Bolger & Laurenceau, 2013). The average age of respondents was 35 (*SD 8.4*) and 52% of respondents identified as female. 61% of the sample is educated to Masters level or above, 63% were married or living with a partner and their average household income was £52,289 (*SD 35,287*). Means and standard deviations for all study variables can be found in Table 3.

**Table 3 Study 2 Means and Standard Deviations**

|  | Mean | Standard Deviation |
|---|---|---|
| **Level 2 Variables** | | |
| Job Autonomy | 3.93 | 0.91 |
| Similarity between Serious Leisure and Work | 2.23 | 0.83 |
| **Level 1 Variables** | | |
| Serious Leisure Time (measured in hours) | 21.67 | 16.89 |
| Casual Leisure Time (measured in hours) | 24.08 | 31.18 |
| Self-efficacy | 3.81 | 0.54 |
| Resilience | 3.73 | 0.50 |
| Vigor | 2.89 | 0.85 |
| Task Proficiency | 4.03 | 0.58 |
| Personal Initiative | 3.65 | 0.595 |
| Taking Charge | 3.48 | 0.89 |

4.4.2 Measures

The measures in this study were kept consistent with those from Study 1. The reliability of every scale used in the current monthly diary study is presented in Table 4. The table shows the maximum and minimum Cronbach's alpha for each scale over the course of the 7 waves of data collection. If the measure relates to one of the initial survey scales which were not repeated there is only one alpha statistic.

**Table 4 Study 2 Reliability Analysis**

| Variable | Cronbach's alpha (Highest and lowest) | |
|---|---|---|
| Job Autonomy | .93 | .90 |
| Self-Efficacy | .93 | .84 |
| Resilience | .64 | .75 |
| Vigor | .78 | .84 |
| Personal Initiative | .87 | .81 |
| Taking Charge | .95 | .88 |
| Task Proficiency | .9? | .83 |
| Similarity With Work | .76 | |

*Leisure Activities*

In order to distinguish between activities which were serious and casual I provided a description of the characteristics of serious leisure to participants, along with instructions to write down the name of the activity that, for them, best matched the description. They were provided with two extra spaces, to include additional activities, if they felt one was not sufficient. This provided me with at least one named activity for each participant. Although this activity was the one they deemed the *closest* fit to the description of serious leisure it was not necessarily a *good* fit for the criteria for a serious leisure activity. Therefore the same procedure for categorizing activities as serious leisure was used for this study as the episodic

leisure study. Participants were asked to fill in the composite measure of the characteristics of serious leisure activity and an activity was categorized as serious leisure when participants agreed or strongly agreed with each item of the measure.

The exact breakdown of the participant descriptions of their serious leisure activities can be found in Table 5. The frequencies of the activities are similar to Study 1 in that climbing and running are most well represented within the data. Again similar to Study 1 there are also a range of other physical and non-physical activities included. Due to the over-representation of physical activities one of the control variables for the analysis will be the type of activity (physical/non-physical)

**Table 5 Serious Leisure Activities Study 2**

|  | Number of Participants | Percentage |
|---|---|---|
| Climbing | 15 | 14.9 |
| Running | 15 | 14.9 |
| Rock Climbing | 9 | 8.9 |
| Cycling | 7 | 6.9 |
| Writing | 3 | 3 |
| Acting | 2 | 2 |
| Improv Comedy | 2 | 2 |
| Mountain Biking | 2 | 2 |
| Triathlon | 2 | 2 |
| Acting in and directing plays | 1 | 1 |
| Alpine Mountaineering/Climbing | 1 | 1 |
| Amateur dramatics | 1 | 1 |
| Army Cadets | 1 | 1 |
| Belly Dancing | 1 | 1 |
| Caving/Outdoor Pursuits | 1 | 1 |
| Choir | 1 | 1 |
| Comedy/Writing | 1 | 1 |
| Computer and Roleplaying games | 1 | 1 |
| Cooking | 1 | 1 |
| Craft | 1 | 1 |
| Creative Writing | 1 | 1 |
| Dance | 1 | 1 |
| Dog Agility | 1 | 1 |
| Drama | 1 | 1 |
| Drama/Singing | 1 | 1 |
| Electronic design (Hobbyist) | 1 | 1 |
| Fitness | 1 | 1 |
| Flying Gliders | 1 | 1 |
| Gaming | 1 | 1 |
| gym fitness training | 1 | 1 |
| Horses | 1 | 1 |
| Knitting | 1 | 1 |
| Languages | 1 | 1 |
| making things | 1 | 1 |
| Musical theatre performance | 1 | 1 |
| Off piste skiing | 1 | 1 |
| Orienteering | 1 | 1 |
| Painting Miniatures | 1 | 1 |
| Photography | 1 | 1 |
| Pipeband | 1 | 1 |
| Playing boardgames | 1 | 1 |
| Playing the drums | 1 | 1 |
| road cycling | 1 | 1 |
| Roller Derby/ Skating | 1 | 1 |
| Scouting | 1 | 1 |

| | | |
|---|---|---|
| Sports | 1 | 1 |
| Swimming | 1 | 1 |
| Technology | 1 | 1 |
| Theatre | 1 | 1 |
| Walking | 1 | 1 |
| Warmachine | 1 | 1 |
| Weight lifting | 1 | 1 |
| Yoga | 1 | 1 |
| Total | 101 | 100 |

### *Resources*

The resource measures used in Study 2 were chosen to be explicitly work-related resources (i.e. they specifically mention work within the items). Work related scales were used as the length of time between surveys was considerably longer in Study 2 than in Study 1 (one month versus one day). Therefore I wanted to avoid tapping into more generalised self-evaluations by providing a contextual frame for the resource. Providing work as the context for the resource also potentially reduces the cognitive load for participants by removing the need to average out potentially different experiences within different domains over the course of the month.

### *Resilience*

To measure resilience I used the six item measure developed by Wagnild and Young (1993), which is also used for the assessment of resilience as part of psychological capital measurement (Luthans et al., 2010). A sample item from this scale is "When I have a setback at work, I have trouble recovering from it, moving on". Participants were asked, on a five point Likert scale, the extent to which they agreed or disagreed with the statement based on the month just passed.

### Vigor

Vigor was measured using the three item subscale from the state engagement version of the Utrecht Work Engagement Scale (UWES; Breevaart, Bakker, Demerouti, & Hetland, 2012). A sample item from this scale is "(This month) I felt bursting with energy." The response format was "Strongly Disagree" to "Strongly Agree" on a five point Likert scale.

### Proactive Behaviour

To measure proactive behaviour I used two measures: personal initiative and taking charge. I used both of these measures to capture a broad sense of an individual's proactive behaviours at work. As Fritz and Sonnentag (2007) note, taking charge is discretionary, change oriented, and focuses on improvement. A shortened and adapted for self-report 4 item version (Parker & Collins, 2010) of the Morrison & Phelps, (1999) taking charge measure was used. The same measure of personal initiative (Frese et al., 1997) was used from the episodic study of serious leisure the main difference being the time frame participants were asked to reflect on was the past month rather than the past working day.

## 4.5 Ethical considerations

The main ethical considerations of this project relate to maintaining participant anonymity, ensuring informed consent and avoiding any harm to participants.

### 4.5.1 Participant privacy

Participant information was kept confidential at all times throughout the project from data collection to dissemination. For dissemination purposes the data were discussed in their aggregate form. No one individual's information can be identified from this form of data presentation.

### 4.5.2 Informed consent

As with all research projects a key ethical step is ensuring that participants are given sufficient information about the research project and the treatment of the resulting data in order that they can give fully informed consent. This was achieved by including an information page (See Appendix 1) at the beginning of the first questionnaire. In order to give consent participants ticked a box at the beginning of the initial online survey to indicate that they had read and understood the information and were happy to take part in the research.

### 4.5.3 Avoiding harm to participants

All researchers must consider any possible harm to participants that could result from taking part in their research project. In the case of this research there was no immediately obvious risk for harm to participants. The sample was not considered a vulnerable population and the research topic was unlikely to be considered sensitive. Additionally the research was designed to avoid unnecessary

inconvenience for participants and promote a generally positive experience of the research process. For example questionnaires were kept as concise as possible and participants were thanked for their time. Participants were also be given the option to receive general feedback about the findings of the research project.

# Chapter 5: Daily Diary study of the effect of serious leisure on daily work performance

*"What I've learned from running is that the time to push hard is when you're hurting like crazy and you want to give up. Success is often just around the corner." James Dyson*

In this chapter I investigate whether serious leisure can provide us with a more nuanced way of examining the enriching and conflicting effects of daily episodes of the activities people pursue in their non-work time. Serious leisure is an orientation towards leisure activities that involves continuity of engagement over time, effort to acquire skills and knowledge, perseverance through difficulties, a unique ethos associated with the activity, and the creation of a sense of identity around the activity. Serious leisure is proposed to be the most effective way of garnering enduring benefits from leisure, in contrast to "casual leisure" which describes the irregular pursuit of an activity, for the immediate and short lived experience of pleasure.

Existing research into the daily effects of individuals' activities on their resources and work behaviours has focused predominantly on recovery of resources (e.g. Sonnentag & Fritz, 2014) and provided mixed results regarding the effects of different types of activities on resources (see Chapter 3 for a more in depth discussion). This line of research has provided limited information regarding how these resources translate into work outcomes (see Binnewies, Sonnentag, & Mojza, 2010; Fritz & Sonnentag, 2006 and Volman, Bakker, & Xanthopoulou, 2013, for exceptions). With this research context at its base, the current study

examines serious leisure as the next step in understanding the daily dynamics between non-work activities, resources and work behaviours. By acknowledging and examining the impact of serious leisure I hope to place leisure at the heart of the research question in contrast to the predominantly work and resources oriented research of the past. The aim of this approach is to yield more novel insights and future research questions which will shape future work in this area.

Drawing from Conservation of Resources (COR) theory I expect that spending time engaged in serious leisure, as a valued activity, will provide psychological resources (self-efficacy and highly activated positive affect), which in turn translate into improved work performance. A serious leisure activity provides both the motivation and the opportunity to improve skills and as such provides opportunities for the development of these resources. I hypothesise that the identity centrality of a serious leisure activity additionally aids the transfer of these resources to the work domain as the schema relating to the experiences, and hence related resources, will be more accessible when deemed relevant to an individual's identity. Following from this I also expect the relationship between time spent in serious leisure and work behaviours will be stronger for activities which are more similar to a participant's work role due to the increased relevance of the resources across domains. In comparison, I expect time spent in casual leisure to display no relationship or a weaker relationship with psychological resources and work behaviours.

## 5.1 Episodic Serious Leisure to Work Enrichment

In Chapter 2 I introduced Greenhaus and Powell's (2006) model of enrichment. This model proposes two pathways of enrichment from one role to another. In this chapter I propose a model (See Figure 2) of leisure-work enrichment which is drawn from, and extends, Greenhaus and Powell's model. I propose an instrumental pathway based on the creation of self-efficacy in serious leisure which is then applied within the work role. I also propose an affective pathway based on the spillover of highly activated positive affect from time spent in serious leisure into the following workday. Finally I suggest an additional pathway for enrichment to occur, a cognitive affective pathway, which operates via the mechanism of positive leisure reflection.

Level 2: Between Person Variables

```
┌──────────────┐
│  Similarity  │
│   between    │
│serious leisure│
│ and work role│
└──────────────┘
```

| Instrumental Pathway |
| Self-efficacy |
| Affective Pathway |
| Highly Activated Positive Affect |
| Cognitive Affective Pathway |
| Positive leisure reflection |

Episodic Serious Leisure

Work Performance
Task Proficiency
Personal Initiative
Task Proactivity

Success in Serious Leisure Activity
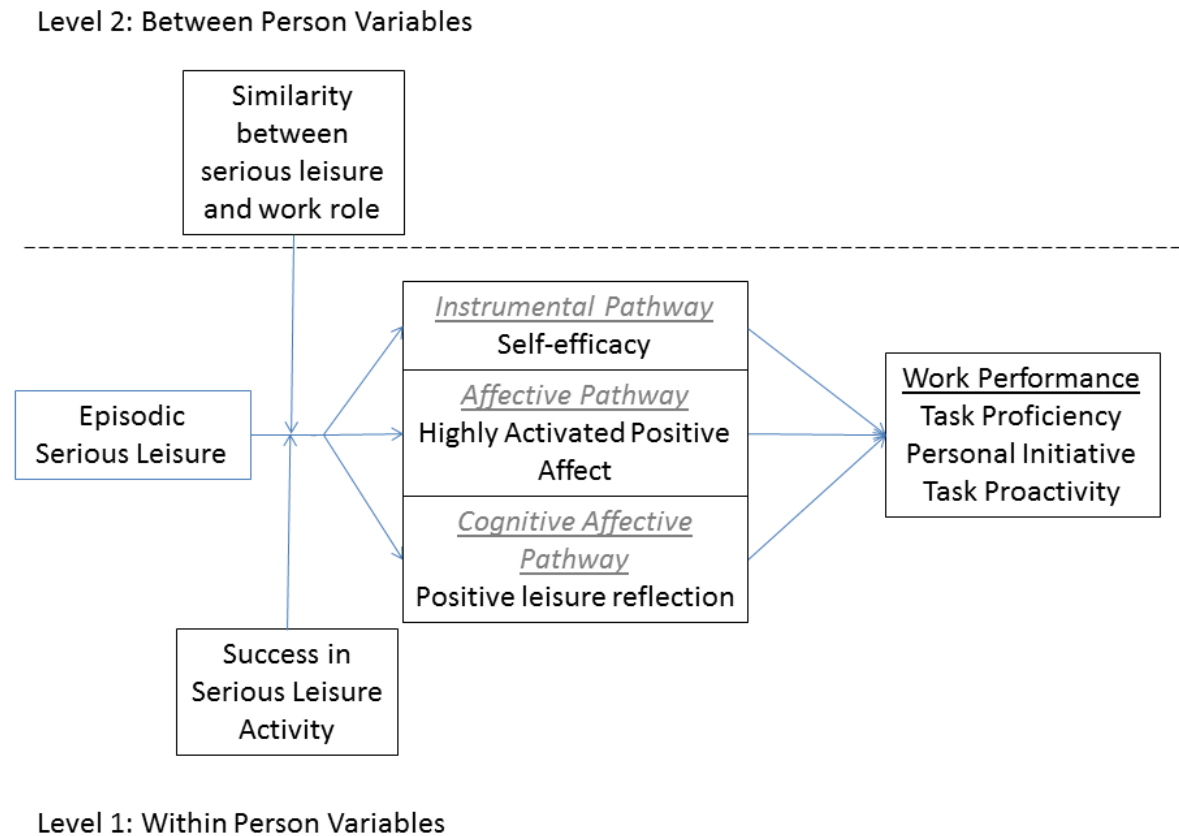
Level 1: Within Person Variables

Figure 2 Model of episodic leisure-work enrichment

### 5.1.1 The instrumental pathway of enrichment: building self-efficacy

The instrumental pathway describes a process through which resources created through the enactment of one role can be directly applied to the work role. I propose that serious leisure creates the psychological resource of self-efficacy which can then be applied to the work domain.

While pursuing serious leisure activities individuals develop the skills and abilities they need to carry out what they consider to be a personally valued activity (Stebbins, 1982). This activity provides a domain where individuals are motivated to achieve a sense of mastery, which is a precursor to self-efficacy (Bandura, 1977). The challenge and effort required to achieve this mastery in turn requires the investment of resources. Conservation of resources theory (COR; Hobfoll, 2002) states that individuals will seek to protect their resources, or invest them only for valued ends or with the expectation of building further resources. I propose that serious leisure, as a valued end in itself, will be more likely than casual leisure to be viewed as a valid domain for resource investment, and as such will provide an individual with more experiences of mastery. A casual leisure activity will be considered less meaningful and thus will not warrant the resource investment required to produce the experiences need to build self-efficacy, particularly if resources are considered scarce.  Thus, I propose:

***Hypothesis 1: Time spent in serious leisure will be positively related to self-efficacy the following day after controlling for the effects of time spent in casual leisure.***

### 5.1.2 The affective pathway of enrichment: generating highly activated positive affect

Enrichment can also occur via an affective pathway (Greenhaus & Powell, 2006). The affective pathway as outlined by Greenhaus and Powell relies on positive affect generated from high performance in one role spilling over into the other role. Serious leisure is associated with positive affective states (Brown, 2007; Gould, Moore, Mcguire, & Stebbins, 2008; Heo et al., 2010), although not necessarily any more than casual leisure activities (Stebbins, 2007). Experiencing positive affective states in one's non-work time is beneficial for facilitating recovery from work, by reducing the experience of work related stress and effort (Meijman & Mulder, 1998). Therefore both serious and casual leisure activities may be useful in terms of preventing additional work related depletion of resources via the experience of positive affect during the activity and therefore both types of leisure will create some spillover of positive mood the morning following the leisure activity.

Greenhaus and Powell's affective pathway does not differentiate between different types of positive affect. However according to the circumplex model of emotion there are two distinct types of positive affect and these differ on their level of activation or arousal (Russel, 1980). Highly activated positive affect (HAPA) relates to feelings such as excitement and enthusiasm which combine both positive valance and positive activation. In contrast low activation positive affective (LAPA) states are related to feeling positive but calm (Russel, 1980). Increasingly, research on emotion is uncovering important differences between

these two types of positive affect. For example HAPA was more strongly associated with proactive behaviours than LAPA states (Bindl, Parker, Totterdell, & Hagger-Johnson, 2012). Therefore I will focus my day level hypotheses on the highly activated elements of positive affect.

***Hypothesis 2: Time spent in serious leisure will be positively related to highly activated positive affect the following day after controlling for the effects of casual leisure.***

### 5.1.3 The cognitive affective pathway of enrichment

Greenhaus and Powell (2006) focused on instrumental and affective pathways of enrichment between work and family. I suggest that in the case of serious leisure there is an additional cognitive-affective pathway that will facilitate enrichment between leisure and work. Cognitive appraisal theory suggests that individuals will seek to capitalize on positive events and maximize their impact (Langston, 1994). As a salient aspect of individuals' identities serious leisure activities are likely to be more easily called to mind (Stets & Burke, 2000) than experiences from other more casual pursuits. Based upon these arguments drawn from the serious leisure literature and cognitive appraisal theory, I propose that time spent in serious leisure induces moments of positive leisure reflection throughout the following work day. I define positive leisure reflection as the act of recalling the positive aspects of one's leisure activity. This concept of positive leisure reflection is an extension and supplement to the concept of positive work reflection (Fritz & Sonnentag, 2005), which represents the act of reflecting on the good sides of one's work during leisure time. The effects of positive work

reflection have been found to mediate the relationship between work engagement and work-life enrichment (Daniel & Sonnentag, 2014) These findings suggest that there is value for individuals in reflecting on the positive aspects of one life domain while being engaged in another. I propose that the act of positive leisure reflection is a resource within the enrichment process as it provides a cognitive prompt which facilitates continued highly activated positive affective resources, beyond the basic affective spillover pathway considered previously.

***Hypothesis 3a: Time spent in serious leisure will be positively related to positive leisure reflection the following day.***

***Hypothesis 3b: Time spent in casual leisure will not be related to positive leisure reflection the following day.***

### 5.1.4 Serious leisure and resource depletion

While this thesis primarily focusses on enrichment between leisure and work, there are also potential costs involved in serious leisure pursuits. Due to its distinctive approach of sustained investment in a personally meaningful non-work activity, serious leisure may result in negative consequences, particularly within the dynamics of daily resources. Stebbins states that the benefits should outweigh the costs in a serious leisure activity (Stebbins, 1982, 2016), however the validity of this assertion has been questioned within the field of leisure research (Lamont, Kennelly, & Moyle, 2015; Major, 2001; Thurnell-Read, 2016). In addition, it is not clear over what timeframe the benefits may outweigh the costs and as such it may be that more volatile resources, such as energy, are depleted in the short term.

This situation may be deemed acceptable by serious leisure participants due to medium or long term returns in terms of more structural resources, or it may be acceptable despite no resource returns if the participant feels their participation maintains concordance with their values and self-concept (Hobfoll, 1989; Sheldon & Elliot, 1999). In addition, serious leisure activity involves a higher level of commitment than more casual forms of leisure meaning that in an instance where an individual is already feeling depleted from work or other domains of their lives, they will have less freedom to choose whether or not to engage in their serious leisure activity and therefore engagement could lead to increased fatigue. For example, a chorus member in a musical theatre production may have had a particularly demanding work day and yet expectations that she will not let the cast of the show down means that she will attend a rehearsal despite feeling the need to do something with less energy investment that evening. Another example may be a triathlete who must maintain a regular training schedule in order to maintain gains in their fitness and endurance. Therefore, in addition to the enriching effects of serious leisure I hypothesise that time spent in serious leisure is also positively related to fatigue. In contrast casual leisure is likely to be more flexible and require less resource investment which would make it a potentially more effective in aiding recovery from work. On a daily basis casual leisure activities may be chosen specifically, and instrumentally, for their recovery potential. In support of this instrumental approach to leisure recent research on leisure crafting (Petrou & Bakker, 2016) and gym attendance (Stewart et al., 2012) does indicate that certain people engage in leisure activities which are instrumentally chosen for their

potential to facilitate their work lives. Therefore I would expect that time spent in casual leisure activities would result in reduced fatigue.

***Hypothesis 4a: Time spent in serious leisure is positively related to fatigue the following day***

***Hypothesis 4b: Time spent in casual leisure is negatively related to fatigue the following day***

### 5.1.5 Moderators of resource creation and enrichment

Greenhaus and Powell (2006) suggest a number of moderators of the enrichment pathway between resources created in one role and improved performance and well-being. They suggest that the perceived relevance of the resources to the work role and the consistency of the resource with the requirements of the work role will influence whether there is effective enrichment between work and family roles. In the case of serious leisure, I examine whether the similarity of the leisure role with the work role moderates the effects of both the process of resource creation as well as the process of enrichment between leisure and work. Additionally, I examine the success of each serious leisure episode as a moderator which is specific to the episodic model of serious leisure to work enrichment. This moderator is examined in order to acknowledge and explore the potential unpredictability of single episodes of leisure activities, in comparison to the *average* experience of an activity over a longer time frame.

### 5.1.5.1 Similarity between the work role and serious leisure activity

The extent to which an individual's serious leisure activity resembles their work role, specifically in regards to the types of skills and activities involved and the mental and physical demands of the role, will influence the way in which resources are created as a result of engagement in that activity. In the case of the instrumental pathway and the development of self-efficacy a serious leisure activity which resembles an individual's work role will provide the opportunity to develop and exercise skills and abilities which are not just relevant for the leisure activity but also for the work role. Experiencing mastery of a skill which is valued in multiple domains, as well as being concordant with one's own values and beliefs is more likely to impact on general self-efficacy than an activity which does not exhibit this overlap (Sheldon & Elliot, 1999).

In the case of the cognitive-affective pathway an individual is more likely to experience cues in the work environment which are similar to their leisure activity and these cues will increase the likelihood of them experiencing positive leisure reflection. The depletion pathway is also hypothesized to be affected by the extent to which work and leisure are similar. According to ego depletion theory (Baumeister et al., 1998) and the effort recovery model (Meijman & Mulder, 1998) engaging in similar activities will increasingly cause depletion because an individual is continuously taxing the same systems and resources. It is possible that engaging in an activity that has similar demands as an individual's daily work will result in increased fatigue due to insufficient recovery.

Within the instrumental pathway I suggest that the similarity of the characteristics of the work role and the leisure activity will influence the extent to which the activity builds self-efficacy and the extent to which this resource is applied to the work domain. Self-efficacy is more effective in influencing behaviour the more domain-specific the experiences are through which the sense of efficacy has been created (Bandura, 2011). Therefore any serious leisure activity will involve building skills and a sense of mastery over an activity, and in addition be considered an important aspect of an individual's life. In this way it may contribute to their general sense of self efficacy, a useful psychological resource. However if the activity shares characteristics in terms of the skills and abilities necessary for success or the tasks involved in the work activity, then experiencing increased self-efficacy in these tasks will result in a more relevant form of self-efficacy for work performance.

The extent to which an individual's serious leisure activity is experienced as similar to their work role is likely to influence the extent to which it builds resources and facilitates the successful transfer of resources from one domain to another. Greenhaus and Powell suggested that the successful transfer of resources between work and family domains was dependent upon the relevance of the resources created in one role to the second role, as well as on the consistency of the demands between the roles. In their framework for enrichment they suggested that "when work and family role identities are similar, individuals can express themselves in similar ways across roles and can see the connection between the skill or perspective acquired in one role and the requirements of the other role."

*Hypothesis 5: The effect of time spent in a serious leisure activity on self-efficacy, positive leisure reflection and fatigue will be moderated by the similarity of the activity to their work role, such that the effect will be stronger when leisure and work are similar.*

### 5.1.5.2 Success of the serious leisure episode

As mentioned in the beginning of this section on moderators, there are likely be differences in the short-term effects of episodes of serious leisure as opposed to its cumulative effects over time (Maertz & Boyar, 2010). In general the overall benefits of serious leisure are expected to outweigh the costs (Stebbins, 1992). Nevertheless, any individual experience of a serious leisure activity in isolation may fail to provide a positive experience. For example, a rock climber may find on a particular day that he or she struggles with a route he or she had previously felt proficient at; or a runner may take longer than usual for a particular run. In this case self-regulatory resources (Baumeister et al., 1998) will have been invested, but a return on resources, such as a boost to self-efficacy will not occur. I propose that serious leisure will not produce enhanced resources on these occasions, and that a sense of success of the leisure activity will moderate the effects of serious leisure on resources.

***Hypothesis 6: The extent to which an individual's serious leisure activity is successful will moderate the effect of time spent in serious leisure on resources, such that the effect will be weaker when the activity has not been successful.***

### 5.1.6 Serious Leisure and Work Performance

The model of work family enrichment (Greenhaus & Powell, 2006) states that high performance in one role facilitates high performance in a second role. I suggest that there are particular areas of performance which are likely to benefit from the enriching effects of serious leisure. Individuals are likely to attempt to maintain a consistent performance in core tasks, due to their importance to their work role, even under conditions of changing resource availability (Halbesleben & Bowler, 2007). Gaining resources from engagement in serious leisure is therefore likely to facilitate positive core task performance or proficiency. However, it is not only core task performance which is likely to be affected by resources generated through engagement in serious leisure episodes. When additional resources are available individuals invest these in behaviours which may be of personal interest to them, or potentially provide them with additional work resources in the future, such as proactive behaviour at work (Parker et al., 2012). Proactive behaviours require energy (or highly activated positive affect), self–efficacy, and motivation (Parker, Bindl, & Strauss, 2010).  I have proposed that serious leisure directly enhances highly activated positive affect and self-efficacy. These increased resources may improve performance in the workplace by fuelling proactive behaviours as suggested by Parker, Bindl and Strauss (2010).

Engagement in serious leisure episodes may also facilitate proactive behaviours indirectly, by prompting a promotion focused state which would spillover into the work domain (Berg et al., 2010). Promotion focus is a state in which individuals are more focused on the potential gains they can achieve within an activity. This contrasts with prevention focus, where an individual is preoccupied with the dangers and losses associated with failing within an activity. Short term set-backs within leisure are likely to have less material consequences for an individual compared to the work or family domain, making engagement in challenging activities during leisure less likely to prompt a prevention focused state. Additionally the gains experienced from developing and building skills over time may facilitate a focus on positive achievement, and as such prompt a promotion focused state.

Additionally, a serious leisure activity is embedded within an individual's identity, this makes any schema or resources associated more readily accessible to the person due to their role within the individual's broader self-concept (Stryker & Serpe, 1994). The identity aspect of serious leisure is therefore likely to facilitate the application of resources generated within the leisure domain to aid tasks and behaviours in other domains. In support of this, Greenhaus and Powell (2006) suggested that the salience of a role within an individual's life will facilitate the enrichment process. Therefore the sustained effort and skill building elements of serious leisure provides the basis for the development of psychological resources which may enrich the work role and the identity element of serious leisure facilitates the effective identification and application of those resources within the

work domain. This combination could therefore facilitate effects that go beyond basic recovery (Sonnentag & Fritz, 2007) or affective spillover (where moods spillover from one domain to an adjacent one, or from one temporally adjacent experience to the next). However, the motivation to invest resources in serious leisure may also have a depleting side, as has been hypothesised with regard to its relationship with fatigue. If there is a positive relationship with fatigue this may reduce the likelihood of finding a direct positive relationship between time spent in serious leisure and work performance as it may supress other positive effects discussed above. Therefore increases in work performance are expected to operate potentially via direct effects from serious leisure but primarily via increases in the two mediators, self-efficacy and highly activated positive affect.

*Hypothesis 7a: Time spent in serious leisure will have a positive direct relationship on work performance, including both core task performance and proactive behaviour.*

*Hypothesis 7b: The relationship between time spent in serious leisure and work performance will be mediated by self-efficacy and highly activated positive affect.*

## 5.2 Analytical Strategy

The model of leisure-work enrichment presented here represents relationships between variables at the within-person level therefore the Intraclass Correlation (ICC) was calculated for all variables that served as outcomes in the theoretical model. The ICC of a variable represents the "proportion of variance explained by the grouping structure in the population" (Hox, 2010, p. 14), which

in this case is the proportion of between-person variance. The remaining variance is therefore attributed to within-person variation. The ICCs for personal initiative, task proactivity, task proficiency, positive leisure reflection, self-efficacy and fatigue indicated that between 45 and 58 percent of the variance was attributable to within-person variation. Hence multilevel modelling was the most appropriate method available to model this variability.

Table 6 Study 1 ICC of Dependant Variables

| Variable Name | ICC |
| --- | --- |
| Personal Initiative | 0.46 |
| Task Proactivity | 0.42 |
| Task Proficiency | 0.50 |
| Positive Leisure Reflection | 0.55 |
| Self-efficacy | 0.43 |
| Highly Activated Positive Affect | 0.46 |
| Fatigue | 0.48 |

In order to limit the analysis to changes which occur on the within-person level the IVs were person-centred. Each participant's average score was subtracted from their daily score to create a person-centred variable which represented only the change which deviated from the person's average. This eliminates differences which may relate to stable differences between participants' levels of the independent variable. For example, people with generally higher levels of self-efficacy may also engage in more proactive behaviour more generally (a between-person effect). However by limiting the analysis to that variation around the mean it eliminates potential between-person effects and limits these effects to changes within participants. Person-centring variables also deals with issues of multicollinearity (Enders & Tofighi, 2007) .

Maximum Likelihood (ML) estimation was used to facilitate comparison between competing models. Restricted Maximum Likelihood (REML) estimation is sometimes used instead of ML when there are smaller numbers of level-two units, but fit statistics generated using REML cannot be compared between models (Tabachnick & Fidell, 2007) so in this instance ML was considered the more appropriate estimation method. For completeness analyses were also run using REML and there were no substantive differences in the findings regarding significant effects within the models.

## 5.3 Results:
### 5.3.1 Preliminary Analysis

Data were cleaned and checked for assumptions and outliers. The means, standard deviations and correlations of the data can be found in Table 1 and Table 7, respectively. The correlation table is based upon daily data as this is the level at which the hypothesised effects are being tested. The variables which are only predictors in the model have been person centred for the correlation table as this is the way they are examined in the multilevel analysis. The correlation table indicates that only self-efficacy has a significant relationship with serious leisure time. However the correlation table does not allow for random intercepts which is strength of multilevel modelling. The results also indicate some high correlations between study variables (e.g. highly activated positive affect and self-efficacy). Therefore the distinctiveness of these constructs were checked using multilevel CFA and the results are reported below.

Visual checks of scatterplots were undertaken to assess whether the data conformed to the assumptions of the inferential analysis. These plots indicated linearity of the relationships between the independent and dependent variables and homoscedasticity of the variable distribution. There was some positive skewing of the time spent in serious leisure. Therefore analyses were conducted using both the log transformed versions of this variable in addition to the untransformed variable. There were no substantive differences in the results between the two sets of analysis. Therefore, to aid interpretation, the results using the untransformed variable are presented here (Tabachnick & Fidell, 2007).

Outliers were removed based on the z-scores of time spent in serious leisure. Those with a value over 3.29 were removed as advised in Tabachnick & Fidell, (2007). This accounted for two cases. I also removed two people who had listed family care time as a leisure activity. This was deemed appropriate for theoretical and practical reasons. The theoretical understanding of serious leisure, and leisure more widely, makes a distinction between family care and free leisure time. From a practical perspective retaining a distinction between leisure activities and family time in this way will aid comparison with the findings of existing empirical research on work and non-work which has generally maintained such discrete categories within non-work domains. Additionally, the data from family activities had the potential to have an outsized influence on model parameters as these participants tended to record long periods of time in their "family" activity. Therefore I removed these cases from analysis, reducing the level 2 sample size from 95 to 91.

In order to ascertain whether the constructs under investigation were distinct I compared a number of competing measurement models using a multilevel confirmatory factor analysis within MPlus. Firstly I tested the fit of a model with one factor representing all variables at the within-person level (self-efficacy, highly activated positive affect, positive leisure reflection and fatigue, as well as outcome variables, personal initiative, task proactivity, and task proficiency). This model did not provide a good fit for the data (CFI = 0.66, RMSEA = 0.14, SRMR = 0.187). Secondly I tested a two factor model in which the mediators were represented by one factor and the outcome variables were represented by a second factor. These factors were modelled at both the within and between person levels of variance. This model was a better representation than the one factor model but still suffered from a poor overall model fit (CFI= 0.704, RMSEA = 0.133, SRMR = 0.275 [within] and 0.220 [between]). The third model tested a 7 factor model in which the items were loaded onto their hypothesised variables. This was an improvement on the previous models and a good fit for the data (CFI=0.97, RMSEA = 0.045, SRMR = 0.036 [within] and 0.059 [between]). Based on this analysis the measurement of a seven factor model appears to be a valid representation of the variables contained within the study.

**Table 7 Study 1 Correlations**

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.Gender | | | | | | | | | | | | | |
| 2. Age | .024 | | | | | | | | | | | | |
| 3. Job Autonomy | .079 | .212** | | | | | | | | | | | |
| 4. Similarity of work and leisure | .011 | .369** | .174** | | | | | | | | | | |
| 5. Success of serious leisure | .005 | .003 | .006 | .000 | | | | | | | | | |
| 6. Casual leisure time | -.001 | .004 | .001 | .008 | -.085 | | | | | | | | |
| 7. Serious leisure time | -.012 | .022 | .018 | .011 | .816** | -.097 | | | | | | | |
| 8. Self-efficacy | -.005 | .189** | .239** | .158** | .058 | .007 | .132** | | | | | | |
| 9. Highly activated positive affect | -.130** | .062 | .192** | .140** | .028 | -.033 | .068 | .608** | | | | | |
| 10. Positive leisure reflection | .147** | -.106 | -.108* | .115* | .001 | .089 | -.019 | .105 | .177** | | | | |
| 11. Fatigue | .039 | .067 | -.167** | -.039 | -.005 | .016 | -.040 | -.392** | -.266** | .036 | | | |
| 12. Task proficiency | -.261** | .077 | .209** | .063 | .053 | .017 | .102 | .403** | .311** | .061 | .022 | | |
| 13. Personal Initiative | -.098 | .205** | .246** | .013 | -.035 | -.071 | .026 | .485** | .426** | .088 | -.039 | .658** | |
| 14. Task proactivity | .011 | .099 | .232 | .058 | -.04 | -.041 | .003 | .417 | .35 | .047 | -.122* | .470** | .660** |

*Note.  *p < .05.  **p < .01. ***p < .001*          Correlations drawn from daily data

### 5.3.2 Tests of direct effects: Resources on Serious Leisure Time

I tested a series of nested models in order to investigate whether the addition of study variables provided additional clarity to the distribution of data of the dependent variables. I began each set of models with a null model containing only the dependent variable partitioned into its respective within- and between-person portions of variance. It is with this model I obtained the ICC statistic which indicated that each of my dependent variables displayed within-person as well as between-person variance, therefore requiring the use of multilevel modelling. Following the null model, I tested the first in a series of 5 predictive models with increasing numbers of independent variables. The first model tests only the control variables; age, gender and type of leisure activity. Model 2 includes time spent in casual leisure and in Model 3 I added time spent in a serious leisure activity. I entered time spent in casual leisure in Model 2 so that in Model 3, where time spent on serious leisure was added, would test whether serious leisure had explanatory power over and above that of casual leisure. This was to test the effects of *serious* leisure, rather than free time in general (in contrast to work time, housework, etc.). Testing my hypotheses in this way represents a more conservative test of the impact of time spent in serious leisure and helps to prevent type 1 errors and confounding serious leisure with the effects of free time.

The moderators of the resource creation aspects of serious leisure were tested in subsequent nested models, Models 4 and 5. In Model 4 the variables representing the moderators were entered and Model 5 contained the interaction terms.

### 5.3.2.1 Instrumental Pathway: Self-efficacy

Table 8 presents the findings for the nested models relating to Hypothesis 1, that time spent in serious leisure will be positively related to self-efficacy the following day after controlling for the effects of time spent in casual leisure. Model 1 shows significant improvement over the null model ($\Delta$ - 2 x log = 556.18, df = 3, p < .001). The addition of time spent in casual leisure makes Model 2 a significant improvement on Model 1 ($\Delta$ - 2 x log = 128.67, df = 1, p < .001), however casual leisure itself does not significantly predict self-efficacy. Model 3 is a significant improvement on Model 2 ($\Delta$ - 2 x log = 9.505, df = 1, p < .01). Time spent in serious leisure is significantly and positively related to self-efficacy, supporting Hypothesis 1. Model 4, where I entered the variables needed to create the interaction effect, was a significant improvement on Model 3 ($\Delta$ - 2 x log = 530.83, df = 2, p < .001). Similarity of work and leisure was a significant predictor of self-efficacy. Within this model time spent in casual leisure did predict self-efficacy, indicating that casual leisure plays a role in self-efficacy when I take into account serious leisure, similarity of serious leisure and work, and the success of serious leisure.

The final two nested models test Hypotheses 5 and 6, that similarity and success will influence the effects of time spent on serious leisure on self-efficacy. When the interaction effects were entered in Model 5 the improvement in Model fit was not significant ($\Delta$ - 2 x log = 1.194, df = 2, ns). Therefore I find no support for Hypotheses 5 and 6 in relation to self-efficacy.

## Table 8 Multilevel Estimates for Predicting Self-Efficacy

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | $t$ | Estimate | SE | $t$ | Estimate | SE | $t$ | Estimate | SE | $t$ | Estimate | SE | $t$ |
| Intercept | 3.674 | 0.110 | 33.47 | 3.633 | 0.129 | 27.956 | 3.641 | 0.128 | 28.27 | 3.705 | 0.161 | 23.00 | 3.714 | 0.159 | 23.21 |
| Age | 0.129 | 0.070 | 1.85 | 0.100 | 0.084 | 1.191 | 0.098 | 0.083 | 1.17 | 0.007 | 0.082 | 0.09 | 0.005 | 0.082 | 0.06 |
| Gender | -0.017 | 0.142 | -0.12 | 0.024 | 0.173 | 0.144 | 0.021 | 0.171 | 0.12 | 0.250 | 0.173 | 1.44 | 0.223 | 0.173 | 1.28 |
| Type of SL | 0.090 | 0.153 | 0.59 | 0.092 | 0.182 | 0.504 | 0.086 | 0.181 | 0.47 | -0.287 | 0.199 | -1.43 | -0.268 | 0.199 | -1.34 |
| CLT | | | | 0.012 | 0.028 | 0.44 | 0.019 | 0.028 | 0.7 | 0.145** | 0.052 | 2.75 | 0.140** | 0.052 | 2.66 |
| SLT | | | | | | | 0.081** | 0.028 | 2.90 | 0.117* | 0.055 | 2.11 | 0.126* | 0.055 | 2.26 |
| Similarity | | | | | | | | | | 0.279* | 0.102 | 2.72 | 0.291* | 0.128 | 2.27 |
| Success | | | | | | | | | | -0.140 | 0.111 | -1.25 | -0.015 | 0.160 | -0.09 |
| Similarity*SLT | | | | | | | | | | | | | -0.014 | 0.068 | -0.20 |
| Success*SLT | | | | | | | | | | | | | -0.115 | 0.107 | -1.07 |
| | | | | | | | | | | | | | | | |
| Minus 2 LL | | | | 858.32*** | | | 729.644*** | | | 720.139*** | | | 189.308 | | | 188.114 |
| Dif Minus 2 LL | | | | 556.18 | | | 128.676 | | | 9.505 | | | 530.831 | | | 1.194 |
| df | | | | 3 | | | 1 | | | 1 | | | 2 | | | 2 |
| Level 1 Intercept Variance | | | | 0.344 | | | 0.337 | | | 0.329 | | | 0.287 | | | 0.285 |
| (SE) | | | | 0.025 | | | 0.027 | | | 0.026 | | | 0.052 | | | 0.052 |
| Level 2 Intercept Variance | | | | 0.234 | | | 0.297 | | | 0.291 | | | 0.137 | | | 0.134 |
| (SE) | | | | 0.058 | | | 0.079 | | | 0.078 | | | 0.072 | | | 0.072 |

*Note.* $*p < .05.$ $**p < .01.$ $***p < .001$    SLT = Serious Leisure Time, CLT = Casual Leisure Time.

### 5.3.2.2 Affective Pathway: Highly Activated Positive Affect

Table 9 presents the findings for the nested models relating to Hypothesis 2, that time spent in serious leisure will be positively related to highly activated positive affect the following day after controlling for the effects of casual leisure. Model 1 shows significant improvement over the null model ($\Delta$ - 2 x log = 758.88, df = 3, p < .001). The addition of time spent in casual leisure resulted in a significant improvement on Model 1 ($\Delta$ - 2 x log = 156.83, df = 1, p < .001). When time spent in serious leisure was added, in Model 3, there was no significant improvement in model fit ($\Delta$ - 2 x log = 3.72, df = 1, p = 0.053), therefore Hypothesis 2 is rejected. The addition of the variables needed to create the interaction effect did result in an improved model fit (Model 4; $\Delta$ - 2 x log = 648.01, df = 1, p < .001), although none of the individual variables were significant predictors of highly activated positive affect. When the interaction effects for Hypotheses 5 and 6 were entered in Model 5 the improvement in Model fit was not significant ($\Delta$ - 2 x log = 0.05, df = 2, *ns*), therefore I find no support for Hypotheses 5 and 6, that success of the activity would moderate the effect of time spent in serious leisure activities and highly activated positive affect the next morning.

*Table 9: Study 1 Multilevel Estimates for Predicting Highly Activated Positive Affect*

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | T | Estimate | SE | t | Estimate | SE | t |
| Intercept | 2.647 | 0.148 | 17.867 | 2.583 | 0.166 | 15.600 | 2.589 | 0.165 | 15.658 | 2.644 | 0.254 | 10.427 | 2.642 | 0.254 | 10.407 |
| Age | 0.083 | 0.094 | 0.875 | 0.014 | 0.108 | 0.127 | 0.012 | 0.108 | 0.110 | -0.068 | 0.129 | -0.524 | -0.067 | 0.129 | -0.516 |
| Gender | 0.185 | 0.192 | 0.966 | 0.178 | 0.220 | 0.807 | 0.174 | 0.220 | 0.791 | 0.444 | 0.288 | 1.543 | 0.451 | 0.290 | 1.558 |
| Type of SL | -0.045 | 0.207 | -0.218 | -0.052 | 0.233 | -0.224 | -0.054 | 0.232 | -0.232 | -0.288 | 0.298 | -0.968 | -0.293 | 0.299 | -0.982 |
| CLT | | | | -0.028 | 0.037 | -0.753 | -0.022 | 0.037 | -0.602 | 0.081 | 0.071 | 1.139 | 0.082 | 0.071 | 1.155 |
| SLT | | | | | | | 0.056 | 0.037 | 1.535 | 0.023 | 0.076 | 0.302 | 0.020 | 0.076 | 0.265 |
| Similarity | | | | | | | | | | -0.006 | 0.149 | -0.042 | -0.042 | 0.216 | -0.193 |
| Similarity*SLT | | | | | | | | | | | | | 0.033 | 0.146 | 0.225 |
| | | | | | | | | | | | | | | | |
| Minus 2 LL | | | | | 1074.062 | | | 917.230 | | | 913.508 | | | 265.493 | | | 265.442 |
| Dif Minus 2 LL | | | | | 758.889*** | | | 156.832*** | | | 3.722 | | | 648.015*** | | | 0.051 |
| df | | | | | 3.000 | | | 1.000 | | | 1.000 | | | 1.000 | | | 1.000 |
| Level 1 Intercept Variance | | | | | 0.565 | | | 0.568 | | | 0.566 | | | 0.506 | | | 0.506 |
| (SE) | | | | | 0.042 | | | 0.045 | | | 0.045 | | | 0.086 | | | 0.086 |
| Level 2 Intercept Variance | | | | | 0.438 | | | 0.478 | | | 0.477 | | | 0.511 | | | 0.512 |
| (SE) | | | | | 0.099 | | | 0.117 | | | 0.116 | | | 0.167 | | | 0.167 |

*Note. *p < .05. **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.2.3 Cognitive-affective Pathway: Positive leisure reflection

Table 10 presents the findings for the nested models relating to participants'

daily positive leisure reflection. Model 1 showed significant improvement over the

null model ($\Delta$ - 2 x log = 634.31, df = 3, p < .001). The addition of time spent in

casual leisure resulted in a significant improvement on Model 1 ($\Delta$ - 2 x log =

142.4, df = 1, p < .001). Gender and casual leisure were significant predictors of

positive leisure reflection. This does not support Hypothesis 3b, that casual leisure

will not be associated with positive leisure reflection. Model 3 is not a significant

improvement on Model 2 ($\Delta$ - 2 x log = 2.4, df = 1, *ns*), therefore Hypothesis 3a

was rejected. Model 4, in which I entered the variables needed to create the

interaction effect, was a significant improvement on Model 3 ($\Delta$ - 2 x log = 541.96,

df = 2, p < .001). Similarity of work and leisure and the type of leisure activity

were both significant predictors of positive leisure reflection in this model. When

the interaction effects were entered in Model 5 the improvement in Model fit was

not significant ($\Delta$ - 2 x log = 0.38, df = 2, p *ns*). Therefore I find no support for

Hypotheses 5 and 6, that similarity of work and leisure and success of the activity

would moderate the effect of time spent in serious leisure activities and positive

leisure reflection.

*Table 10: Study 1 Multilevel Estimates for Predicting Positive Leisure Reflection*

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | T | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.629 | 0.197 | 18.412 | 3.720 | 0.191 | 19.460 | 3.719 | 0.191 | 19.454 | 4.114 | 0.282 | 14.603 | 4.102 | 0.284 | 14.439 |
| Age | -0.079 | 0.117 | -0.672 | -0.168 | 0.119 | -1.411 | -0.167 | 0.119 | -1.401 | -0.335* | 0.142 | -2.351 | -0.341* | 0.144 | -2.368 |
| Gender | -0.223 | 0.243 | -0.921 | -0.504* | 0.243 | -2.069 | -0.501* | 0.244 | -2.056 | -0.608 | 0.299 | -2.030 | -0.596 | 0.302 | -1.970 |
| Type of SL | -0.202 | 0.258 | -0.784 | -0.368 | 0.256 | -1.438 | -0.373 | 0.256 | -1.457 | -0.730* | 0.349 | -2.089 | -0.733* | 0.356 | -2.059 |
| CLT | | | | 0.104* | 0.045 | 2.334 | 0.105* | 0.045 | 2.336 | 0.033 | 0.115 | 0.286 | 0.046 | 0.116 | 0.395 |
| SLT | | | | | | | 0.024 | 0.046 | 0.522 | -0.177 | 0.106 | -1.671 | -0.177 | 0.107 | -1.647 |
| Similarity | | | | | | | | | | 0.428* | 0.173 | 2.472 | 0.392 | 0.226 | 1.739 |
| Success | | | | | | | | | | 0.182 | 0.200 | 0.906 | 0.019 | 0.366 | 0.052 |
| Similarity*SLT | | | | | | | | | | | | | 0.035 | 0.118 | 0.296 |
| Success*SLT | | | | | | | | | | | | | 0.143 | 0.269 | 0.532 |
| | | | | | | | | | | | | | | | |
| Minus 2 LL | | 905.851 | | | 763.451 | | | 761.046 | | | 219.077 | | | 218.693 | |
| Dif Minus 2 LL | | 634.311*** | | | 142.400*** | | | 2.405 | | | 541.969*** | | | 0.384 | |
| df | | 3.000 | | | 1.000 | | | 1.000 | | | 2.000 | | | 2.000 | |
| Level 1 Intercept Variance | | 0.620 | | | 0.596 | | | 0.596 | | | 0.601 | | | 0.593 | |
| (SE) | | 0.052 | | | 0.054 | | | 0.054 | | | 0.128 | | | 0.126 | |
| Level 2 Intercept Variance | | 0.653 | | | 0.545 | | | 0.545 | | | 0.446 | | | 0.456 | |
| (SE) | | 0.151 | | | 0.142 | | | 0.142 | | | 0.195 | | | 0.196 | |

*Note. *p < .05.  **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.2.4 Depletion pathway: Fatigue

Table 11 presents the findings for the nested models relating to participants daily morning fatigue. Model 1 shows significant improvement over the null model ($\Delta$ - 2 x log = 778.92, df = 3, p < .001). The addition of time spent in casual leisure makes Model 2 a significant improvement on Model 1 ($\Delta$ - 2 x log = 194.124, df = 1, p < .001). However time spent in casual leisure is not a significant predictor of fatigue. This does not support Hypothesis 4b, that casual leisure will be positively associated with fatigue. Model 3 is not a significant improvement on Model 2 ($\Delta$ - 2 x log = 2.35, df = 1, *ns*), therefore Hypothesis 4a, that serious leisure will be positively related to fatigue, is rejected. Model 4, in which I entered the variables needed to create the interaction effect, was a significant improvement on Model 3 ($\Delta$ - 2 x log = 642.60, df = 2, p < .001). Gender and type of leisure activity were both significant predictors of fatigue in this model. When the interaction effects were entered in Model 5 the improvement in Model fit was not significant ($\Delta$ - 2 x log = 0.96, df = 2, p *ns*), therefore, in concordance with the previous moderator analysis of self-efficacy, highly activated positive affect and positive leisure reflection, I found no support for Hypotheses 5 and 6. The similarity of work and leisure and success of the activity did not moderate the effect of time spent in serious leisure activities and fatigue.

*Table 11: Study 1 Multilevel Estimates for Predicting Fatigue*

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 2.160 | 0.170 | 12.723 | 2.237 | 0.150 | 14.880 | 2.235 | 0.150 | 14.902 | 2.221 | 0.255 | 8.715 | 2.213 | 0.256 | 8.636 |
| Age | -0.001 | 0.109 | -0.005 | -0.019 | 0.097 | -0.198 | -0.020 | 0.097 | -0.203 | 0.040 | 0.136 | 0.294 | 0.041 | 0.138 | 0.301 |
| Gender | -0.081 | 0.220 | -0.369 | -0.400 | 0.199 | -2.006 | -0.401* | 0.199 | -2.017 | -0.663* | 0.285 | -2.331 | -0.636* | 0.289 | -2.202 |
| Type of SL | 0.395 | 0.238 | 1.659 | 0.167 | 0.210 | 0.793 | 0.172 | 0.210 | 0.821 | 0.785* | 0.328 | 2.389 | 0.765* | 0.334 | 2.290 |
| CLT | | | | 0.019 | 0.037 | 0.512 | 0.018 | 0.037 | 0.487 | 0.001 | 0.071 | 0.009 | 0.007 | 0.071 | 0.103 |
| SLT | | | | | | | -0.020 | 0.037 | -0.549 | -0.060 | 0.077 | -0.788 | -0.071 | 0.077 | -0.930 |
| Similarity | | | | | | | | | | -0.265 | 0.166 | -1.593 | -0.296 | 0.201 | -1.471 |
| Success | | | | | | | | | | -0.144 | 0.150 | -0.961 | -0.293 | 0.216 | -1.361 |
| Similarity*SLT | | | | | | | | | | | | | 0.031 | 0.096 | 0.323 |
| Success*SLT | | | | | | | | | | | | | 0.137 | 0.146 | 0.943 |
| | | | | 1100.725 | | | 906.601 | | | 904.242 | | | 261.636 | | | 260.668 |
| Minus 2 LL | | | | 778.920*** | | | 194.124*** | | | 2.359 | | | 642.606*** | | | 0.968 |
| Dif Minus 2 LL | | | | 3 | | | 1 | | | 1 | | | 2 | | | 2 |
| df | | | | 0.577 | | | 0.566 | | | 0.566 | | | 0.514 | | | 0.502 |
| Level 1 Intercept Variance | | | | 0.043 | | | 0.046 | | | 0.046 | | | 0.088 | | | 0.087 |
| (SE) | | | | 0.608 | | | 0.377 | | | 0.374 | | | 0.469 | | | 0.486 |
| Level 2 Intercept Variance | | | | 0.133 | | | 0.102 | | | 0.101 | | | 0.164 | | | 0.172 |

*Note.  *p < .05.  **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.3 Tests of direct effects: Work behaviours on Serious Leisure Time

To test the hypothesis that serious leisure will influence work I ran an additional set of nested models using time spent in serious and casual leisure to predict work performance behaviours. In these models I included age, gender and job autonomy as control variables in the first step. As above I entered time spent in casual leisure in Model 2 and time spent in serious leisure in Model 3. Type of leisure activity was included as a control variable in preliminary analysis of the models of work behaviour. However it did not significantly contribute to any of the models in this section and so it was removed from the analyses.

#### 5.3.3.1 Proactive Behaviour: Personal Initiative

Table 12 shows the findings for the nested models relating to participants daily personal initiative. Model 1 showed significant improvement over the null model ($\Delta$ - 2 x log = 19.8, df = 3, p < .001). Consistent with previous research job autonomy was a significant predictor of personal initiative. The addition of time spent in casual leisure resulted in a significant improvement on Model 1 ($\Delta$ - 2 x log = 106.03, df = 1, p < .001). Interestingly, and contrary to the proposed hypothesis, casual leisure was significantly related to personal initiative. In fact, the analysis showed personal initiative had a significant *negative* relationship with time spent in casual leisure activities. Model 3 was a significant improvement on Model 2 ($\Delta$ - 2 x log = 447.41, df = 1, p < .001). Time spent in serious leisure was not a significant predictor of personal initiative. Therefore Hypothesis 7a, which proposed that serious leisure is related to proactive behaviours, was not supported.

*Table 12: Study 1 Multilevel Estimates for Predicting Personal Initiative*

|  | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
|  | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.722 | 0.081 | 45.778 | 3.714 | 0.083 | 45.015 | 3.639 | 0.115 | 31.637 |
| Age | 0.071 | 0.059 | 1.213 | 0.010 | 0.064 | 0.152 | 0.032 | 0.084 | 0.378 |
| Job Autonomy | 0.167 | 0.056 | 2.975** | 0.209 | 0.059 | 3.563** | 0.230 | 0.072 | 3.183 |
| Gender | 0.132 | 0.119 | 1.111 | 0.114 | 0.124 | 0.914 | 0.250 | 0.170 | 1.472 |
| CLT |  |  |  | -0.062 | 0.022 | -2.771** | -0.084 | 0.034 | -2.482 |
| SLT |  |  |  |  |  |  | -0.047 | 0.034 | -1.376 |
| Minus 2 LL |  | 1143.869 |  |  | 1037.833 |  |  | 590.419 |  |
| Dif Minus 2 LL |  | 19.800 |  |  | 106.036*** |  |  | 447.414*** |  |
| df |  | 3 |  |  | 1 |  |  | 1 |  |

*Note. *p < .05. **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.3.2 Proactive Behaviour; Task Proactivity

Table 13 shows the findings for the nested models relating to participants' daily task proactivity. Model 1 was a significant improvement over the null model ($\Delta$ - 2 x log = 16.04, df = 3, p < .001). In congruence with findings from the study's other proactivity variable, personal initiative, job autonomy was a significant predictor of task proactivity. The addition of time spent in casual leisure was a significant improvement on Model 1 ($\Delta$ - 2 x log = 145.42, df = 1, p < .001). Casual leisure displayed a similar predictive pattern with task proactivity and personal initiative, showing a negative relationship between time spent in casual leisure and task proactivity (p < .10). Model 3 is a significant improvement on Model 2 ($\Delta$ - 2 x log = 482.76, df = 1, p < .001). Although serious leisure does not significantly contribute to the prediction of task proactivity, lending no support to Hypothesis 7a that serious leisure is related to proactive behaviours.

*Table 13: Study 1 Multilevel Estimates for Predicting Task Proactivity*

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.683 | 0.086 | 42.813 | 3.669 | 0.086 | 42.669 | 3.601 | 0.114 | 31.557 |
| Age | 0.013 | 0.062 | 0.214 | -0.050 | 0.066 | -0.754 | -0.049 | 0.082 | -0.604 |
| Job Autonomy | 0.180 | 0.060 | 3.013** | 0.211 | 0.061 | 3.449** | 0.210 | 0.072 | 2.942** |
| Gender | -0.025 | 0.126 | -0.200 | 0.018 | 0.129 | 0.138 | 0.093 | 0.167 | 0.556 |
| CLT | | | | -0.041 | 0.024 | -1.704 | -0.050 | 0.036 | -1.369 |
| SLT | | | | | | | -0.052 | 0.037 | -1.403 |
| | | | | | | | | | |
| Minus 2 LL | | 1250.895*** | | | 1105.473*** | | | 622.707*** | |
| Dif Minus 2 LL | | 16.044 | | | 145.422 | | | 482.766 | |
| df | | 3.000 | | | 1.000 | | | 1.000 | |
| Level 1 Intercept Variance | | 0.416 | | | 0.382 | | | 0.391 | |
| (SE) | | 0.027 | | | 0.026 | | | 0.035 | |
| Level 2 Intercept Variance | | 0.263 | | | 0.255 | | | 0.233 | |
| (SE) | | 0.052 | | | 0.052 | | | 0.065 | |

*Note. \*p < .05. \*\*p < .01. \*\*\*p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.3.3 Core task Performance; Task Proficiency

Table 14 shows the findings for the nested models relating to participants' daily task proficiency. Model 1 showed significant improvement over the null model ($\Delta$ - 2 x log = 17.63, df = 3, p < .001). In this model gender and job autonomy were significant predictors of core task performance. Model 2 was a significant improvement on Model 1 ($\Delta$ - 2 x log = 69.35, df = 1, p < .001). However, casual leisure was not significantly related to core task performance. Model 3 was a significant improvement on Model 2 ($\Delta$ - 2 x log = 420.49, df = 1, p < .001) but, again, serious leisure did not significantly contribute to the prediction of core task performance, lending no support to Hypothesis 7a, that serious leisure is directly related to core task performance.

Table 14: Study 1 Multilevel Estimates for Predicting Task Proficiency

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.972 | 0.080 | 49.829 | 3.963 | 0.081 | 49.137 | 3.925 | 0.115 | 34.188 |
| Age | -0.034 | 0.058 | -0.590 | -0.084 | 0.062 | -1.356 | -0.058 | 0.082 | -0.709 |
| Job Autonomy | 0.149 | 0.055 | 2.714** | 0.179 | 0.057 | 3.134** | 0.226 | 0.071 | 3.168** |
| Gender | 0.299 | 0.117 | 2.557* | 0.269 | 0.121 | 2.219* | 0.449 | 0.167 | 2.685* |
| CLT | | | | -0.017 | 0.021 | -0.805 | -0.002 | 0.032 | -0.054 |
| SLT | | | | | | | 0.029 | 0.032 | 0.909 |
| Minus 2 LL | | | 1040.386 | | | 971.027 | | | 550.534 |
| Dif Minus 2 LL | | | 17.637** | | | 69.359*** | | | 420.493*** |
| df | | | 3.000 | | | 1.000 | | | 1.000 |
| Level 1 Intercept Variance | | | 0.282 | | | 0.293 | | | 0.296 |
| (SE) | | | 0.018 | | | 0.020 | | | 0.027 |
| Level 2 Intercept Variance | | | 0.238 | | | 0.231 | | | 0.252 |
| (SE) | | | 0.044 | | | 0.045 | | | 0.064 |

*Note. *p < .05.  **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 5.3.4 Tests of Mediation: Serious Leisure and Work Behaviours via Resources

The previous models found no relationship between time spent in serious leisure and work performance. According to the steps set out by Baron and Kenny (1986) this would indicate that there would not be a mediation effect. However it is possible that there is an indirect mediation effect which is not detectable using traditional methods of testing mediation (Preacher, Zyphur, & Zhang, 2010). New techniques using path analysis allow for mediation to be assessed in one analysis rather than modelling the steps separately. This is achieved by estimating the mediator as both an outcome and predictor within the same model and assessing both the direct effect between the predictor and the outcomes as well as the individual pathways between the predictor and the mediator and the outcome. The indirect effect is calculated by estimating a path which is the product of the path between the predictor and mediator and a second path, that between the mediator and the outcome.

This indirect effect can reveal relationships in situations where there are pathways with conflicting relationships. For example, if there is a negative direct effect between a predictor and outcome but a positive indirect effect via a mediator then traditional tests of mediation would not support mediation as the direct effect cancels out any indirect effects. Additionally multilevel path analysis allows for the latent modelling of the within and between person variance which reduces the probability of conflation or bias in the model estimates (Preacher et al., 2010).  Therefore, I used the MPlus software package to carry out a multilevel

path analysis in order to test the mediation hypotheses for this study. Based on the findings of the multilevel regression analyses, primarily that time spent in serious leisure is positively related to self-efficacy but not highly activated positive affect, the mediation analysis focused on indirect relationships between time spent in serious leisure and work behaviours via self-efficacy as a mediator. (for completeness I tested the same models of work behaviours with highly activated positive affect as an indirect mediator and, as expected, no significant effects were found). Due to sample size the models were based on observed variables (Preacher et al., 2010) rather than latent variables. As a result of this there are no model constraints (i.e. all pathways are assessed freely by MPlus), and, as expected in saturated models, the models in the following analysis demonstrate perfect fit (CFI = 1, RMSEA & SMSR = 0). In cases such as these inferences are drawn primarily from the assessment of the individual path estimate and the associated confidence interval (Preacher et al., 2010).

### 5.3.4.1 Instrumental mediators: Self Efficacy

Findings for analyses of the indirect mediation pathway at the within-person level between time spent in serious leisure and the four work behaviours of interest for this study, personal initiative, task proactivity, organisational citizenship behaviour, and core task performance, are presented in Table 15. The indirect pathway is formed by multiplying the pathway between the predictor and the mediator with the pathway between the mediator and the outcome variable. The new indirect pathway can then be assessed using a single significance test.

The analyses showed that there were significant and positive indirect relationships between time spent in serious leisure and three of these behaviours.

In support of Hypothesis 7b time spent in serious leisure was indirectly positively related to both proactive behaviours, personal initiative (.014) 95% CI [0.004, 0.024] and task proactivity (.012) 95% CI [0.002, 0.022] via self-efficacy. Hypothesis 7b was also pa supported for core task performance, as a significant positive indirect relationship was found between time spent in serious leisure and task proficiency (0.008) 95% CI [0.001, 0.015] via increased self-efficacy.

*Table 15: 1-1-1 Indirect Mediation*

| | Personal Initiative | | | | | Task Proactivity | | | | | Task Proficiency | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Estimate | SD | | 95% Confidence Interval | | Estimate | SD | | 95% Confidence Interval | | Parameter | SD | | 95% Confidence Interval | |
| Within Person (Level 1) | | | | Lower 2.5% | Upper 2.5% | | | | Lower 2.5% | Upper 2.5% | | | | Lower 2.5% | Upper 2.5% |
| Path a (SLT->self-efficacy) | 0.056 | 0.017 | *** | 0.022 | 0.089 | 0.056 | 0.017 | *** | 0.022 | 0.09 | 0.054 | 0.017 | ** | 0.020 | 0.088 |
| Path b (self-efficacy -> job performance) | 0.254 | 0.057 | *** | 0.143 | 0.365 | 0.214 | 0.063 | *** | 0.111 | 0.338 | 0.146 | 0.042 | * | 0.063 | 0.229 |
| Path c (SLT -> job performance) | -0.040 | 0.023 | | -0.085 | 0.006 | -0.067 | 0.022 | ** | -0.109 | -0.025 | -0.008 | 0.014 | | -0.035 | 0.019 |
| Indirect effect (SLT-> self-efficacy -> job performance) | 0.014 | 0.005 | ** | 0.004 | 0.024 | 0.012 | 0.005 | * | 0.002 | 0.022 | 0.008 | 0.003 | * | 0.001 | 0.015 |

*Note.. *p < .05.  **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

*Table 16: Summary of Hypotheses and Results*

| | Hypothesis | | Result |
|---|---|---|---|
| Instrumental Pathway | Hypothesis 1 | Time spent in serious leisure will be positively related to self-efficacy the following day after controlling for the effects of time spent in casual leisure. | **Supported** |
| Affective Spillover Pathway | Hypothesis 2 | Time spent in serious leisure will be positively related to highly activated positive affect the following day after controlling for the effects of casual leisure. | Rejected |
| Affective-cognitive pathway | Hypothesis 3a | Time spent in serious leisure will be positively related to positive leisure reflection the following day. | Rejected |
| | Hypothesis 3b | Time spent in casual leisure will not be related to positive leisure reflection the following day. | **Rejected (Significant positive relationship found)** |
| Depletion pathway | Hypothesis 4a | Time spent in serious leisure will be positively related to fatigue the following day. | Rejected |
| | Hypothesis 4b | Time spent in casual leisure will be negatively related to fatigue the following day. | Rejected |
| Moderators of resource generation | Hypothesis 5 | The effect of time spent in a serious leisure activity on self-efficacy, positive leisure reflection and fatigue will be moderated by the similarity of the activity to their work role, such that the effect will be stronger when leisure and work are similar. | Rejected |
| | Hypothesis 6 | The extent to which an individual's serious leisure activity is successful will moderate the effect of time spent in serious leisure on resources, such that the effect will be weaker when the activity has not been successful. | Rejected |
| Serious leisure and work behaviours | Hypothesis 7a | Time spent in serious leisure will have a positive direct relationship on work performance, including both core task performance and proactive behaviour | Rejected |
| | Hypothesis 7b | The relationship between time spent in serious leisure and work performance will be mediated by self-efficacy and | **Supported for self-efficacy** |

| | | highly activated positive affect. | |
|---|---|---|---|

## 5.4 Discussion

In this chapter the aim was to examine the within-person effects of time spent in serious leisure activities on work behaviours the next day. Additionally, this study aimed to examine the mechanisms through which these effects could occur. Findings showed that there were indirect effects between the time a person spent in their serious leisure activity and their work behaviours.

### 5.4.1 Implications

#### 5.4.1.1 Serious Leisure and Resource Generation

The model of leisure-work enrichment that I have proposed in this study posits that episodes of serious leisure generated resources at the day level. Three pathways between serious leisure time and resource generation were examined: an instrumental resource pathway, an affective spillover pathway and a cognitive-affective pathway. Additionally, I examined a resource depletion pathway to investigate whether serious leisure involves short term costs as a result of the investment of energy in the activity. The study also examined whether these effects were present over and above those related more generally to leisure activities (i.e. casual leisure activities).

#### 5.4.1.2 Instrumental Pathway

The first pathway tested from the model was the instrumental pathway. This pathway relates to resources which can be directly applied within the work domain. In this instance I focused on self-efficacy due to the developmental nature of serious leisure and the role self-efficacy plays in facilitating proactive

behaviours at work. The analyses showed that time spent in serious leisure activities was positively related to increased self-efficacy the following day at work. This was a robust finding as the analysis controlled for casual leisure time and type of activity. This provides evidence that serious leisure has an effect over and above the effect one might expect from generally taking part in a leisure activity. Due to the inclusion of leisure type as a control variable the analysis also shows that the effect of serious leisure goes beyond the positive effects associated with physical activities. These effects are well documented and can impact upon peoples' ability to deal with stress (Toker & Biron, 2012) as well as having long (Wang et al., 2012) and short term (Nägel & Sonnentag, 2013) implications for well-being.

The evidence for a positive relationship between time spent in serious leisure and self-efficacy found in this study provides useful information for organisations interested in broadening initiatives aimed at facilitating wellness and sustainable productivity. Providing the needed flexibility for employees to pursue the specific activities that they have a long term interest in developing and those that they feel are more meaningful to them personally (i.e. serious leisure activities) may provide an added avenue to support employees. This finding is useful not just for organisations wishing to facilitate the wellbeing of their staff but potentially for those wishing to support the well-being of unemployed or retired participants. Self-efficacy forms part of an individual's core self-evaluation (Judge, Locke, & Durham, 1997), and positive core self-evaluation is linked to many positive outcomes such as job and life satisfaction (Judge, Locke, Durham, & Kluger,

1998). Therefore encouraging individuals to find an activity that means something to them, and in which they wish to grow and develop may be an effective and sustainable method for building daily boosts to self-efficacy that would support overall wellbeing.

### 5.4.1.3 Affective and Cognitive-affective pathways

The results showed that time spent in serious leisure is not related to positive affective spillover or a cognitive affective pathway via positive leisure reflection. This means that when people spend more time in their serious leisure pursuits it does not necessarily result in gains in highly activated positive mood the following morning. This may be due to the stronger influence of more immediate work related factors influencing participants affect. Research on the daily impact of time spent volunteering has found similar results in that volunteering was unrelated to positive affect the following day (Mojza et al., 2011). The research did find that time spent volunteering was related to decreased negative affect the following day. They concluded that the positive influence of volunteering could reduce negative feelings but that the events *at work* were more relevant for producing positive affect. It may be that a similar effect occurs for serious leisure. Interestingly the findings from both Monza et al. (2011) and the current study are not supportive of the predictions from enrichment and spillover theory. However in the current study I do not have a measure of positive affect *during* the leisure activity. So it is possible that a lack of positive affective spillover was due to a lack of positive affect during the activity. I have also focused on the high activation form of positive affect rather than the low

activation form, which includes feelings such as calm and serenity. It may be that this focus on high activation was too narrow to capture positive affective spillover as it may be more strongly related to low activation rather than highly activated particularly if the activity requires the investment of a lot of physical energy.

Additionally the lack of a significant relationship between serious leisure and positive leisure reflection may indicate that participants did not experience a conscious spillover or integration between their leisure and their work-life. This finding is interesting in the light of previous work on interactions between work and leisure. Some approaches to commitment amongst multiple life domains suggest that feeling committed to a role outside of work would be detrimental to work performance or signal a lack of commitment to work (Marks, 1977; Randall, 1988). This "either/or" view of work or leisure focus may also be held by management within organisations who could assume that individuals committed to particular leisure activities may be distracted from work tasks by thoughts of their serious leisure. Indeed past research has shown that in certain cultures it is deemed unprofessional to draw attention to one's non-work life (Uhlmann, Heaphy, Ashford, Zhu, & Sanchez-burks, 2013). However in the current study it seems that increased time spent in serious leisure does not relate to thoughts of the activity in the work domain.

Based on cognitive appraisal theory I hypothesized that serious leisure would be associated with more positive leisure reflection which would in turn prompt positive affect. However positive leisure reflection may instead reflect a redirection of cognitive effort away from work and towards more pleasant

activities as a result of dissatisfaction or disengagement with work rather than a preoccupation with leisure. This interpretation is partially supported by the study's findings that casual leisure, rather than serious leisure, predicted positive leisure reflection during the following work day. Furthermore I found that casual leisure time was negatively related to proactive work behaviours. It may be that positive leisure reflection is a way of cognitively avoiding unpleasant work situations by reflecting on more pleasant experiences. Future research may wish to explore this as avoidance coping is known to be associated with more negative outcomes than problem focused coping.

### 5.4.1.4 Resource Depletion; Fatigue

I found no evidence to suggest that spending more time in serious leisure activities was related to fatigue the following morning. This finding is in line with other research on non-work activities which have shown that physical activity particularly is not only not depleting but can also build resources and energy. This study further supports this with the finding that when the type of activity is physical it is negatively related to fatigue the next day. The findings are interesting in that they show that any resource investment in serious leisure activities does not generally result in increased depletion in comparison with leisure activities which are undertaken in a less intense manner. In the case of physical energy it seems that the type of activity is more influential than the approach taken to it, with physical activities providing a reduction in fatigue in a way that other types of activities do not.

### 5.4.1.5 Moderators

***Similarity between serious leisure and work.*** The model of episodic

serious leisure to work enrichment included one cross-level interaction and one

within-level interaction. A cross level interaction moderates the effect between

two level one variables, the variables in this case being time spent in serious

leisure and resources, using a level two moderator, in this case similarity between

the serious leisure activity and the work activity. A cross level interaction is when

person level (level 2) variables moderate the effect between day level (level 1)

variables (Aguinis & Culpepper, 2015). In this instance I found that similarity

between an individual's serious leisure activity and their work did not influence

the relationship between the time they spend in serious leisure and the four

pathways to resources I tested here. In relation to the depletion pathway these

findings indicate that spending extra time in a serious leisure activity does not, on

an episodic basis,  cause ego depletion (Baumeister et al., 1998) or block recovery

from work through increasing strain from similar work activities (Meijman &

Mulder, 1998). This may be reassuring to organisations where there are concerns

about facilitating activities which may seem potentially detrimental to recovery in

this way. However the lack of moderation between serious leisure and resources

also indicates that there is no particular benefit to spending extra time in a serious

leisure activity that is similar to one's work as opposed to one that does not relate

to it in any way.

Despite not finding evidence for the hypothesised moderation effects, in

the course of testing these hypotheses, I did find that the similarity of one's serious

leisure and work was a positive predictor of resources. Those participants who ranked their serious leisure as similar reported higher levels of pre-work positive affect and self-efficacy. These findings indicate that when it comes to the influence of leisure/work similarity that the amount of time an individual spends in their serious leisure is not as important as just having a serious leisure activity that overlaps with one's work. This may have implications for recruitment and indications of person job-fit in so far as applicants display these similarities may be less prone to burnout and have more energy in the job as a result of these higher levels of resources. It may also be a signal that the person is truly engaged in their work as they are also engaging in these activities in their non-paid time, and this may lead to higher resource ratings.

*Success of the serious leisure episode.* The influence of the perceived success of the serious leisure episode on the relationship between time spent in serious leisure and resource generation constituted the within level interaction included in the model. I proposed that the resource gain from spending time in serious leisure activities would be more pronounced when the participant felt it had been a successful experience where they had displayed competence in the activity. The analysis found no evidence that this was the case. These results indicate that on the level of episodes of serious leisure the benefits are not reliant on how well the individual feels they have performed within the activity. Enrichment theory suggests that it is high performance facilitates enrichment (Powell & Greenhaus, 2006) and this has not been found to be the case here. However serious leisure research has found that for some serious leisure

enthusiasts, shag dancers specifically, there is a stronger focus on the social

aspects of the experience (Brown, 2007) . This may change the extent to which

each individual experience of competence influences an individual's resources.

Future research could investigate the balance between the social aspects of serious

leisure and enrichment in comparison with the skill development aspects of a

serious leisure experience.

### 5.4.1.6 Serious Leisure and Work Behaviours

The findings regarding serious leisure and work behaviours were mixed. I

found no direct relationship between serious leisure and work behaviours.

However follow up analyses investigating the relationship between serious leisure

and self-efficacy showed that via the relationship with self-efficacy time spent in

serious leisure demonstrates an indirect relationship with both proactive

behaviours and core task proficiency. This is provides evidence that serious leisure

activities can influence work behaviours, but it refutes my hypothesis that the

effects will be concentrated on proactive behaviours and not core tasks. The lack

of a direct relationship is interesting because it indicated that serious leisure may

also have a negative effect on work behaviours via other variables not considered

in the present model. Potential negative relationships were considered in the

model, with the inclusion of a depletion pathway. However the results indicated

that time spent in serious leisure was not related to fatigue. It may be the case that

there are individual differences which influence the direct effect between time

spent in serious leisure and work behaviours, such as an individual's regulatory

focus (Ferris et al., 2013) or individuals' general appraisals of non-work activities (Reinecke, Hartmann, & Eden, 2014).

Time spent in casual leisure on the other hand did directly predict performance outcomes, specifically for proactive behaviours. The results showed a significant negative relationship between time spent in casual leisure and personal initiative and a negative relationship between casual leisure and task proactivity which approached significance. These findings indicate the importance of considering the way specific leisure activities are engage in by the individual and not just the type of activity as objectively categorized by researchers (e.g. physical, social etc.).

### 5.4.2 Limitations

There are a number of potential limitations in Study 1. The data used to address the hypotheses are single source, which creates the potential for issues such as common method bias (Podsakoff et al., 2003). However the risk of common method bias in this case is reduced due to the use of two surveys over the course of each day. This design allowed me to temporally separate the collection of information about predictor and outcome variables which reduces common method bias (Podsakoff et al., 2003) as well as allowing me to collect information from participants at a time which corresponds most closely to the variables being measured. For example, positive affective spillover was measured in the morning before work. The exceptions to this time-based sampling were data collected about time spent in leisure which were also included in the morning survey. Collecting this information as part of the morning survey allowed me to reduce the number of

surveys from three to two, reducing the disruption to participants' daily routine during the data collection period. This decision was taken as I considered the time spent in leisure activities as more objectively verifiable than other variables (e.g. recalling how much time was spent in an activity versus recalling affective states) and therefore less likely to be influenced by the context in which the participant was completing the survey or by difficulty in accurate recall.

### *Daily experience sampling*

Using a design which samples multiple consecutive days allowed a fine grained analysis of volatile resources in relation to serious leisure. At this point in the exploration of the effects of serious leisure it is useful to have information at this level as it can inform future research in the area about issues such as leisure frequency and short term effects on resources. However, this design does have limitations. Following the analysis of the of the data regarding serious leisure it was found that there was limited variation in the amount of time people spent in their serious leisure activities and that the number of times within a week that serious leisure activities were pursued was relatively infrequent. This may be caused by the more organised and resource-intensive nature of serious leisure activities in which many have externally enforced duration and frequency. For example, an amateur actor will have a predetermined rehearsal schedule which may only result in engaging in this activity once or twice a week for a predetermined amount of time. The limited number of instances of serious leisure over the ten day diary period resulted in much lower statistical power for

examining the effects of success as a moderator of serious leisure and resources.

Measures of success were only assessed when a participant had engaged in the

activity and as a result there were fewer data available to assess this hypothesis

than the other direct relationships between time spent in serious leisure and

resources or work behaviours. As a result of this finding it would be advisable for

future research to use an experience sampling approach which only samples days

where participants have engaged in the activity but collect this information over a

longer period of time. This would ensure that sufficient data were collected in

relation to the daily experiences without over-burdening participants.

# Chapter 6: The effect of habitual serious leisure on leisure-work enrichment

This chapter investigates whether individuals' habitual engagement in their leisure activities has an enriching effect on their work, and whether this process, if it does occur, is underpinned by the development of psychological resources. I define habitual engagement as the accumulated time spent in serious leisure over the course of a month. This chapter contrasts habitual leisure with episodes of engagement in an activity investigated in Chapter 5 to assess whether there are consistent relationships between the effects of serious leisure on resources and work performance across different periods of time. In Chapter 5 I explored the episodic effects of serious leisure activities: That is, the impact of the time spent in the activity from one evening on resources and work behaviours reported within 24 hours.

Contrasting episodic (daily) and habitual (monthly) enrichment relationships allows me to juxtapose what Maertz and Boyar (2010) refer to as "episodes" versus "levels" of enrichment between the leisure and work domains. In their review of work-life balance research they suggest that individual episodes provide useful information about the causal processes of enrichment, conflict and work-life balance among employees and that the overall "level" of enrichment or balance is influenced by successive episodes. This study represents a more robust examination of "levels" than is usually reported, as the intensive longitudinal approach provides multiple measurements from each individual over the course of

7 months. This allows me to investigate effects which may be visible only with sustained engagement in the activity.

Theory, within organisational psychology, even when specifically examining processes, is often devoid of reference to what time scales these processes operate under (Zaheer, Albert, & Zaheer, 1999). In line with this observation, Greenhaus and Powell's model of enrichment does not indicate specific time scales for the enrichment process and as such there is no indication as to whether there will be differences between enrichment that can be observed following an episode of serious leisure and enrichment that results from longer term habitual engagement in serious leisure. Zaheer et al. (1999) argue that there is potential for large variation in the relationships between variables when examined under different time scales. Large discrepancies have been found between the results of studies using different time scales to examine accounting and stock market earnings, and even the batting performance of good and bad hitters in baseball (Zaheer et al., 1999). In any given baseball game the difference between good and bad hitters is not large, however over a longer time frame these differences become substantial (Abelson, 1985). These examples demonstrate how time scales can influence the conclusions researchers draw depending on the specific formulation of their research question or design of data collection. Zaheer et al. (1999) advocate careful consideration of the implications of time scales in theory building and research design. Therefore throughout this chapter I will consider how these differing time scales may affect the enrichment process between serious leisure, resources and work performance.

In Chapter 5 the findings indicated that time spent in single episodes of serious leisure were associated with an increase in self-efficacy the following morning. However no support was found for an affective spillover pathway or cognitive affective pathway. In this chapter I will examine whether habitual time in serious leisure recreates or even amplifies this pattern of enrichment.

### 6.1.1 Habitual Leisure and Psychological Resources

A key characteristic of psychological resources is that they are "state-like" (Luthans & Youssef, 2007). This means that they lie on a continuum between momentary feelings and emotions and traits which are relatively stable and unchangeable. Therefore they are malleable and open to development and change. The development of psychological resources has been demonstrated through a number of direct interventions (Luthans, 2006; Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans, Norman, Avolio, & Avey, 2008; Reivich, Seligman, & McBride, 2011) and field research (Tims et al., 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2012).

However, while their malleability has been demonstrated, there are few studies to date which have examined whether these changes are maintained indefinitely or whether short term boosts to psychological resources are volatile and open to influence from current contexts. It may be that repeated opportunities for resource building create a practice effect (Muraven, Baumeister, & Tice, 1999), where volatile and malleable state-like psychological resources are consolidated and moved along the continuum to become more trait-like. This raises the question as to whether a consolidation process could influence more stable elements of self-

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concept such as core self-evaluations. Alternatively, in the absence of regular "top up" experiences of the type which developed these resources, will these volatile and malleable state-like resources fade? Put another way, do psychological resources resemble reliable muscle memory, that take some practice to acquire, but once established are available for life, or do they resemble knowledge pathways which are strengthened with use but atrophy when neglected over time?

Occupational health psychology and management literature suggest that psychological and energetic resources do accumulate over repeated experiences. For example, authors writing about recovery from work have suggested that mastery experiences create new resources, specifically self-efficacy, for individuals to compensate for spent work-related resources, but that this process may require *repeated* mastery experiences (Mojza et al., 2011). Broaden and build theory (Fredrickson, 2001) suggests that individuals can increase their total possible resources through an expansion in their schema, or mental model, of what constitutes a resource, which takes place as a result of positive affective experiences allowing more flexible ways of seeing and interacting with the world.

Applying the idea of practice effects and broadening of resource schemas to the process of habitual enrichment from serious leisure engagement it seems likely that an increase in the habitual engagement in serious leisure may indeed cause an individual to accumulate resources which would increase the likelihood that effects would be visible in the work context. This broadening of resource schemas could occur via engaging in a serious leisure role as it provides enjoyment, and positive mood is a predictor of widening thought and action

repertoires (Fredrickson, 2001). Increased engagement in the activity over time may also increase an individual's awareness of the multiplicity of roles within their life and increase the salience of having these multiple roles (Maertz & Boyar, 2010; Seiber, 1974). Engaging in multiple roles broadens individuals' expected social roles and behaviours and this may provide more opportunities to consciously expand their schemas of potential resources available between domains, which expands individuals' sense of "total possible resources" (Quinn, Spreitzer, & Lam, 2012).

As discussed in the previous chapter, serious leisure involves the development of skills and abilities which facilitate an individual to improve their performance and increase their level of involvement in a personally meaningful activity. This provides a forum for the development of self-efficacy through mastery experiences. In Study 1, I found that self-efficacy displays daily fluctuations linked to spending time in a serious leisure activity. This suggests that each individual episode of serious leisure engagement has the potential to influence self-efficacy.  However, it has been suggested that cumulative mastery experiences are most useful for creating a sense of efficacy (Bandura, 1977; G. Chen, 2012; Mojza et al., 2011). As such, habitual leisure is likely to be a strong predictor of the development of self-efficacy over time. The effects of serious leisure engagement may even be more pronounced, and enduring, with repeated experiences.

*Hypothesis 1: There is a positive relationship between habitual time spent in serious leisure and self-efficacy*

Additionally, serious leisure requires some perseverance through difficulties in relation to the activity. Any activity that requires challenge will also have the potential for frustrated goals and a lack of progress, at least in the short term. In Study 1, the daily diary study, the implications of a need for perseverance in serious leisure were investigated by examining whether less successful leisure episodes would result in less resource creation and therefore less enrichment between leisure and work. I found no evidence that an individual's appraisal of the activity's success influenced their resources, mood or work behaviours. In the current study I am examining an additional proposal for the impact of perseverance on resources, particularly taking into account the effects of habitual serious leisure engagement.

For an individual to evaluate each leisure episode as more or less successful they would need to associate each episode with having a performance goal (Seijts & Latham, 2005). However it is possible that serious leisure enthusiasts tend towards learning goals rather than performance goals. As such it may be more likely that difficult or frustrating episodes of serious leisure are interpreted by individuals as signals that they have reached a further opportunity for development and rather than seeing this situation in a negative light, it is instead interpreted as an opportunity to bounce back or prove themselves. Instead of evaluating each individual episode as more or less successful, individuals may accept, and potentially embrace, the unpredictable nature of their activity and thus gain a sense of resilience through the combination of challenging and rewarding

experiences of serious leisure over time. If this is the case, then increased time spent in habitual serious leisure would lead to increased feelings of resilience.

***Hypothesis 2: There is a positive relationship between habitual time spent in serious leisure and resilience.***

### 6.1.2 Affective resources: Vigor

In Study 1, I focused on state fluctuations of emotion when examining the affective pathway of leisure-work enrichment. Highly activated positive affect and positive leisure reflection were proposed as mediators between serious leisure and positive work behaviours. I found no relationship between serious leisure and these resources on a day level. As habitual serious leisure represents longer time scales of engagement in a leisure activity it is more appropriate to examine affective experiences which represent generalized moods rather than emotional states. Vigor is an affective, energetic resource which forms an element of work engagement (Bakker, Albrecht, & Michael, 2011). It has been examined from both a state and trait perspective previously. In this study it is examined over the course of a month to investigate whether vigor is established or eroded according to the time invested in serious leisure activities. .

When considering the dynamics of energy as a resource Quinn, Spreitzer and Lam, (2012) described a model of human energy where repeated practice of marshalling resources would lead to an increase in the total available resources over time. Their model was based on ego depletion research (Baumeister et al., 1998) where repeated opportunities for self-regulation resulted in higher capacity

for self-regulation. Quinn and colleagues' (2012) dynamic model of human energy is an attempt to examine the temporal aspects of energy as a resource. Therefore I have drawn on this theory to understand how habitual serious leisure engagement may affect vigor over time.

In Study 1, I found no relationship between time spent in episodic leisure and highly activated positive affect. However it may be that vigor as a more generalized energetic-affective experience is more likely be generated following accumulation of serious leisure experiences over time, particularly when combined with a reduction in the potential impact of ego depletion due to repeated exposure to the serious leisure activity (Quinn et al., 2012)

***Hypothesis 4: There is a positive relationship between time spent in habitual leisure and vigor.***

### 6.1.3 Similarity between work and leisure

In the previous chapter, I proposed that the similarity between a person's work and their serious leisure activity may influence the degree to which spending time in their serious leisure activity will influence the creation of resources. I restate this proposition in the present study of habitual serious leisure. In Study 1, I suggested that in line with enrichment theory (Greenhaus & Powell, 2006), there would be increased behavioural and affective spillover between leisure and work when they share similar characteristics. In the habitual leisure study I suggest that resources are more strongly accumulated in a context where work and leisure are similar because it further increases this practice effect which helps to build the

resources over time (Quinn et al., 2012). This is an expansionist perspective on resources, which assumes that with successful use these resources are not depleted but are strengthened. Therefore when individuals are in a position to deploy resources in similar environments, these experiences will be mutually reinforcing, potentially creating an upward spiral of resource gain (Hobfoll, 2002). From a leisure crafting perspective (Petrou & Bakker, 2016) individuals may deliberately aim to develop resources within their serious leisure activities which are useful to them in other domains of their lives. Therefore, those individuals who see their serious leisure activity as being similar to their work role may be even more motivated to develop resources which improve performance in multiple domains.

***Hypothesis 4: The extent to which individuals' serious leisure activity is similar to their work role will moderate the effect of time spent in serious leisure on resources, such that the effect will be stronger when their leisure and work are similar.***

### 6.1.4 Serious Leisure and work performance

In Chapter 5 I hypothesised that serious leisure would be related to work performance via resources created from time spent in episodes of serious leisure. The results showed an indirect effect between serious leisure and resources, and resources and work performance. This reflected the enrichment process, as performance in one role supports performance in another role. For the current study I hypothesise that habitual leisure will be positively related to work

performance. This is due to the cumulative effects on self-efficacy, resilience and vigor, which have been hypothesised earlier in this chapter. The specific work behaviours being examined are core work performance in the form of task proficiency and extra role behaviours in the form of proactivity. Increases in the availability of resources provides the fuel needed for work performance and previous research has indicated that increased levels of self-efficacy and resilience do support increased performance (Avey, Luthans, & Youssef, 2009; Luthans et al., 2010). Vigor is one of the elements that make up work engagement which supports performance in the workplace (Bakker, 2011). Additionally research on proactive behaviours indicates that they are particularly likely to be facilitated by increases in self-efficacy and positive affective resources (Parker, Bindl, & Strauss, 2010).

The link between habitual serious leisure and proactive behaviour is also likely to be stronger than that of episodic serious leisure. Proactivity is a behaviour which can involve several steps and potentially the involvement of others in an organisation (Bindl et al., 2012; Frese & Fay, 2001), depending on the change that the individual seeks to make. They may not have the opportunity to engage in these behaviours on a daily basis, however the extent of an individual's proactive behaviour over the course of a month is less likely to be as constrained by contextual issues and be more reflective of their inclinations to engage in these behaviours. As a result of this I propose a positive relationship between habitual leisure and work performance.

*Hypothesis 5: There is a positive relationship between time spent in habitual serious leisure and (a) task proficiency, (b) personal initiative, (c) taking charge.*

*Hypothesis 6: The relationship between time spent in habitual serious leisure and work performance is mediated by psychological resources.*
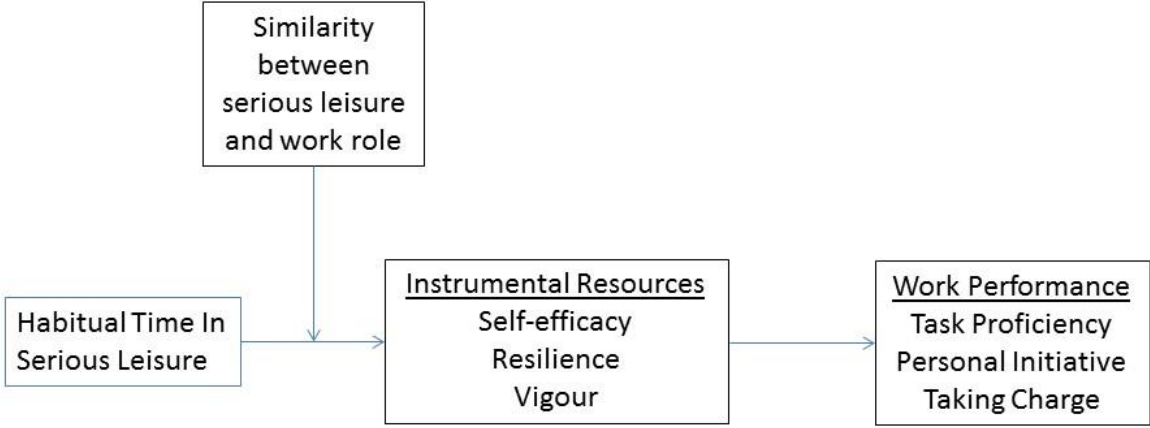


**Figure 3 Model of habitual serious leisure to work enrichment**

## 6.2 Analytical Strategy

This study uses multiple repeated measures over 7 months. The standard deviations, means and correlations of the data from this study can be found on Table 3 and Table 18, respectively. The correlations are drawn from the monthly

data as this is the level at which the hypothesised effects occur. The results indicate positive relationships between serious leisure and vigor and serious leisure and task performance. As with Study 1, the variables with high correlations were checked to ensure they were distinctive constructs using a multilevel CFA. The results of this can be found in section 6.2.1.

To analyse the monthly data I used a similar analytical approach to that used in Study 1, of multilevel modelling to examine within-person variation of resources and work performance relating to within-person variations of serious leisure time. Matching the analytical methods allows for more valid comparisons between the daily diary and monthly diary.

One important difference in the analytic approach for this study was the use of autocorrelation. Using the REPEATED command in SPSS the scores for the dependent variables during each wave were correlated with each other wave according to their proximity. This meant that data from adjacent waves were expected to be more similar to each other than to those taken months later. I chose to include this in the monthly analysis due to the increased likelihood of adjacent months being more highly related.

The ICC of the outcome variables can be seen in Table 17. The ICC represents the percentage of the variance accounted for by between-person differences. These indicate that between 38 and 55 percent of the variance in the dependant variables is accounted for by within-person changes from month to month, and it is this proportion of variance that I focus my analysis on.

Table 17 Study 2 ICC of dependent variables

| Variable Name | ICC |
|---|---|
| Self-efficacy | 0.57 |
| Resilience | 0.59 |
| Vigor | 0.60 |
| Personal Initiative | 0.62 |
| Taking Charge | 0.60 |
| Task Proficiency | 0.45 |

The model testing mirrored the approach taken in the daily diary study, where repeated measures (Level 1) were person-centred and between-person measures (Level 2) were grand mean-centred. Each outcome variable was regressed onto predictor variables in stages using nested models. The fit of these models was compared in order to ascertain whether the addition on new variables provided a better fit for the data (Hayes, 2006).

One principal difference between Study 1 and Study 2 is that Study 2 was more focused on the pathways of enrichment for serious leisure than on comparing the effects of serious and casual leisure. The purpose of the study was to examine more deeply the relationships between habitual serious leisure and work, and compare them to those between episodic leisure and work. Therefore while I retained casual leisure in the models as a control variable, to reduce the risk of conflating the effects of leisure time in general and the effects of serious leisure specifically, there are no hypotheses regarding casual leisure in this study. This is also partly due to the way casual leisure was recorded. In Study 1, participants were asked for 3 activities they engaged in most often and I assessed the seriousness of each of these, providing a source of information about multiple activities. In Study 2 participants were asked to indicate the activity that most

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conformed to the description of serious leisure. They were permitted to list up to

three activities if they felt that appropriately reflected their leisure experience.

Therefore the casual leisure variable in this model is represented by those leisure

activities which participants considered to be most closely aligned with serious

leisure but which did not meet all the criteria of serious leisure. Adding this

variable into the model makes it a more stringent test of the additional value of

serious leisure, however it does not necessarily represent casual leisure in the same

way as Study 1. It would therefore not be appropriate to attempt to draw

conclusions based on comparisons of these variables between the two studies.

### 6.2.1 Multilevel CFA

I carried out a multilevel confirmatory factor analysis to ascertain the

distinctiveness of the resources and work performance behaviour variables within

study 2. The model with separate within and between factors for all variables was

the best fit (CFI= 0.919, RMSEA = 0.032, SRMR = 0.042 [within] and 0.079

[between]). The CFI is somewhat below the recommended 0.95 but is well within

the recommended measures for the other fit criteria (Hu & Bentler, 1999). In order

to check whether the psychological resources of self efficacy and resilience were

distinctive a model was fitted with these variables loaded onto one factor. This

resulted in a less well fitting model than the one where these variables were

represented by distinct factors (CFI= 0.903, RMSEA = 0.035, SRMR = 0.046

[within] and 0.082 [between]). A model was fitted with 1 factor for all resources

and a second factor for all work behaviours. The fit statistics showed that this

model was a less good fit in comparison to the hypothesised measurement model,

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as well as being a poor fit overall (CFI= 0.664, RMSEA = 0.064, SRMR = 0.118 [within] and 0.339 [between]). Based on these model comparisons I will retain the hypothesised factor structure for the analysis using the observed rather than latent factors.

**Table 18 Study 2 Correlations**

| Variable | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | | | | | | | | | | | | |
| 2. Age | .127** | | | | | | | | | | | |
| 3. Job Autonomy | .089* | -.026 | | | | | | | | | | |
| 4. Similarity of work and leisure | -.032 | .110* | .174** | | | | | | | | | |
| 5. Success of serious leisure activity | -.005 | -.005 | .028 | .004 | | | | | | | | |
| 6. Casual leisure time | .001 | .001 | -.013 | -.002 | .028 | | | | | | | |
| 7. Serious leisure time | -.03 | -.120* | -.036 | .078 | .263** | .063 | | | | | | |
| 8. Self-efficacy | -.152** | .016 | .340** | .019 | -.002 | -.009 | .085 | | | | | |
| 9. Resilience | -.085* | .042 | .334** | -.064 | .009 | -.009 | .038 | .644** | | | | |
| 1. Vigor | -.088* | .103** | .394** | .362** | .023 | -.015 | .115* | .499** | .437** | | | |
| 11. Task proficiency | -.211** | -.038 | .137** | .198** | .061 | -.062 | .230** | .545** | .404** | .328** | | |
| 12. Personal Initiative | -.04 | .051 | .259** | .229** | -.01 | .037 | .098 | .541** | .466** | .456** | .410** | |
| 13. Taking Charge | -.013 | .085* | .220** | .158** | .038 | .022 | -.017 | .276** | .195** | .267** | .209** | .503** |

*Note.* *p < .05. **p < .01. ***p < .001     Correlations drawn from monthly data

## 6.3 Results

### 6.3.1 Tests of direct effects: Resources on Serious Leisure Time

#### 6.3.1.1 Serious Leisure and Resources:  Self Efficacy

Hypothesis 1 proposed that time spent in habitual serious leisure would be positively related to self-efficacy. Table 19 outlines the findings for self-efficacy as a monthly resource. To test this hypothesis I first modelled the control variables (Model 1) and casual leisure (Model 2) and then added time spent in habitual serious leisure in Model 3. Model 3 was a significant improvement ($\Delta$ - 2 x log = 10.81, df = 1, p < .001) from Model 1 and 2. Time spent in habitual serious leisure was not a significant predictor of self-efficacy, thus Hypothesis 1 is not supported.

In order to test Hypothesis 4, that similarity of work and serious leisure would moderate the relationship between time spent in habitual serious leisure and self-efficacy, I tested two further nested models. The first additional model, Model 4, contained the moderator variable and Model 5 contained the interaction effect. The model fit improved significantly for model 5 ($\Delta$ - 2 x log = 6.22, df = 1, p < .05) when the interaction term for similarity between serious leisure and work role and time spent in serious leisure was added. This interaction term was a significant negative predictor of self-efficacy. A graph demonstrating the interaction effect (see Fig. 4) shows that increased habitual leisure time is associated with lower levels of self-efficacy for individuals whose leisure activity is more similar to their work role. Hypothesis 4 proposed the opposite of this effect, namely that similarity would *increase* the impact of time spent in habitual

serious leisure on self-efficacy. Therefore this finding is contrary to the

hypothesized direction of the effect which suggested that those with similar work

and leisure roles would experience more enrichment than others.

Table 19 **Multilevel Estimates for Predicting Self-Efficacy**

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | T | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.776 | 0.073 | 51.371 | 3.778 | 0.073 | 51.345 | 3.768 | 0.070 | 53.128 | 3.768 | 0.071 | 52.798 | 3.768 | 0.070 | 53.245 |
| Age | 0.075 | 0.051 | 1.467 | 0.074 | 0.051 | 1.455 | 0.069 | 0.049 | 1.406 | 0.069 | 0.049 | 1.392 | 0.073 | 0.049 | 1.479 |
| Gender | 0.217 | 0.096 | 2.261* | 0.215 | 0.096 | 2.248* | 0.234 | 0.092 | 2.538* | 0.234 | 0.092 | 2.529* | 0.237 | 0.092 | 2.574* |
| Type of SL | -0.028 | 0.104 | -0.263 | -0.028 | 0.105 | -0.273 | 0.025 | 0.102 | 0.254 | 0.025 | 0.103 | 0.245 | 0.028 | 0.102 | 0.276 |
| CLT | | | | -0.001 | 0.001 | -1.65 | -0.001 | 0.001 | -1.742 | -0.001 | 0.001 | -1.742 | -0.002 | 0.001 | -1.802 |
| SLT | | | | | | | 0.001 | 0.001 | 1.299 | 0.001 | 0.001 | 1.296 | 0.000 | 0.001 | 0.162 |
| Similarity | | | | | | | | | | 0.001 | 0.045 | 0.03 | 3.36E-06 | 0.045 | 0 |
| Similarity*SLT | | | | | | | | | | | | | -0.003 | 0.001 | -2.549* |
| Minus 2 LL | 267.909 | | | 265.205 | | | 254.398 | | | 254.397 | | | 248.18 | | |
| Dif Minus 2 LL | 643.354*** | | | 2.704 | | | 10.807*** | | | 0.001 | | | 6.217* | | |
| df | | | | 1 | | | 1 | | | 1 | | | 1 | | |
| Level 1 Intercept Variance | 0.095 | | | 0.094 | | | 0.098 | | | 0.098 | | | 0.092 | | |
| (SE) | 0.010 | | | 0.010 | | | 0.011 | | | 0.011 | | | 0.010 | | |
| Level 2 Intercept Variance | 0.113 | | | 0.113 | | | 0.099 | | | 0.099 | | | 0.100 | | |
| (SE) | 0.025 | | | 0.025 | | | 0.023 | | | 0.023 | | | 0.023 | | |

*Note.* *p < .05. **p < .01. ***p < .001    SLT = Serious Leisure Time, CLT = Casual Leisure Time
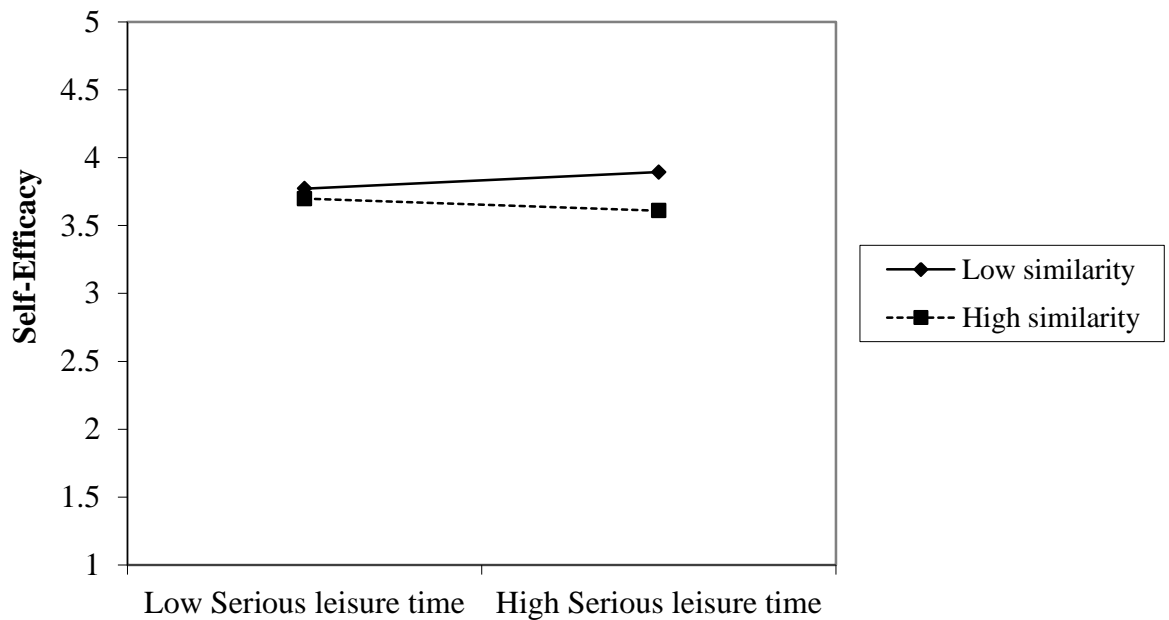
**Figure 4 Similarity as a moderator of Self-Efficacy**

6.3.1.2 Serious Leisure and Resources: Resilience

Hypothesis 2 proposed that time spent in habitual serious leisure would be positively related to resilience. The results for this analysis can be seen in Table 20. The addition of the control variables in model 1 significantly improved the model fit from the null model ($\Delta$ - 2 x log = 518.89, df = 3, p < .001). Model 2, which included casual leisure did not show any fit improvement fit ($\Delta$ - 2 x log = 1.22, df = 1, *ns*). However, the addition of time spent in habitual leisure improved overall model fit ($\Delta$ - 2 x log = 12.85, df = 1, p < .001 ) although, echoing the findings regarding self-efficacy, habitual leisure time was not itself significantly related to resilience.

Two further models were tested to assess the moderating effect of similarity between work and serious leisure (Hypothesis 4). The addition of the interaction term (similarity*habitual leisure time) in model 5 significantly improved the model fit ($\Delta$ - 2 x log = 4.77, df = 1, p < .05). The graph of this interaction (see Fig 5) shows that more habitual time spent in serious leisure is related to higher levels of self-reported resilience over the month but only for those whose leisure activity is less similar to their work role. This was confirmed with a simple slopes test. These results show the same pattern of relationships as those found between time spent in habitual serious leisure and self-efficacy
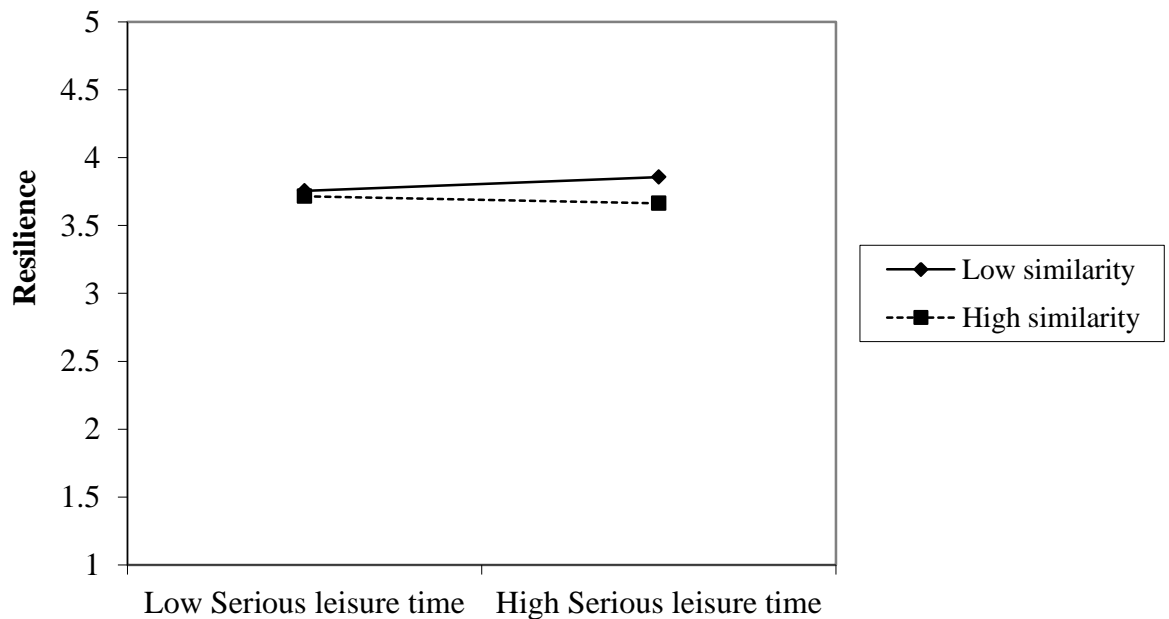


**Figure 5 Similarity as a moderator of resilience**

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# Table 20 Multilevel Estimates for Predicting Resilience

| RESIL | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | T | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.797 | 0.070 | 53.792 | 3.798 | 0.070 | 53.739 | 3.786 | 0.068 | 55.559 | 3.778 | 0.067 | 55.589 | 3.778 | 0.067 | 55.928 |
| Age | 0.099 | 0.049 | 2.007* | 0.098 | 0.049 | 1.999 | 0.093 | 0.047 | 1.964 | 0.098 | 0.047 | 2.079* | 0.102 | 0.047 | 2.164* |
| Gender | -0.028 | 0.092 | -0.308 | -0.028 | 0.092 | -0.313 | -0.011 | 0.088 | -0.125 | -0.005 | 0.088 | -0.057 | -0.001 | 0.087 | -0.017 |
| Type of SL | -0.018 | 0.100 | -0.187 | -0.019 | 0.100 | -0.193 | 0.042 | 0.098 | 0.431 | 0.058 | 0.098 | 0.592 | 0.062 | 0.098 | 0.636 |
| CLT | | | | -0.001 | 0.001 | -1.108 | -0.001 | 0.001 | -1.084 | -0.001 | 0.001 | -1.08E+00 | -0.001 | 0.001 | -1.144 |
| SLT | | | | | | | 0.002 | 0.001 | 1.551 | 0.002 | 0.001 | 1.592 | 0.000 | 0.001 | 0.577 |
| Similarity | | | | | | | | | | -0.042 | 0.043 | -0.963 | -0.044 | 0.043 | -1.019 |
| Similarity*SLT | | | | | | | | | | | | | -0.003 | 0.001 | -2.227* |
| | | | | | | | | | | | | | | | |
| Minus 2 LL | | 258.403 | | | 257.181 | | | 244.331 | | | 243.414 | | | 238.644 | |
| Dif Minus 2 LL | | 518.887*** | | | 1.222 | | | 12.85*** | | | 0.917 | | | 4.77* | |
| df | | 3 | | | 1 | | | 1 | | | 1 | | | 1 | |
| Level 1 Intercept Variance | | 0.088 | | | 0.088 | | | 0.086 | | | 0.086 | | | 0.084 | |
| (SE) | | 0.008 | | | 0.008 | | | 0.008 | | | 0.008 | | | 0.007 | |
| Level 2 Intercept Variance | | 0.107 | | | 0.107 | | | 0.097 | | | 0.095 | | | 0.095 | |
| (SE) | | 0.024 | | | 0.024 | | | 0.021 | | | 0.021 | | | 0.021 | |

*Note. . *p < .05. **p < .01. ***p < .001    SLT = Serious Leisure Time, CLT = Casual Leisure Time*

### 6.3.1.3. Serious Leisure and Resources: Vigor

Hypothesis 3 posited that time spent in habitual serious leisure would be positively related to vigor and Hypothesis 4 suggested that this effect would be moderated by the similarity between serious leisure and work. From Table 21 it can be seen that as with self-efficacy and resilience nested models, time spent in habitual serious leisure did not significantly add to the model. Therefore no support is found for Hypothesis 3.  In Model 4, the moderator was added and was found to be a significant positive predictor of vigor ($\Delta$ - 2 x log = 15.24, df = 1, p < .001). This means that having a similar work role and leisure activity positively predicts vigor throughout the month.  However in Model 5 the interaction term was not a significant predictor of vigor, nor did it improve the overall model fit ($\Delta$ - 2 x log = 0.879026, df = 1, ns). Therefore I find no support for the hypothesis that similarity between work and serious leisure increases the impact of time spent in serious leisure on vigor.

# Table 21 Multilevel Estimates for Predicting Vigor

| | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.044 | 0.119 | 25.451 | 3.04384 | 0.119 | 25.457 | 3.039 | 0.117 | 25.787 | 3.088 | 0.105 | 29.294 | 3.088 | 0.105 | 29.336 |
| Age | 0.193 | 0.083 | 2.312* | 0.193 | 0.083 | 2.319* | 0.192 | 0.082 | 2.349* | 0.153 | 0.073 | 2.108* | 0.155 | 0.072 | 2.137* |
| Gender | 0.108 | 0.156 | 0.696 | 0.108 | 0.155 | 0.7 | 0.111 | 0.153 | 0.727 | 0.072 | 0.136 | 0.533 | 0.074 | 0.136 | 0.549 |
| Type of SL | -0.184 | 0.170 | -1.084 | -0.183 | 0.169 | -1.082 | -0.146 | 0.169 | -0.864 | -0.249 | 0.151 | -1.65 | -0.247 | 0.151 | -1.636 |
| CLT | | | | 0.001 | 0.001 | 0.763 | 0.001 | 0.001 | 0.911 | 0.001 | 0.001 | 0.914 | 0.001 | 0.001 | 0.884 |
| SLT | | | | | | | 0.003 | 0.002 | 1.418 | 0.003 | 0.002 | 1.336 | 0.002 | 0.002 | 0.823 |
| Similarity | | | | | | | | | | 0.278 | 0.066 | 4.156*** | 0.277 | 0.066 | 4.143*** |
| Similarity*SLT | | | | | | | | | | | | | -0.002 | 0.002 | -0.939 |
| | | | | | | | | | | | | | | | |
| Minus 2 LL | | 657.775 | | | 657.208 | | | 615.093 | | | 599.85 | | | 598.971 | |
| Dif Minus 2 LL | | 924.649*** | | | 0.567 | | | 42.115*** | | | 15.243*** | | | 0.879 | |
| df | | 3 | | | 1 | | | 1 | | | 1 | | | 1 | |
| Level 1 Intercept Variance | | 0.308 | | | 0.311 | | | 0.322 | | | 0.328 | | | 0.325 | |
| (SE) | | 0.037 | | | 0.038 | | | 0.045 | | | 0.048 | | | 0.047 | |
| Level 2 Intercept Variance | | 0.270 | | | 0.267 | | | 0.239 | | | 0.158 | | | 0.158 | |
| (SE) | | 0.069 | | | 0.069 | | | 0.070 | | | 0.059 | | | 0.059 | |

*Note. . *p < .05. **p < .01. ***p < .001*   SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 6.3.2 Tests of Direct Effects: Work Performance on Serious Leisure Serious

Hypothesis 5 proposes that habitual time spent in serious leisure is positively related to the three forms of work performance; task proficiency, personal initiative and taking charge. The analysis of this hypothesis was approached using the same nested model format as the tests of Hypotheses 1-3, the direct effects between habitual serious leisure and resources. However, the nested models in this case do not include similarity as a moderator. Figure 3 displays the hypothesized model of these relationships.

### 6.3.2.1 Task Proficiency

Table 22 shows the findings of the nested models representing task proficiency as a function of time spent in serious leisure. Model 1 ($\Delta$ - 2 x log = 769.49, df = 4, p < .001), Model 2 ($\Delta$ - 2 x log = 8.503, df = 1, p < .01) and Model 3 ($\Delta$ - 2 x log = 23.32, df = 1, p < .001) all show improvements in their fit statistics. Time spent in habitual serious leisure is positively and significantly related to task proficiency, supporting Hypothesis 5a. Notably, time spent in habitual casual leisure is negatively related to performance. This pattern of findings displays some parallels with the findings relating to episodic leisure, where serious leisure was indirectly related to task proficiency, while casual leisure was negatively related work performance (specifically personal initiative).

## Table 22 Multilevel Estimates for Predicting Task Proficiency

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.867 | 0.080 | 47.931 | 3.870 | 0.080 | 47.955 | 3.866 | 0.078 | 49.342 |
| Age | 0.030 | 0.056 | 0.531 | 0.029 | 0.056 | 0.521 | 0.034 | 0.054 | 0.633 |
| Gender | 0.289 | 0.105 | 2.76** | 0.287 | 0.104 | 2.737** | 0.302 | 0.101 | 2.971** |
| Type of SL | 0.091 | 0.036 | 2.481* | 0.087 | 0.036 | 2.408* | 0.092 | 0.036 | 2.551* |
| Job Autonomy | 0.158 | 0.114 | 1.38 | 0.156 | 0.114 | 1.367 | 0.174 | 0.112 | 1.551 |
| CLT | | | | -0.003 | 0.001 | -2.937** | -0.004 | 0.001 | -3.2** |
| SLT | | | | | | | 0.004 | 0.001 | 2.818** |
| Minus 2 LL | 392.732 | | | 384.229 | | | 360.912 | | |
| Dif Minus 2 LL | 769.489*** | | | 8.503* | | | 23.317*** | | |
| df | 4 | | | 1 | | | 1 | | |
| Level 1 Intercept Variance | 0.129 | | | 0.125 | | | 0.128 | | |
| (SE) | 0.012 | | | 0.011 | | | 0.012 | | |
| Level 2 Intercept Variance | 0.135 | | | 0.136 | | | 0.121 | | |
| (SE) | 0.029 | | | 0.030 | | | 0.028 | | |

*Note. *p < .05. **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 6.3.2.2 Personal Initiative

The results of regressing personal initiative onto habitual serious leisure are shown in Table 23. Model 1 showed an improvement on the null model ($\Delta$ - 2 x log = 605.09, df = 4, p < .001), however the addition of casual leisure did not further improve the fit (Model 2; $\Delta$ - 2 x log = 1.2, df = 1, *ns*). Time spent in habitual serious leisure did improve the fit for Model 3 ($\Delta$ - 2 x log = 4.788, df = 1, p < .05), but the effect of the variable itself was not significant. Again, in line with findings from the daily diary study there was no direct effect of time spent in serious leisure on personal initiative, lending no support to Hypothesis 5b.

## Table 23 Multilevel Estimates for Predicting Personal Initiative

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.603 | 0.087 | 41.172 | 3.601 | 0.087 | 41.213 | 3.601 | 0.088 | 40.725 |
| Age | 0.081 | 0.061 | 1.314 | 0.080 | 0.061 | 1.319 | 0.081 | 0.062 | 1.312 |
| Gender | 0.178 | 0.114 | 1.56 | 0.178 | 0.114 | 1.569 | 0.184 | 0.115 | 1.594 |
| Job Autonomy | 0.150 | 0.035 | 4.283** | 0.152 | 0.035 | 4.329*** | 0.150 | 0.035 | 4.172*** |
| Type of SL | -0.149 | 0.125 | -1.196 | -0.149 | 0.124 | -1.194 | -0.116 | 0.128 | -0.91 |
| CLT | | | | 0.001 | 0.001 | 1.099 | 0.001 | 0.001 | 0.961 |
| SLT | | | | | | | 0.002 | 0.001 | 1.419 |
| | | | | | | | | | |
| Minus 2 LL | | 358.173 | | | 356.971 | | | 352.183 | |
| Dif Minus 2 LL | | 605.09*** | | | 1.202 | | | 4.788* | |
| df | | 4 | | | 1 | | | 1 | |
| Level 1 Intercept Variance | | 0.115 | | | 0.115 | | | 0.117 | |
| (SE) | | 0.011 | | | 0.011 | | | 0.011 | |
| Level 2 Intercept Variance | | 0.167 | | | 0.167 | | | 0.169 | |
| (SE) | | 0.035 | | | 0.035 | | | 0.036 | |

*Note. *p < .05. **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 6.3.2.3 Taking Charge

Hypothesis 5c proposed that time spent in habitual serious leisure would be positively related to taking charge. The results for this analysis can be found on Table 24. Model 1 ($\Delta$ - 2 x log = 970.08, df = 4, p < .001) and Model 3 ($\Delta$ - 2 x log = 31.94, df = 1, p < .001) showed improvements in model fit, while Model 2 did not show any improvement in fit ($\Delta$ - 2 x log = 0.2, df = 1, *ns*). However, time spent in habitual serious leisure was not significantly related to taking charge, lending no support to Hypothesis 5c.

From these findings, and the above analysis of personal initiative, it can be seen that neither proactive work behaviours were related to time spent in serious habitual leisure. However there was a significant positive relationship between time spent in habitual serious leisure and task proficiency.

# Table 24 Multilevel Estimates for Predicting Taking Charge

| | Model 1 | | | Model 2 | | | Model 3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | T | Estimate | SE | t | Estimate | SE | t |
| Intercept | 3.414 | 0.133 | 25.615 | 3.413 | 0.133 | 25.617 | 3.428 | 0.133 | 25.613 |
| Age | 0.200 | 0.094 | 2.141* | 0.200 | 0.093 | 2.144* | 0.213 | 0.093 | 2.273* |
| Gender | 0.141 | 0.174 | 0.813 | 0.141 | 0.173 | 0.815 | 0.144 | 0.174 | 0.828 |
| Job Autonomy | 0.087 | 0.055 | 1.577 | 0.088 | 0.055 | 1.589 | 0.086 | 0.055 | 1.549 |
| Type of SL | 0.018 | 0.190 | 0.095 | 0.018 | 0.190 | 0.096 | -0.013 | 0.193 | -0.069 |
| CLT | | | | 0.000 | 0.001 | 0.448 | 0.000 | 0.001 | 0.29 |
| SLT | | | | | | | 0.001 | 0.002 | 0.805 |
| Minus 2 LL | | | 690.907 | | | 690.709 | | | 658.773 |
| Dif Minus 2 LL | | | 970.076*** | | | 0.197 | | | 31.936*** |
| df | | | 4 | | | 1 | | | 1 |
| Level 1 Intercept Variance | | | 0.275 | | | 0.274 | | | 0.273 |
| (SE) | | | 0.024 | | | 0.024 | | | 0.025 |
| Level 2 Intercept Variance | | | 0.395 | | | 0.395 | | | 0.394 |
| (SE) | | | 0.081 | | | 0.081 | | | 0.081 |

*Note. *p < .05. **p < .01. ***p < .001*    SLT = Serious Leisure Time, CLT = Casual Leisure Time

### 6.3.3 Tests of Mediation

Hypothesis 6 proposed that resources would mediate the relationship between time spent in habitual serious leisure and work performance. Using MPlus, I tested for evidence of indirect effects between each of the resources and work performance outcomes and found no significant pathways. These findings are not surprising given the lack of direct effects between the predictor, serious leisure, and resources as the mediators (Baron & Kenny, 1986).

### 6.3.4 Post-hoc analysis: Lagged effects for resources

The analyses thus far focused on the cumulative effect of time spent on serious leisure on resources and work performance within the same month. In order to test whether the effects of time spent in habitual leisure would persist throughout the following month I created a lagged variable for time spent in serious leisure. Using this lagged data I tested whether habitual time at time 1 predicted resources and work performance at time 2 and so on, across the 7 time points. The analysis was identical in all other regards to the analysis between habitual time spent in serious leisure and resources and work performance.

The results from the lagged variable analysis showed no significant relationship between time spent in serious leisure and either resources or work performance the following month. The lagged analysis also failed to find any moderating effects of the similarity of work and leisure. The findings indicate that the effects of time spent in habitual serious leisure may wear off relatively quickly.

Due to the use of lagged variables the sample size for this analysis was smaller than the main analysis for this study. Having one fewer time points reduced the sample to 264 cases, reducing the power of the analysis. Therefore while this analysis provides some indications of the longer term effects of habitual serious leisure, further data collection would provide more robust findings.

**Table 25 List of Study 2 hypotheses and results**

| Hypothesis 1: | There is a positive relationship between habitual time spent in serious leisure and self-efficacy | Not supported |
|---|---|---|
| Hypothesis 2: | There is a positive relationship between habitual time spent in serious leisure and resilience. | Not supported |
| Hypothesis 3: | There is a positive relationship between time spent in habitual leisure and vigor. | Not supported |
| Hypothesis 4: | The extent to which an individual's' serious leisure activity is similar to their work role will moderate the effect of time spent in serious leisure on resources, such that the effect will be stronger when their leisure and work are similar. | Significant moderation in the opposite direction for self-efficacy and resilience |
| Hypothesis 5: | There is a positive relationship between time spent in habitual serious leisure and (a) task proficiency, (b) personal initiative, and (c) taking charge. | Supported for task proficiency |
| Hypothesis 6: | The relationship between time spent in serious leisure and work performance is mediated by psychological resources. | Not supported |

## 6.4 Discussion

In this chapter I have examined how levels of enrichment (Maertz & Boyar, 2010) are affected by habitual serious leisure, compared them to a model of daily enrichment, and further examined instrumental resources via the contribution of serious leisure to building resilience over time. The study showed that time spent in habitual serious leisure impacts the creation of resources, but only in specific circumstances, namely, when an individual's serious leisure is less similar to their work role. It also showed that, unlike serious leisure *episodes*, which are only indirectly related to task proficiency, time spent in *habitual* serious leisure was associated directly with increased task proficiency. Habitual serious leisure was not, however, related to proactive behaviour either directly or via mediation.

### 6.4.1 Implications

6.4.1.1 Serious Leisure and Psychological Resources: Self-efficacy and Resilience

This study focused on the instrumental and affective pathways to enrichment (Greenhaus & Powell, 2006), examining whether psychological and affective resources gather in a cumulative way over the course of a month. In addition to self-efficacy I examined resilience as a psychological resource. Resilience was included in this study because engagement in serious leisure involves the challenges which provide opportunities to develop resilience and based on previous research it was deemed to be likely to develop over multiple experiences and therefore be associated with habitual serious leisure (Zaheer et al., 1999). Based on theory and prior research I proposed that there would be an accumulation of resources over time prompted by spending more time than

usual on habitual serious leisure activities. Positive relationships between time spent in serious leisure and both resources and work performance were expected to be replicated in Study 2. Additionally it was expected that resources which were not generated at the episodic level may be generated at the habitual level, prompted by the accumulation of serious leisure experiences. However this pattern of results was not found. The findings showed that, although there was evidence for a positive relationship between time spent in *episodic* serious leisure and self-efficacy, there was no evidence that time spent in *habitual* serious leisure was positively related to self-efficacy. This indicates that the relationship between episodic serious leisure and habitual serious leisure is not a straightforward accumulation of resources. As Zaheer et al. (1999) and Maertz and Boyar (2010) suggested, the difference between these time scales is substantively influential on the enrichment process.

### *Similarity as a moderator*

The analysis of similarity of the work and serious leisure role demonstrated the importance of context for the accumulation of resources. For both self-efficacy and resilience, the results indicated that spending more time engaging in a serious leisure activity was positively related to resources for those who rated their leisure activities as *less* similar to their work role. The direction of this effect is the opposite of the hypothesized effect. In the introduction I proposed that the degree of similarity between roles would enhance the creation of resources. Based on social learning theory (Bandura, 1977) and enrichment theory (Greenhaus & Powell, 2006) I argued that similarities would allow for a more generalizable sense of confidence arising from learning as it would be relevant to more domains than just that of the

leisure activity. For this same reason, developmental experiences within a serious leisure activity, with a high degree of similarity to the work role, could provide a safe but work relevant venue for building resilience. The serious leisure activity could provide challenges without the same external or material risks than work related challenges.

However, the findings of Study 2 suggest that it is dissimilarity which is beneficial for individuals' resource levels, i.e., it is more beneficial for participants to have a leisure activity which is *not* similar to their job role. The negative interaction of similarity with habitual serious leisure indicates that psychological resource generation is supported by increasing the diversity of the types of activity engaged in across the domains of work and leisure.

Role accumulation theory (Seiber, 1974) suggests that the accumulation of roles could provide beneficial buffering effects between roles, where positive aspects of one role can compensate for difficulties encountered in another life role. It may be the case that participants benefit more over longer time scales from the distinctiveness between their work role and their leisure role, in comparison to those who see many overlaps between them and perhaps view them as less distinct roles. This could be due to having a more clearly defined leisure role which can be used to buffer against difficulties encountered in work. In contrast to the findings of Study 2, Study 1 found that, on an episodic level, participants reported increased self-efficacy regardless of the similarity between serious leisure and their work role. This further highlights the potential differences between the impact of episodic and habitual serious leisure time.

It is interesting to note that despite the negative influence of similarity as a moderator of the impact of time spent in habitual serious leisure, the direct effects of similarity on resources tended to be positive in both studies. For example, there was a positive effect of similarity on positive affect in Study 1, and on vigor in the current study. The positive direct effect of similarity of work and serious leisure roles is a between-person effect, and as such its effects are independent of the time spent in serious leisure. This means that if individuals' work and leisure are similar they will experience higher levels of energy and positive affect, in general, in comparison with individuals whose work and leisure are less similar. In contrast, the moderated effect between time spent in serious leisure and self-efficacy and resilience is a within-person effect, which means that for an individual whose work and leisure have less in common it is the *time they spend* in the activity which influences their resources.

This discrepancy between the benefits of similarity for between and within-person effects could result from a ceiling effect for resources, where individuals who have similar work and leisure roles experience generally higher levels of psychological resources and hence within-person development of resources is limited.

### 6.4.1.2 Serious Leisure and Vigor

Hypothesis 4 stated that there would be a positive relationship between habitual leisure and vigor. The results showed that this was not the case. This indicates that spending more time than usual in serious leisure over the course of the month does not improve general levels of vigor. I proposed that self-regulatory practice would reduce any depletion caused by the intense nature of

serious leisure and boost energy levels. However it is possible to that due to the more intrinsic motivations associated with leisure the attentional demands of a serious leisure activity are not experienced as depleting by participants. An alternative explanation may be that when serious leisure is experienced as challenging it produces feelings of flow, which are not associated with negative energetic effects. This would mean that there would not be an opportunity for the practice effects of self-regulation that I proposed in the original hypothesis.

As mentioned in the section discussing similarity of work and serious leisure as a moderator, the similarity of work and leisure was found in Study 2 to positively predict vigor at work. Much of the early work examining the relationships between leisure and work examined whether individuals were more inclined to seek out leisure experiences which were similar to their work role, or ones which were different or complementary in some way (see Staines, 1980 for a review). While some evidence in past research found that there was a slight inclination towards activities which displayed similar characteristics to people's work, in general there was substantial variability (Elizur, 1991; Snir & Harpaz, 2002). Therefore, a better question may be whether there are positive effects of overlap between leisure and work. The effort recovery model suggests that it is necessary to allow the physical and mental systems which are taxed during work to have some remittance from these demands to facilitate recovery (Meijman & Mulder, 1998), which suggests that similarity would be detrimental. However, the findings from both Study 1 and Study 2 of this thesis indicate that for energetic resources individuals who have a serious leisure activity which is similar to their work role report better outcomes in

comparison to individuals who do not. Again, this is notwithstanding the within-person results, which indicated additional time spent on the activity was more impactful for those whose work and leisure were *less* similar.

The between-person benefits of similarity of work and serious leisure may be useful for organisations to bear in mind when considering how to support staff. Candidates who choose leisure activities which are similar to their work are potentially likely to derive much more intrinsic motivation from their work, than individuals whose activities are distinctively different from their work. However, it would require further research to investigate whether this is only the case for serious leisure activities, and whether the individual needs to consider the activities similar or whether there are objective markers of similarity that could be used. Regardless of these details, my findings indicate that it is important to consider both the within-person and between-person effects of overlap between leisure and work

### 6.4.1.3 Serious Leisure and Work Performance

***Proactive Behaviour; Personal Initiative and Taking Charge***

The results showed that there was no direct relationship between time spent in habitual leisure and either measure of proactive behaviour. I originally suggested that proactive behaviour would be more strongly related to enrichment from *habitual* serious leisure than to enrichment from *episodic* serious leisure. There were two arguments underlying this proposition. The first was that habitual leisure would require less resource investment following repeated engagement due to the potential of practice effects relating to ego depleting activities. This decreasing resource investment would potentially

result in an upward spiral of resource gain within the activity over time. Additionally, psychological resources have been theorized to be state-like, where additional development can lead to longer term gains in resources.

The second argument was based upon recent developments in the conceptualisation of proactive behaviours. These behaviours have been shown to have a number of stages from envisioning, through planning, acting and reflecting (Bindl et al., 2012). Therefore, it may not be possible to engage in each of these stages within a day of a serious leisure episode, thus underestimating the impact of serious leisure on the acting stage of proactivity. Therefore, it may be more valid to measure proactive behaviour over a longer period of time to capture the full extent of the potential effect. However, these arguments for a positive link between time spent in habitual serious leisure and proactive behaviours have not been supported by the results. Neither personal initiative nor taking charge were related to time spent in serious leisure over the course of the month. In contrast to findings from the episodic study of serious leisure there was also no indirect effect, which indicates that proactivity is unrelated to habitual time in serious leisure. This may mean that the enrichment effects between serious leisure and proactivity are limited to short term spillover rather than an accumulation of resources. This could be due to the limited number of episodes of serious leisure within a month which would limit the impact of these experiences over this time frame. The lack of evidence of any lagged effects, i.e. influences of leisure time on behaviour the following month, adds weight to the conclusion that enrichment is short lived and not cumulative. It may be that more proximal influences, such as those

within the work domain, override any small, immediate influence of serious leisure on work behaviours.

## *Task Proficiency*

The results showed that there was a direct positive effect of time spent in habitual leisure on task proficiency. This suggests that when people spend more time than usual in their serious leisure activity over the course of a month they also report higher performance in their core tasks. In the study of episodic leisure, I found that there was a similar, but indirect, relationship between time spent in an episode of serious leisure and task proficiency. This difference indicates that there is a stronger relationship between serious leisure at the habitual level and task proficiency. However, the fact that habitual serious leisure is only related to self-efficacy in certain circumstances indicates that there may be other explanatory factors for why this direct effect is observed with habitual leisure. In their model of enrichment Greenhaus & Powell (2006) suggest a range of resources that may be generated within a role. Some of these resources such as social capital, skills and perspectives may be related to habitual leisure more than episodic leisure. For example, a computer programmer may be struggling with a problem at work and happen to discuss it at a gaming group, drawing on the advice of fellow players. This is not necessarily an enrichment pathway that operates in a linear fashion across serious leisure experiences, and may not occur with a predictable frequency. Therefore the effects may be more visible over a longer time period, such as the monthly periods within this study.

### 6.4.2 Limitations

All the variables were assessed simultaneously within a single survey each month to reduce the survey burden on participants. A single repeated survey design has two potential limitations. First, the causal direction of the relationships cannot be determined. I have proposed that more time habitually spent in leisure provides a regular experience of developing or maintaining psychological resources. However, it is possible that, rather than leisure influencing resources and thus enriching the work role, good performance at work results in individuals feeling like their resources in work are not under any immediate threat. They may then feel more comfortable investing increased time and energy in activities outside of work. However, the data for predictor and outcome variables in Study 1 were separated in time (one assessed in the morning and one assessed at the end of the work day) and the findings indicated that higher time in the activity was related to later increases in resources and influences on work behaviours. These findings provide some support for the hypothesized direction of causality. However, it is possible that experiences within work and leisure domains influence each other in turn. Future research could explore this using multilevel structural equation modelling, which can examine whether there are stronger predictive pathways from the leisure variables to work variables, or work variables to leisure variables. It may also be possible to test this in a quasi-experimental design where individuals agree to engage in increased amounts of time in their serious leisure activity, decreased amounts of time, and to stop this activity altogether, to assess whether the time engaged is itself caused by work factors.

The second limitation of collecting variables simultaneously from participants is the potential for common method bias. Podsakoff et al. (2003) suggest common method bias can be reduced by a psychological barrier between different measures, such as by using different question types or response formats. In this study the independent variable was the amount of time spent in an activity. This requires a different type of reflection and a different response format (an estimation of time rather than a Likert scale) than the other measures of psychological resources and work behaviours. These factors reduce the potential impact of common method bias.

# Chapter 7: Discussion

Employees experience their work nested within the broader context of their lives. The value of understanding the influence of other life domains on work is being increasingly acknowledged. Moreover, leisure is becoming increasingly important to employees of younger generations (Twenge et al., 2010). However, the impact of leisure on work and well-being has received less attention than that of other domains, particularly the area of family. In response to this, this thesis seeks to broaden understanding of the way employees' psychological and affective resources are affected by their leisure activities and how, in turn, this impacts their work. Previous research has indicated the potential for leisure activities to impact workplace attitudes by showing positive relationships between leisure enrichment and job commitment and satisfaction (Kirchmeyer, 1992b). In addition certain types of leisure activities have been found to influence work engagement via their effect on vigor (ten Brummelhuis & Bakker, 2012b).

In this thesis I have approached the question of leisure-work enrichment by examining specifically the influence of serious leisure on the process of enrichment. I have focused primarily on within-person changes that result from the engagement in serious and casual leisure activities in order to capture the impact of different types of leisure engagement on individuals. This approach is rarely used in enrichment research, but is considered a fruitful approach in recovery research (e.g. Bakker, Demerouti, Oerlemans, & Sonnentag, 2013; Daniel & Sonnentag, 2014; Sonnentag & Kühnel, 2016).

In this thesis two longitudinal diary studies were carried out examining the effects of episodic engagement in serious leisure (Study 1, over 10 days) and

habitual engagement in serious leisure (Study 2, over 7 months) in order to address the following research questions; 1) What are the effects of spending time in serious leisure on psychological and affective resources? 2) What are the effects of spending time on serious leisure on the process of leisure-work enrichment and what role do psychological resources play in this process? 3) What are the similarities and differences between episodic and habitual leisure-work relationships?

Both studies examined the role of psychological and affective resources as mechanisms through which time spent in serious leisure would support work performance. Results showed that spending more time than usual in episodic leisure (Study 1) increased self-efficacy in participants, and that this increase in self-efficacy indirectly mediated the relationship between serious leisure and work performance.

Additional findings include a lack of support, across both studies, for an affective pathway (also referred to as in the literature as spillover) of enrichment between serious leisure and work. Within my model of the episodic enrichment process, I proposed an additional enrichment pathway to the traditional two pathway model (Greenhaus & Powell, 2006). This cognitive-affective pathway was proposed as an additional route for affective resources to provide enriching effects on work via positive leisure reflection. No support for this pathway was found in the results of the study of episodic leisure. However, positive leisure reflection was found to positively relate to time spent in casual leisure. Given the link between casual leisure and lower ratings of work performance, positive leisure reflection may in fact be linked to conflict between leisure and work, rather than enrichment.

Results from Study 2, an examination of habitual time spent in serious leisure, displayed a different pattern of resource generation and leisure to work enrichment than episodic leisure. In Study 2, time spent in habitual serious leisure was positively related to self-efficacy and resilience only when participants' leisure activity was not similar to their work role. In contrast to this, time spent in episodic serious leisure was directly related to self-efficacy. Secondly there were differences in the relationships between serious leisure and work performance between habitual and episodic leisure. In Study 2 results showed that time spent in habitual serious leisure was *directly* related to core task performance, whereas in Study 1, time spent in episodic serious leisure was only indirectly related to work performance measures, via self-efficacy. These findings indicate that different mechanisms may support enrichment between leisure and work over daily and monthly time frames.

Additionally, findings indicated differences between the effects of serious and casual leisure. In contrast to the positive relationships between serious leisure and work performance, casual leisure was negatively related to proactive behaviour in Study 1, further highlighting the importance of considering the individual's approach to an activity (i.e. serious or casual) when examining leisure to work enrichment.

In this discussion chapter I will integrate the findings from the two empirical chapters to examine the general conclusions that can be drawn from the results and the contribution that these studies can make to our knowledge of the work-life interface and the role of leisure. To do this I will first outline the theoretical contributions of the findings, then the methodological

contributions, before discussing future research areas. The final sections will explore the limitations of the thesis and the practical implications.

## 7.1 Theoretical Contributions
### 7.1.1 Serious Leisure as a source of enrichment

Traditionally enrichment has been examined predominantly as a process between the work and family domains (Crain & Hammer, 2013). This has neglected other roles such as those enacted through leisure activities. More recently researchers have called for a more detailed view of other elements of the non-work domain (Hall et al., 2013). Previous research has examined the levels of commitment to, or identification with, particular leisure activities or non-work domains. For example, research in this area has investigated whether commitment to multiple roles would reduce or increase the resources available for (Weer et al., 2010) and commitment to the work domain (Randall, 1988). Studies found that identity related leisure activities correlated with measures of leisure to work enrichment (Kirchmeyer, 1992b), and that psychological involvement in personal benefit activities, a category of non-work activities which includes leisure, were positively related to enrichment of the work role (Allis & Driscoll, 2008). In light of this research, both Study 1 and 2 of this thesis provide evidence supporting the positive role of identity, among the other serious leisure characteristics, in the process of leisure-work enrichment. It also expands on this research by including the additional elements of serious leisure including self-development and a focus on future goals that are inherent in the serious leisure perspective.

I have sought to bring leisure more fully into the frame in its own right, and introduced the serious leisure perspective as a conceptualisation of leisure

in order to focus this research around a meaningful construct. Serious leisure is defined by an individual having an approach to their leisure activity which is linked to their sense of identity, in which they are motivated to develop skills and knowledge to progress within the activity, are willing to persevere through difficulties and intend to continue their engagement in the activity into the future. To my knowledge there are no previous studies which examine the relationship between serious leisure engagement and work outcomes. The relationships between serious leisure and work performance were visible directly, in Study 2, and indirectly in Study 1. In Study 1, daily time spent in serious leisure increased self-efficacy and via this mechanism increased three measures of work performance; task proficiency, personal initiative and task proactivity. This indicates that there is a link between engagement in serious leisure activity and performance at work. In contrast to these findings, casual leisure was found to have a negative relationship with personal initiative ($p < 0.01$) and task proactivity ($p < .1$).

This thesis also expands on the findings of research into the enrichment process between non-work and work (e.g. Kirchmeyer, 1992b; Schwind Wilson & Baumann, 2014; Weer et al., 2010) by examining the within-person variation of work performance in relation to time spent in serious leisure. My findings suggest that for individuals who are invested in their leisure activities, i.e. they have a serious leisure activity, time spent engaging in this activity has a positive effect on their psychological resources and work behaviours. This provides information about how fluctuations in the levels of serious leisure engagement (represented by time spent in the activity) may influence outcomes. Previous enrichment research has demonstrated how differences between

individuals in their leisure identity can be linked to differences in enrichment. These between-persons findings (Allis & Driscoll, 2008; Kabanoff & O'Brien, 1980; Kirchmeyer, 1992a) allow comparisons between participants who have different levels of the target variables but do not provide within-person information on the *process* of enrichment for any given individual. This point will be further explored in the sections on methodological contributions and practical implications.

To date, the within-person processes relating to the leisure-work interface have been predominantly investigated in research on recovery from work. Activities which are considered part of the leisure domain, such as physical and social activities, have been previously investigated for their potential role in recovery from work (ten Brummelhuis & Bakker, 2012b; Winwood, Bakker, & Winefield, 2007). As discussed in the literature review, this represents an instrumental view of leisure which presupposes leisure's function for the individual. For example, in recovery research the mechanisms explored are primarily related to resource replenishment in order to return to a functioning level of resources. My thesis has taken a more leisure-centric approach by examining those activities that individuals are likely to engage in regardless of their effect on work, which moves the conversation away from instrumental aspects of leisure and towards leisure as a valued role within an individual's life. This view aligns leisure activities more closely to our current view of family activities within the non-work domain, in terms of their link to eudaimonic well-being and functions beyond recovery. The findings from Study 1 did not provide any evidence for a relationship between time spent in serious leisure and either fatigue or highly activated positive affect. This

indicates that neither recovery nor depletion of energetic resources is affected by time spent in serious leisure. Therefore, it may be more fruitful to focus on the generation of new resources rather than the recovery of resources resulting from serious leisure engagement. In support of this focus on the development rather than recovery of resources, this thesis has found that under certain circumstances psychological resources are developed following time spent in serious leisure activities. This finding was present despite controlling for physical leisure activities, further reinforcing the additive value of serious leisure as an informative lens for leisure-work enrichment. Moreover, the distinction found between the effects of serious and casual leisure on proactive behaviour highlights the need to take these characteristics of leisure into account when examining the leisure-work interface. Future research may examine whether, on an episodic level, serious leisure activity provides higher levels of recovery experiences such as detachment and mastery than casual leisure activities.

### 7.1.1.1 Cognitive-affective pathway

This thesis sought to expand enrichment theory by investigating a possible additional pathway to the enrichment process. The cognitive-affective pathway was suggested as a means of maximising and capitalising on the positive impacts of events in accordance with cognitive appraisal theory (Langston, 1994). I proposed that positive leisure reflection would be the mechanism through which the cognitive-affective pathway would operate. No evidence was found for this pathway in Study 1. One reason for a lack of support for this pathway may be found in boundary theory (Ashforth, Kreiner, & Fugate, 2000). Boundary theory suggests that individuals have preferences

for integration or segmentation of life domains, such as work and leisure (Ashforth et al., 2000; Methot & LePine, 2016). Therefore, there may be dispositional differences in the extent to which individuals would actively choose to reflect on non-work experiences during work time. Future research on this topic may benefit from including boundary preferences as a moderator of enrichment pathways.

An unexpected finding relating to this pathway was the significant positive relationship between positive leisure reflection and casual leisure time. The original hypothesis for a cognitive-affective enrichment pathway proposed that serious leisure would be linked to positive leisure reflection due to the identity component of serious leisure. However this link was not found and instead casual leisure was positively related to positive leisure reflection. In Study 1, when individuals spent more time than usual on casual leisure activities they also engaged in more positive leisure reflection during the following work day. Additionally casual leisure time was negatively related to task performance during the work day. This suggests that casual leisure and positive leisure reflection may reflect a pathway for conflict between leisure and work rather than enrichment.

Time spent on casual leisure may also reflect leisure crafting (Petrou & Bakker, 2016) where an individual is servicing immediate needs in order to compensate for, or buffer against difficulties in other life domains. This is in contrast to serious leisure which incorporates activities which build towards a leisure related future-self (Markus & Nurius, 1986). Employees who are more focused on servicing present problems and needs have been shown to choose work behaviours which are more focused on alleviating those problems than

individuals who are future focused (Strauss & Parker, 2015). Positive leisure reflection may prompt positive affect as originally hypothesised in the cognitive-affective pathway, but instead of being used as a resource which is actively applied in the work role it may instead be an emotional coping mechanism focused on present problems in the workplace (Folkman & Lazarus, 1980). If positive leisure reflection is related to emotion focused coping, rather than active problem focused coping, it may explain why casual leisure is negatively related to personal initiative. Additionally, when individuals reflect on their leisure activities during the work day it may hinder reattachment to work and interfere with their ability to focus on their work tasks. Recovery research has highlighted the importance of reattachment to work following a recovery period (Sonnentag & Kühnel, 2016). In Sonnentag and Kühnel's study, successful reattachment was related to higher levels of work engagement.

### 7.1.1.2 Leisure-work conflict

There has been even less research on the area of leisure to work conflict than leisure to work enrichment. Within the field of leisure research conflict is examined from a work to leisure direction, with work as the source of conflict (Tsaur, Liang, & Hsu, 2012). Research in this area reports, somewhat unsurprisingly, that work can interfere with leisure engagement (Jun & Kyle, 2011) and that work-leisure conflict can have negative effects on life satisfaction (Lin, Wong, & Ho, 2013). Examining work as a primary driver of conflict with leisure is based on a number of assumptions. Work commitments are thought to be less flexible than leisure commitments, resulting in changes to leisure to accommodate work demands (Staines, 1980). Additionally, there

are likely to be fewer material and social repercussions from quitting a leisure activity than quitting a job. As a result of these aspects of leisure and work, research has focused on one direction of influence, unlike the field of work-family research which has examined both directions for potential conflict (Allen, French, Dumani, & Shockley, 2015).

However, there are situations which may give rise to leisure interfering with work, particularly in the case of serious leisure. In the short term, leisure commitments may be difficult to disengage from, even when they conflict with work commitments. For example, when an individual has a climbing partner they cannot cancel a planned climbing activity without letting their partner down (social consequences) and potentially losing money invested in their membership or climbing equipment (material consequences). Therefore, while leisure-work conflict was not the primary focus of this thesis I did investigate whether time spent in serious leisure could have negative effects on work performance. I focused on strain based conflict because, according to the effort recovery model (Meijman & Mulder, 1998), serious leisure could potentially overtax the systems involved in self-regulation. This effect was hypothesised to be stronger for those participants who experienced their work and leisure as sharing similar characteristics and demands. This hypothesis was not supported which indicates that despite the likelihood of high levels of resource investment in serious leisure activities there is no indication of strain based conflict, where effort invested in one role makes it more difficult to fulfil requirements of another role (Greenhaus & Beutell, 1985). One potential explanation for this finding is that serious leisure may have a positive effect on sleep quality. Leisure activities have been found, in cross-sectional studies, to

have a positive association with sleep quality (Nasermoaddeli et al., 2005).
Therefore sleep may be a mechanism through which any strain-based conflict
is ameliorated.

### 7.1.2 Time Scales; Divergences between Episodic and Habitual Leisure

In this thesis I conducted two studies of serious-leisure to work
enrichment. The main difference between the two studies was the time scale
over which I examined the process. In this section I will outline key
differences in the findings between the study of episodic and habitual serious
leisure and consider how these differences may inform our understanding of
the way leisure engagement influences the work-life interface.

A comparison of the findings of the episodic and habitual serious
leisure indicates that the benefits of serious leisure engagement are not
necessarily consistent or uniform. Based on social cognitive theories of
resource development (Bandura, 1977; Youssef & Luthans, 2010) and
suggestions in wider resource literature of an accumulation effect (Hobfoll,
2002; Mojza et al., 2011; ten Brummelhuis & Bakker, 2012a), I had expected
that the longer time scales would reproduce positive effects of the episodic
serious leisure pursuit or reveal effects which were not evident at the episodic
level. For example, researchers have suggested that repeated opportunities to
engage in resource building activities would strengthen and consolidate
psychological resources, such as self-efficacy (Chen, Gully, & Eden, 2001;
Mojza et al., 2011).

However, a comparison of the links between episodic leisure and
resources, and habitual leisure and resources found in my thesis does not

provide evidence of a simple accumulation of resources from episodic to habitual. Time spent in episodic leisure was associated with increased self-efficacy for all participants, whereas time spent in habitual serious leisure was only associated with a boost in self-efficacy (and resilience) for certain participants. More specifically those participants whose leisure activity was less similar to their work role experienced a greater boost in their psychological resources of self-efficacy and resilience than other participants. In other words individuals felt more confident and more able to bounce back from setbacks when they spent more time in their serious leisure as long as it was not like their work role. This difference demonstrates the need to consider different time scales as potentially different levels of analysis as has been suggested in the enrichment literature (Maertz & Boyar, 2010) and more broadly in the management literature (Zaheer et al., 1999).

My data showed that episodic serious leisure had a short term positive effect on self-efficacy but this did not translate into increased self-efficacy when measured across a month. It may be that recency effects (Baddeley & Hitch, 1993) cause individuals to assess their state levels of self-efficacy in relation to their most recent activities. So in the case of the episodic study, on mornings following increased time spent in their serious leisure, the most recent and therefore influential reference point for the participants momentary or state self-efficacy would have been their serious leisure activity. In contrast to this an assessment of self-efficacy may be influenced by multiple experiences throughout the month. Additionally, if self-efficacy is related to an assessment of multiple experiences across a month then individuals who have leisure activities which are distinct from their work experiences may

accumulate more novel information regarding their abilities as a result of their leisure pursuit. This novelty may be seen to contribute more to an overall summation of self-efficacy than a leisure experience that replicates similar work experiences. According to multiple role theory, as the number of roles a person inhabits increases, the greater the chance of benefits of those roles accruing (Seiber, 1974). It may also be the case that distinctions between the leisure activity and work role provide a coping mechanism which protects an individual's self-concept against threats in one domain by providing a sense of achievement and competence in another domain, and that this is more effective when there is greater variability across roles. This view is in line with studies of self-complexity which show that when an individual had multiple self-aspects they were less likely to suffer negative outcomes such as illness as a result of increased stress (e.g. Linville, 1987).

It is worth noting that the moderating relationship of similarity on time spent in serious leisure and the resources of self-efficacy and resilience is in line with the predictions which come from the Effort Recovery Model (Meijman & Mulder, 1998), in that individuals experienced increased resources when the demands of non-work activities are dissimilar from those of the work role. The Effort Recovery Model suggests that taxing similar systems would hinder recovery of lost resources (Meijman & Mulder, 1998). While there was no evidence that energetic resources (highly activated positive affect in study 1 and vigor in study 2) are overly taxed by engaging in similar activities the findings that similarity is a moderator of the effect of time spent in serious leisure and self-efficacy and resilience may indicate that the

recovery and generation of psychological resources requires a break from certain taxing activities which occur during the work day.

There may also be a difference in the way that time spent in serious leisure creates general rather than work-related resources. The measures used for resources in Study 1 were related to general feelings of self-efficacy and highly activated positive affect, whereas the measures for Study 2 made specific reference to work. In studies of work-family conflict and facilitation it has been noted that there may be different processes of interactions between domains depending on the extent to which an individual consciously sees potential for applying resources or is motivated to apply resources between domains (Voydanoff, 2005). This difference may explain the different patterns of resource creation and transfer visible between Study 1 and Study 2 in that time spent in serious leisure has more of an effect on general resources but there are only certain situations where it may create work related resources.

### 7.1.3 Contributions to leisure literature

I have used serious leisure as a lens to explore the influence of leisure on work. By combining serious leisure with theories of resources and enrichment I have also augmented the conceptualisation of serious leisure and thus added to the leisure literature in a number of ways. Serious leisure has long been associated with enduring benefits (Stebbins, 1982). In this thesis I have demonstrated that there are also immediate benefits to engaging with serious leisure, in the form of psychological resources. The differences between resources created by episodes of serious leisure versus habitual serious leisure indicate that these benefits may differ. The future study of serious leisure would benefit from even greater integration of theory relating to

the creation and use of resources. With the use of COR theory (Halbesleben et al., 2014; Hobfoll, 1989, 2002) in this thesis I have demonstrated that resource theories can produce novel hypotheses which aid the investigation into how leisure is embedded in an individual's life via its interconnections with other activities and life domains.

### 7.1.3.1 Serious leisure has immediate benefits (as opposed to durable benefits)

As individuals spend additional time in their serious leisure activities they experience an immediate benefit to their self-efficacy. The theoretical framework pertaining to serious leisure suggests that serious leisure is more closely associated with long term, or durable benefits, as opposed to immediate outcomes (Gould et al., 2008; Stebbins, 1992). My findings demonstrate that serious leisure is also related to short term benefits which are relevant to broader aspects of an individual's life.

Previous research has suggested that leisure activities may be useful for building confidence (Patterson & Pegg, 2009) and the durable benefits of serious leisure are enhanced self-image and feelings of accomplishment (Gould et al., 2008; Heo, Stebbins, Kim, & Lee, 2013). My thesis findings demonstrate that there are also within-person variations in how confidence or self-efficacy is experienced. Previous research focused on between-person experiences of leisure, where participants who had a serious leisure activity also reported higher levels of beneficial experiences, such as personal growth, than those who did not (Chun, Lee, Kim, & Heo, 2012; Heo et al., 2013; Kim et al., 2011). In contrast, in this thesis the relationships are related to within-person changes. When an individual spends more time than usual on their

serious leisure activity they reap greater benefits, in the form of increased self-efficacy. This adds to our knowledge of the value of serious leisure in that the benefits of serious leisure are linked to the amount of time invested in the activity and therefore the benefits of having a serious leisure activity may differ from day to day based on the level of engagement. To my knowledge this link with time spent engaging in an activity has not yet been investigated in relation to serious leisure pursuit.

### 7.1.3.2 Differential impacts of serious and casual leisure

By demonstrating that there are differing effects of serious leisure and casual leisure on resources and work performance, I have provided evidence for the differing outcomes associated with these two approaches to leisure. There is ongoing discussion within the leisure literature regarding the nature of serious leisure (e.g. Scott, 2012; Shen & Yarnal, 2010; Veal, 2016). In some descriptions of serious leisure, certain activities are described as being inherently serious (Stebbins, 2014). Other researchers have challenged this assumption and the implications of this approach to serious leisure. Qualitative researchers have demonstrated that activities, such as drinking and drug taking, which were categorized as casual (Stebbins, 1997) could display the characteristics associated with serious leisure (Shinew & Parry, 2005). By including a range of activities within my studies, I have demonstrated that the characteristics of serious leisure are experienced across many activities, and that activities may or may not be regarded as serious by an individual. Moreover, my studies showed that when individuals did not consider their activity to be a serious leisure activity they did not experience the same outcomes as individuals engaging in a serious leisure activity.

In this research casual leisure represents the activities that have not satisfied the criteria of serious leisure. Casual leisure time was associated with a decrease in proactive behaviour the following day. The results showing opposite effects of serious and casual leisure on work performance indicate that the meaning and future intentions behind an activity can be an important factor in the enrichment process. This may contribute to future studies examining recovery from work in addition to literature on enrichment. Mastery experiences, which involve learning new skills and broadening horizons, have been linked to positive activation (Sonnentag, Binnewies, & Mojza, 2008), joviality, self-assurance and serenity (Fritz, Sonnentag, Spector, & Mcinroe, 2010). However effect sizes have generally been small and the findings have been mixed (Kelly, Strauss, & Arnold, 2014). It may be that serious leisure promotes mastery experiences via its focus on development, but that mastery experiences are more potent in areas which are congruent with an individual's identity, such as serious leisure. This may explain why mastery experiences show intermittent links to resources as mastery experiences may not always be gained within a serious leisure context.

Research in the field of recovery tends not to examine identity in relation to non-work activities when testing the differential effects of activities on recovery. An exception to this is a study which investigated the influence of levels of intrinsic motivation towards non-work activities on recovery from work (ten Brummelhuis & Trougakos, 2013). Intrinsic motivation refers to "doing something because it is inherently interesting or enjoyable" (Ryan & Deci, 2000, p.55) and a feeling that "the locus of causality for their behavior [is] internal" (Edward & Ryan, 1985, p.34). The five day diary study found that

when an individual was intrinsically motivated to do an activity that they experienced activities as more recovering and less exhausting (ten Brummelhuis & Trougakos, 2013). In a similar vein, when an individual pursues a serious leisure activity they may experience more positive outcomes than when an activity is not of central importance to them.

## 7.2 Methodological Contributions

This thesis has provided two methodological contributions to the research on enrichment. It has expanded the methods used to examine enrichment by moving beyond participants' own perceptions and beliefs about the impact of one life domain (i.e. leisure) on another life domain (i.e. work). As discussed in Chapter 3, much of the research into enrichment relies on measures which ask simultaneously about the generation of resources and their application across domains, within one survey item (e.g. Carlson et al., 2006; Daniel & Sonnentag, 2014; Russo & Buonocore, 2012). These double-barrelled survey approaches make it difficult to disentangle whether a lack of enrichment is due to a lack of resource generation or a lack of application of resources across domains. As Greenhaus and Powell (2006) note when outlining their framework for enrichment, this survey approach is also less suitable for psychological and affective resources as individuals may not be consciously aware of the enrichment process occurring for these intangible resources. The approach I have used avoids this problem by separating the measurement of domain engagement, resources and work performance. In future a combination of approaches may be useful depending on the nature of the resources being examined. These could take into account the individual's perceptions of enrichment via enrichment scales as well as individual

measurement of resources and outcomes. Examples of enrichment which rely on social capital may only be possible with the conscious effort of an individual to draw on multiple domains and in these instances more traditional methods may continue to add value. Additionally an individual's belief or perception of enrichment may be an important mechanism in the enrichment process. Voydanoff (2005) and Maertz and Boyer (2010) argue that one of the limitations of enrichment may be an individual's awareness of the possibility of drawing on resources from one domain to apply in another. Similarly, Iwasaki and Mannell (2000) suggest that the belief in the positive effects of leisure beyond enjoyment is in itself a driver of benefits. In future these approaches may be combined to gain a picture of the dynamics of enrichment across time which incorporates individuals' perceptions of enrichment as a moderator between resources and work performance.

The second methodological contribution was the use of diary methods and multiple time scales to examine the temporal aspects of the enrichment process. Despite enrichment being a *process* of resource generation and application across domains the temporal dynamics of this process have been under theorized and under researched. Existing empirical research in this area implicitly assumes that enrichment is a constant process where the movement of resources from one domain to another can be identified at a certain level for each individual. However by using multiple time points within each study I have been able to demonstrate differences in the levels of enrichment depending on the changing levels of engagement in an activity (i.e. time spent in serious leisure) as well as changing patterns of enrichment depending on the time scale examined (i.e. individual episodes versus habitual engagement).

This thesis has demonstrated the theoretical and empirical challenges and opportunities inherent in examining similar processes over differing time scales.

## 7.3 Future Research

Avenues for future research have been alluded to throughout the thesis, including the discussion of theoretical contributions above. In this section I will focus on a number of the most promising directions for research which will build on the findings presented here to further illuminate the work-life interface, particularly with reference to the domain of leisure.

Research on work-life interface has generally focused on leisure as a homogenous domain, juxtaposed with family and work. Through the distinctions between serious and casual leisure this research demonstrates that leisure is not a homogenous domain and the meaning and intent attached to a leisure activity can influence how enrichment occurs. This approach may be expanded into research on other aspects of work and non-work to take into account how enrichment may be affected by these characteristics of roles within other domains. In the area of work-family conflict, the nature of family obligations may impact on episodes of conflict. For example, caring for children may be more likely to generate both enriching and depleting experiences in comparison to caring for elderly relatives. Caring for children is likely to be future focused in that parents can focus on their child becoming a happy independent adult, and developmental in that both children and parents are learning useful skills during this time (Ruderman et al., 2002). In contrast, caring for elderly relatives is likely to be more taxing as there is less likelihood of a positive future outcome for those with chronic illness, and there is likely

to be identity incongruity when an adult child becomes a carer for their parents. This area has been touched on by Lilius (2012) in relation to the balance of resources generated and depleted for paid carers, but has not been investigated in relation to work-life interface (see Ingersoll-dayton, Neal, & Hammer, 2001 for an exception).

### 7.3.1 Alternative Resources for Enrichment

In this thesis I focused on psychological and affective resources due to the theoretical links between the activities needed to develop these resources and serious leisure activities. However, Greenhaus and Powell (2006) suggest a broader range of resources which may be produced from role engagement including skills and perspectives, social capital and material resources. In Study 2, I found that time spent in habitual leisure was positively related to task proficiency, but not to psychological or affective resources. It may be that there are alternative resources which are being called on from the leisure domain, such as skills and perspectives (see discussion on the development of promotion focus below). Resources such as social capital and material resources are likely to be better investigated with a between-person approach as they are likely to be more sporadic in their transfer between domains than experiences which prompt self-efficacy or skill usage. For example an academic may use his or her contacts within a leisure activity to find organisations which are interested in being part of future data collection. However this is not likely to happen in a way that is either practically or theoretically interesting as a within-person phenomenon.

### 7.3.2 Casual leisure

The results of this thesis highlighted some interesting links between time spent in casual leisure and work performance. Time spent in casual leisure appeared to have a negative effect on proactive behaviour the following day. Casual leisure as a phenomenon is under researched, even within the field of leisure (Akyıldız Munusturlar & Argan, 2016; Stebbins, 1997). For this reason casual leisure is undertheorized and predominantly viewed as a foil for serious leisure activities, which in effect makes it "all leisure falling outside the realm of serious leisure" (Stebbins, 1997, p16). The main focus of this thesis was the process of enrichment relating to engagement in serious leisure, and as such, I too focused on this "residual" characterisation of casual leisure (Stebbins, 1997, p16). However, the category of non-serious leisure may have more complexity than is evident in a single category. The positive outcomes that have been suggested as motivations for casual leisure, "pursuit regeneration, social attraction, and self-enrichment", were not evident in my studies of leisure engagement. When viewed as a foil to serious leisure, casual leisure activities can include activities that are extrinsically motivated. Participants in a study of gym use reported that they felt under pressure to work out in order to fit both the cultural and bodily expectations of their professions (Stewart et al., 2012). There may be distinctions between forms of casual leisure which are focused on purely hedonic experiences, which is the more traditional conceptualisation of casual leisure, and those which have an instrumental focus, such as the gym example above. Investigating these possibilities would also help to sharpen the distinction between casual leisure and serious leisure, which some researchers have suggested may benefit from a stronger focus on

the identity centrality of serious leisure verses casual leisure (Jones, 2000; Veal, 2016).

Casual leisure activities may also be pursued in place of preferred activities due to barriers in engaging with a preferred activity. Such barriers that have been noted in the leisure literature including financial (Jun & Kyle, 2011), physical (Siddiqi, Tiro, & Shuval, 2011) , and time constraints (Borodulin et al., 2016). There may be a detrimental effect of trying to substitute less fulfilling activities as a result of these barriers. This was found to be the case in a study examining callings which found that individuals compensated for missed callings by crafting scenarios where they could pursue elements of the missed callings. This resulted in feelings of disappointment as it reminded participants that they could not fully pursue their preferred activity (Berg et al., 2010). This substitution effect was recently reported with regards to food replacements. Researchers found that when individuals were offered a substitute for their preferred snack they were less satisfied when that snack was similar to their original choice than when it was a completely different type of snack (Huh, Vosgerau, & Morewedge, 2016). Similarly, the influence of casual leisure may differ between those individuals who have a serious leisure activity and those who do not. The influence of casual leisure on resources and well-being may be more negative for individuals who have a serious leisure activity that they are unable to pursue than individuals who do not have a serious leisure activity at all. Pursuing these avenues of investigation would provide a more complete view of the nuances of individuals' patterns of participation and the resulting effects on other domains such as work and family.

### 7.3.3 Individual differences

The way in which resources are created and transferred from one domain to another may be affected by certain individual differences.

Self-regulatory traits, i.e. promotion and prevention focus, have been shown to moderate between work role engagement and resulting levels of enrichment and conflict in the work-family interface (Chen & Powell, 2012). A promotion focus motivates individuals to move towards desired outcomes and be focused on potential gains rather than losses, whereas a prevention focus makes individuals vigilant against losses (Brockner & Higgins, 2001). Promotion focused individuals have been found to gain more resources from engagement with their work activity which led to higher levels of work-family enrichment (Chen & Powell, 2012). Similarly, individuals who are promotion focused may be more motivated to gain and apply new resources from their serious leisure activity and apply them within the work context. In keeping with the recent trend to consider within-person fluctuations in trait-level variables (e.g. Debusscher, Hofmans, & De Fruyt, 2016), it may also be informative to examine whether engaging in serious leisure can prompt a promotion focused state. Berg, Grant and Johnson (2010) suggest that when individuals experience positive activities in their leisure time which relate to their callings that this will trigger promotion focused states in those individuals. The authors suggest that this promotion focused state then leads to proactive efforts to pursue the additional calling.

There is the potential for individuals who are self-critical (SC) perfectionists to experience negative outcomes as a result of their time in serious leisure. Serious leisure activities are likely to contain elements of

performance or achievement as a result of their developmental aspects. For example, in amateur dramatics an individual may be required to audition for roles, leading to varying levels of success. In a sample of students, "SC perfectionists were [found to be] emotionally reactive to stressors that imply possible failure, loss of control, and criticism from others". This led to lower levels of positive affect (Dunkley, Zuroff, & Blankstein, 2003). Additionally, academics who were SC perfectionists were found to suffer from higher levels of fatigue, emotional exhaustion, and anxiety as a result of achievement-related stressors. The lack of evidence for an affective enrichment pathway in Study 1 and 2 of this thesis may be due to differential effects of serious leisure time on participants with varying levels of self-critical perfectionism. Future research could investigate whether individuals consider their serious leisure to be an "achievement related event" (Dunkley et al., 2003 p.237) and whether this results in negative outcomes for those individuals who are also self-critically perfectionist.

## 7.4 Practical Implications

This thesis speaks to issues of work-life balance, well-being and sustainable productivity of employees. Traditional boundaries between work and life are being increasingly challenged by social and technological changes. For example, the use of smartphones allows work to directly influence individuals' home lives (Boswell & Olson-Buchanan, 2007) and recovery opportunities (Derks, ten Brummelhuis, Zecic, & Bakker, 2012). There is also a blurring of boundaries around what constitutes work and leisure, particularly in creative industries (Banks, 2009). These changes present opportunities and challenges for employees, as well as organisations. There is an opportunity to

rethink the structure of work for many employees whose tasks are not geographically or temporally constrained. These employees can feasibly carry out their roles at different times and locations and still fulfil the aims of the organisation. Many organisations are considering, or are already implementing, flexible working arrangements. In the UK, for example, it is a statutory right for employees to have requests for flexible working arrangements considered by their organisations ("Flexible working," 2016), although employers are not obliged to fulfil these requests. Given the changing priorities of newer generations of workers towards a more balanced life (Twenge et al., 2010) flexible working represents an opportunity for organisations to attract and maintain talented workers with essential skills (Deery, 2008).

The challenge for organisations lies in how they should approach and implement these changes. Organisations have tended to be relatively conservative in relation to changing working arrangements. Flexible working arrangements have in the past been encouraged only for certain types of employee, often parents, sometimes specifically just mothers (Mescher, Benschop, & Doorewaard, 2010). Should organisations wish to extend the usage of flexible working there is limited evidence for managers to draw on when attempting to manage this change. The findings of this thesis can help to provide some clarity around the potential organisational impacts of providing time and space for employees to pursue leisure activities. This information is complementary to the existing literature around family supportive organisational practices (e.g. Kossek, Lewis, & Hammer, 2010; Matthews & Toumbeva, 2015). The following sections discuss the practical implications in more detail.

### 7.4.1 Short term and long term approaches to increased performance

The episodic daily effects of serious leisure on psychological resources and work performance demonstrate the value of each opportunity an individual has to engage in their chosen activity. As a within-person effect is based upon deviations from an individual's average this finding suggests that at times when an organisation is particularly interested in boosting daily work performance they would facilitate their employees not just to spend time in their serious leisure activities, but to spend *even more time than usual* on them. Performance benefits were also observed for those individuals who spent more time in their serious leisure over the course of a month. This means that in months where individuals spent more time than usual on their serious leisure they also reported higher performance. This finding supports the benefits of providing ample opportunity for individuals to engage in meaningful leisure activities.  Many organisations request increased time commitments at key performance moments for the organisation and therefore this may be a culturally challenging change to implement. However, interventions which facilitate employees to "play hard" as well as work hard may find that their employees are better equipped to perform at those key moments.

The findings also indicate that individuals who have serious leisure activities which are similar to their work role are generally happier at work. These findings indicate that organisations may find it useful to consider the outside interests of individuals during the recruitment, as their serious leisure activities may be indicative of their fit with their work role, particularly in terms of the types of skills and abilities they enjoy using and the level of challenge or demands within the role. Similarities on these dimensions were

related to the levels of positive affect and vigor in my studies. Fit along these dimensions may also signal that potential recruits will enjoy their time spent at the organisation. This would have benefits for the organisation as well as the employee. For example, employee happiness and satisfaction have been associated with a wide variety of positive work outcomes such as increased performance (Wright & Cropanzano, 2000) , innovative work behaviour (Madrid & Patterson, 2014) and career success (Boehm & Lyubomirsky, 2008).

While Study 1 and 2 indicated that having a serious leisure activity which is similar to one's work role is associated with higher positive affective resources in general, there were also indications of benefits associated with lower levels of similarity. Although, individuals with lower levels of similarity between their work and leisure experienced less general positive affect than others, I also found the *time they spent* in the activity resulted in greater benefits to them than to others with higher similarity. The relationship between the amount of time spent in habitual serious leisure and self-efficacy and resilience was moderated by similarity, such that lower levels of similarity resulted in higher gains in resources.  Based on these findings, serious leisure may also offer a way to support the well-being of individuals who are already employed in an organisation but have low fit with their roles. Habitual serious leisure which is different from work roles may compensate for a mismatch between desired skill usage, or levels of mental or physical demands. Therefore for this group of individuals it may be particularly important to facilitate the flexibility for them to pursue their leisure activities for the longer term resource benefits they will gain from this.

### 7.4.2 Building supportive supervision

The findings from this thesis may help to lay foundations for more supportive supervision particularly with regards to flexible working and an appreciation of the role that non-work activities can play in influencing work performance. In contexts where supervisors may view employees who demonstrate anything other than total commitment to a work role as non-ideal workers (Reid, 2015) it may be useful to consider the benefits of improving access to non-work activities. According to Kossek et al. (2010, p.3) "In order to advance the field, organisations and scholars need to frame both structural and cultural work–life changes as part of the core employment systems to enhance organisational effectiveness and not just as strategies to support disadvantaged, non-ideal workers". This thesis supports this case and shows the implications for organisational effectiveness resulting from of time spent in non-organisational activities. As a result of improved and more pluralised access to work-life balance there may be positive impacts on those who have experienced the stigma and negative career impacts of openly attempting to improve their work-life balance (Reid, 2015).

### 7.4.3 Caveats for organisations: Interventions and inequality

There are a number of caveats in terms of the practical implications of this thesis. The positive associations between serious leisure and performance may appear to provide the basis for potential organisational intervention around serious leisure. However, it is not a given that encouraging employees to take up a serious leisure activity will result in the same outcomes reported here. The links between serious leisure and self or identity mean that the sense of seriousness of a leisure activity develops naturally from the self-concept of

the individual. Therefore organisations encouraging employees to "find" a serious leisure activity may be experienced as a form of controlled motivation (Ryan & Deci, 1985) and potentially have negative consequences for employees and organisations (Grant, Nurmohamed, Ashford, & Dekas, 2011; Nix, Ryan, Manly, & Deci, 1999). Therefore at this point the practical steps which organisations can take may be limited to facilitating existing serious leisure pursuits or removing barriers to individuals exploring potential serious leisure pursuits. Future intervention studies may clarify the extent to which organisations can effectively play an active role in this area, while preserving the autonomy of their employees.

A final caveat around the facilitation of leisure for the promotion of performance is the potential for the facilitation of serious leisure to further disadvantage women in the workplace. There is a documented difference in the amount of time men and women engage in leisure activities (Sayer, 2016). Primary responsibility for childcare and household management remains with women, regardless of their employment status (Bianchi, Sayer, Milkie, & Robinson, 2012) reducing time available to pursue leisure activities of any kind. Additionally research has shown that women feel less entitled to leisure time than men (Henderson & Dialeschki, 1991), which represents a barrier for their engagement in serious leisure. Therefore performance gains resulting from increased engagement in serious leisure may be unequally distributed and may exacerbate gender inequality in the workplace. Additionally if organisations communicate a preference for active and intensive engagement in a leisure activity it may create normative pressure for individuals to portray

themselves as having a serious leisure activity, creating further strain on work-life balance.

Finally, the practical implications of the findings of this thesis are primarily based on within-person findings and focused on those individuals who already have a serious leisure activity. Organisations should bear in mind the distinctions between "having" a serious leisure activity and spending time in it. Therefore the effects of time spent in leisure activities may be different for individuals whose leisure plays a less central role in their life.

## 7.5 Limitations

The conclusions and contributions of the studies are presented here with acknowledgment of certain limitations. The limitations which are specific to the individual studies, such as the number of measurement points and issues around common method bias, have been discussed in the closing sections of the empirical chapters. In this section I will discuss limitations which arise in both studies and are relevant to study of leisure and work more generally.

### 7.5.1 Limitations in testing the affective pathway

Given that serious leisure was linked to some resources such as self-efficacy and resilience, indicating its influence more broadly on an individual's life, it was surprising that no relationship was found with affect-related variables in either the episodic or habitual serious leisure studies. Leisure is traditionally considered as a domain where activities are engaged in primarily for fun and enjoyment, and while serious leisure is more focused on eudaimonic rather than hedonic satisfaction, it is still expected to be associated with enjoyable activities. From this I hypothesized that a likely outcome of a meaningful leisure activity would be enduring positive mood, certainly

sufficient to spill over to the next working day, and/or that spending more time in an active meaningful activity would result in more energetic feelings throughout the month. However neither of these effects were identified in my data. There are two potential reasons for this. It may be that positive feelings related to serious leisure are extremely short lived and their effects are extinguished by the next morning. Alternatively it may be that serious leisure is in fact not associated with positive mood. The latter alternative is less likely as previous research, using experience sampling methods, did find a positive relationship between engaging in a serious leisure activity and concurrent positive affect (Heo et al., 2010). Mojza et al., (2011) found that volunteer work had a stronger effect on reducing negative affect the following day than promoting positive affect. Future investigations of the leisure-work interface may benefit from a closer focus on the pattern of affective responses to serious leisure, including measuring emotions during the activity, after the activity is complete and during the following work day to disentangle these affects. Such an approach could also take into account the different levels of arousal and valence of affect as suggested in the circumplex (Russel, 1980) and four quadrant models of emotion (Warr, Bindl, Parker, & Inceoglu, 2013).

### 7.5.2 Time as an independent variable

For both studies the hypothesised causal process was from time spent in an activity to resources and work performance. Measuring engagement in a serious leisure role using the amount of time provides an easily understood and recorded approach to this variable. Measures of the amount of time spent in a role or activity are relatively common in studies of non-work activities in relation to recovery, and as such this approach allows for comparison with

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these studies, particularly in relation to changes in resources (e.g. Bakker, Demerouti, Oerlemans, & Sonnentag, 2013; Feuerhahn, Sonnentag, & Woll, 2012; Mojza et al., 2011; Winwood et al., 2007). However this may not capture the full extent of engagement in the activity or provide the most meaningful measure of variability of leisure activity engagement for individuals. Within the work-family literature other measures of role engagement have been used as a starting point of the processes of enrichment and conflict, such as attention and absorption (Rothbard, 2001). Time as a measure may therefore offer a useful, but limited, amount of information regarding the impacts of pursuing a serious leisure activity.

### 7.5.3 Serious leisure as an "ideal type"

I have conceptualised serious leisure as an "ideal type" (Weber, 1949). There are some arguments that it would be more fruitfully examined as a continuum between serious and casual (Shen & Yarnal, 2010). Research using cluster analysis has revealed three categories, rather than the two used in the current research, in relation to the distribution of serious leisure characteristics (Kim et al., 2011), with the largest cluster relating to serious leisure as it is examined in this thesis. Future research on the interaction between serious leisure and work may benefit from increased breakdown of the category of casual leisure to reflect the two remaining categories identified in Kim et al.'s analysis. The use of full measures of the individual characteristics of serious leisure (e.g. Gould et al., 2008) would also provide more fine grained analysis of the relationships between engagement in serious leisure and work via the use of path analysis and structural equation modelling.

### 7.5.4 Recall strategies for daily and monthly experiences

One contribution of this thesis is the comparison between the impact of episodic and habitual serious leisure. However due to the longer recall time required for habitual leisure (one month) than episodic leisure (one day) there may be differences in the strategies participants used to recall information about their leisure participation, as well as the other variables within the studies. When recalling past events individuals can choose between aggregating each individual incidence of relevance or employing semantic knowledge, such as beliefs about the subject, to support gaps in their memory and reduce the cognitive load of the task (Robinson & Clore, 2002). It is possible that some of the differences between the two studies are due to this different processing of the time scales. In order to mitigate this, I included a number of prompts in the introduction to the relevant sections of the survey, instructing participants to reflect back on their experiences of the past month, before the questions were presented. This approach has been shown to produce similar results to experience sampling, where individuals provide immediate ratings of variables, and day reconstruction, where individuals reflect back on their experience at the end of the day (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004).

### 7.5.6 Generalisability

The online method of survey distribution and data collection, in both studies, resulted in a sample that was limited to participants with access to a computer or smartphone. However 76% of adults in the UK now have access to smartphones, with the numbers ranging from 90% in the youngest working cohorts to 50% in the oldest working age bracket (Deloitte, 2015) so the

influence of online survey distribution is less than it may have been in previous years. Additionally there was a reasonable range of ages and occupations within the sample, although the average income was higher than the population average for the UK at £27,600 (Office for National Statistics, 2015). Therefore it should be borne in mind that the results may not generalize to people without access to the internet or those on lower incomes.

## 7.6 Conclusion

This thesis has thrown light on the leisure domain as an influential non-work domain, which has the potential to provide important resources for work performance. It has applied new methods to examine the process of enrichment and thus provided a step towards a new way of examining both enrichment and conflict for all non-work domains, including family. In this thesis I tested a model of the serious leisure work interface which covered both resource generation as well as the enrichment process (i.e. the transfer and application of resources from one domain to another). By taking this end to end process, from resource generation in the originating domain, to resource transfer and application in the target domain, my studies provided information not only about the positive and some negative aspects of serious leisure, but also about the context under which these resources may be applied within the workplace to promote performance. Finally, I have compared the process of episodic and habitual serious leisure to work enrichment to gain insight into the different time scales involved in the enrichment process. Given the increasing importance of the leisure domain to younger generations of workers (Twenge et al., 2010) it is likely that this area of research will only increase in relevance

over time. This thesis represents a step towards a fuller understanding of

leisure's role in work-life interface.

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# Appendices

## 1. Study 1 & 2 Information Sheet

# The University Of Sheffield.

## Balancing work and leisure;

## An uphill struggle or a walk in the park?

Do your leisure activities influence how you feel, how you see yourself and how you experience your work? If you share our curiosity for these questions then we would like to invite you to take part in a University of Sheffield research project, which aims to better understand how work and leisure interact.

### What's the purpose of the project?

When organisations consider work/life balance they often don't consider people's leisure activities. We would like to redress this balance by finding out how your leisure activities influence your work. We will examine the effects of leisure on your psychological resources (mood, confidence, resilience, etc.) over time.

The results of our project will help you make better decisions about how to balance your time and energy between work and leisure activities. The ultimate aim of the project is to enhance people's overall sense of well being and ability to do the things they find most meaningful and rewarding.

Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

### What will I be asked to do if I take part?

The project involves two separate studies. If you choose to take part you will only be asked to participate in one of these. You will find out which one you have been assigned before you get your first survey.

By allocating our participants to groups in this way we increase the reliability of our results and any recommendations based on the findings. See below for a description of the individual studies

- 2-week daily mini-survey

You will be asked to fill out an initial survey that will take no more than 30mins and then a 5 minute mini-survey at the beginning and end of each working day for two weeks. The mini-survey allows us to take a snap-shot of your experiences to form a picture of the day-to-day experiences which influence your work and well being.

- Monthly survey study for 6 months.

Monthly surveys provide information about whether your leisure habits influence your work over time. Usefully, this allows us to detect changes in feelings and behaviours which are not immediately obvious, as they develop slowly over time.
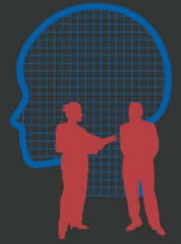
## Institute of Work Psychology

To register as a participant follow this link

**http://bit.ly/1pFe40N**

Or email:

**c.kelly@sheffield.ac.uk**

**The University Of Sheffield.**

## What are the benefits of taking part?

You will have access to the overall research findings and be entered into a prize draw for a £50 voucher for Foothills Walking Specialists*. As a thank you for being a part of our project you will also get an exclusive 20% discount voucher for Foothills, who specialise in Paramo, Scarpa and Rohan, amongst other outdoor products.

Your contribution to the research will benefit society by helping employers to more effectively support their employees' well being and development.

## Who is eligible to take part in this research?

Anyone who works full time and has access to their emails during the working day is invited to take part in this research.

## Are there any risks involved?

There are no major risks attached to taking part in this project. If you participate in the 2 week mini surveys of study 1, you will be asked to take five minutes out of your work day to complete each survey. We have kept these surveys short in order to help you fit them in to your schedule with as little inconvenience as possible.

## What will happen to my information?

Your information will be kept confidential at all times. We will contact you using the email address you provide. Our results rely on combining all of our participants responses to find patterns in how leisure influences work. No individual participants information will be identifiable to anyone outside the research team.

## Do I have to take part?

It's totally up to you. If you do choose to take part you can withdraw at any time. You do not have to give a reason. If you do let us know that you are withdrawing from the study we will not use the information you have already provided.

## What if I have any questions?

If you have any questions, problems, or suggestions we encourage you to get in touch. The main point of contact for the research is Ciara Kelly (c.kelly@shef.ac.uk).

# Register now by following the link:

# http://bit.ly/1pFe40N

## Or email c.kelly@sheffield.ac.uk

### and feel free to share this information sheet with a friend!

*Eligibility for the prize draw is based on full participation in the study. The draw will take place when the study is complete.

**Meet the research team!**

Ciara Kelly BA MSc MBPsS

Dr. Karoline Strauss

Prof John Arnold

## 2. Study 1 Episodic Serious Leisure; Participant Instructions and Initial Survey Thank You

Thanks for completing the general survey. The research team, and I, can now busy ourselves with making your personalised snap-shot surveys.

**Instructions for the rest of the study**
http://youtu.be/m2GQUjzeDCE or see below

From Monday you will receive two short surveys per day. We would like you to complete the first survey of the day before you begin your work in the morning, and the second when you finish your work at the end of the day.
The timing of the surveys is important so we appreciate every effort you can make to fill them in at these times.

We do understand that sometimes life can get in the way so if you miss a morning or an evening survey then move on to the next survey and complete it at the correct time.

**If you are very busy on any of the days then please try and continue with the surveys. If we miss out on everyone's difficult days our results may look far more positive than real life really is!**

Thanks again for taking part, we couldn't do this without the effort of each one of our participants and it is very much appreciated. If you have any questions or suggestions don't hesitate to get in touch.

Kind Regards
Ciara

# 3. Study 1 Episodic Serious Leisure; Morning Invite Emails

## Monday Morning
Monday morning, it always seems to come too soon!

But for a few minutes before you start your day (around 5-7 to be exact) you get to relive your Sunday, and tell us how you're feeling this morning, in the first snap shot survey.
**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}
Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

## Tuesday Morning
Good morning,

Do let us know what you got up to yesterday evening by filling in your second diary snap shot.
Now that you are familiar with the survey it should be even quicker to fill out than before.
**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

## Wednesday Morning
Morning,

It's Wednesday, aka "hump day", and what that means is we are motoring through the week (and through the study).
If you could fill this in before you begin work or as close to the beginning of your work day as possible that would be perfect.
**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

## Thursday Morning
Morning,

Before this morning's survey I thought it would be useful to mention why the same questions appear in the surveys each day (if this hasn't been a burning question on your mind feel free to go straight to the survey link).

It may feel a little like Groundhog day, but because we are looking at patterns in the way people feel and act over time, we need to be able to compare these feelings and behaviours from one day to the next.

Your answers may be very similar from day to day, or very different, depending on your circumstances and characteristics.
This is why it's important to fill in each survey at the right time and preferably not miss out on any.

So thank you for your commitment, without it researching these questions would not be possible.

**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}


## Friday Morning

Morning,

If you're anything like me, you're a little surprised that it's Friday.
It's hard to believe we've done a whole week already. I guess time flies when you're tracking your every non-work activity (I'm pretty sure that's how that saying goes....)
It also means that this is your last morning snap shot this week!

**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}
Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

## 4. Study 1 Episodic Serious Leisure: Initial Survey



Balancing Work and Leisure  Welcome to the project. We are delighted to have you on board!  "Remind me what I signed up for again?"  In this first survey we are asking you about your life, work and leisure in general. This background information will help us make sense of your daily experiences. Because this is a once off, general survey it is the longest one we will send you. But before you despair, it still takes less than 20 mins to complete.  This survey contains questions about your mood and well being. If your answers to these questions cause you to be concerned then we recommend you discuss this with your doctor.  If you have any questions or issues you may contact Ciara Kelly at c.kelly@sheffield.ac.uk.  This research is being supervised by Dr Karoline Strauss and Prof John Arnold.

Informed Consent By ticking the box you confirm that

❑ You have read and understand the information sheet (included in your welcome email). You have had the opportunity to consider the information, ask questions of a member of the research team and have had these answered satisfactorily. You understand that your participation is voluntary and that you are free to withdraw at any time without giving any reason. You understand that no individual will be identified, all data will be held securely and all responses will remain confidential.  You understand that that your information will be held and processed for the following purposes: to be analysed by the researcher for the purposes of completing their PhD research and, where relevant, for the writing of associated academic journal articles.  You agree to take part in the study

We are interested in the kinds of activities you regularly engage in outside of work. Please enter up to three leisure activities that you take part in most frequently, in the boxes below. These can include any activity that you freely choose to engage in, to pass the time outside of work. They do not necessarily need to be active or formal, organised activities.

Activity 1
Activity 2
Activity 3

How long have you been pursuing these activities?

| | Please respond with numbers rather than words (i.e. type "3" rather than "three") | |
|---|---|---|
| | Years | Months |
| ${q://QID2/ChoiceTextEntryValue/1} | | |
| ${q://QID2/ChoiceTextEntryValue/2} | | |
| ${q://QID2/ChoiceTextEntryValue/3} | | |

People have many reasons for taking part in leisure activities. We will ask you a number of questions about these different motivations in the following section.

This first question is particularly focused on four characteristics of leisure experiences. We would like to know, out of these four options, which one is the most important reason to you, for engaging in that particular activity. You may consider going to the gym with a friend both physical and social, but if the main reason you choose to do this activity is to exercise then you would include it in the physical activity category. If you choose to do an activity because it doesn't require effort or energy tick the "low effort" option.

| | It is low effort | It is social | It is physical | It benefits others |
|---|---|---|---|---|
| Activity 1 ${q://QID2/ChoiceTextEntryValue/1} | ○ | ○ | ○ | ○ |
| Activity 2 ${q://QID2/ChoiceTextEntryValue/2} | ○ | ○ | ○ | ○ |
| ${q://QID2/ChoiceTextEntryValue/3} | ○ | ○ | ○ | ○ |

The following questions ask how you feel about Activity 1, ${q://QID2/ChoiceTextEntryValue/1}.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| ${q://QID2/ChoiceTextEntryValue/1} is very important in describing who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I intend to become accomplished in this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I regularly train for this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe I have the potential to be good at ${q://QID2/ChoiceTextEntryValue/1}. | ❍ | ❍ | ❍ | ❍ | ❍ |

To what extent do you agree with the following statements. I engage in ${q://QID2/ChoiceTextEntryValue/1}, as a leisure activity ...

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Because I find this activity interesting. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I find it engaging. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because it's fun. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I believe this activity is valuable. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I value this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because my goals in ${q://QID2/ChoiceTextEntryValue/1} fit with my broader life goals. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because ${q://QID2/ChoiceTextEntryValue/1} is a big part of who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because this activity helps to define me. | ❍ | ❍ | ❍ | ❍ | ❍ |

Comparing your work activities with ${q://QID2/ChoiceTextEntryValue/1}, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| My work tasks are similar to the activities I do while ${q://QID2/ChoiceTextEntryValue/1}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I require similar skills and abilities to be successful in my job and ${q://QID2/ChoiceTextEntryValue/1}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| The mental demands of ${q://QID2/ChoiceTextEntryValue/1} are similar to my work role. | ❍ | ❍ | ❍ | ❍ | ❍ |
| The physical demands of this activity are like those of my work role. | ❍ | ❍ | ❍ | ❍ | ❍ |

The following questions ask how you feel about Activity 2, ${q://QID2/ChoiceTextEntryValue/2}.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| ${q://QID2/ChoiceTextEntryValue/2} is very important in describing who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I intend to become accomplished in this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I regularly train for ${q://QID2/ChoiceTextEntryValue/2}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe I have the potential to be good at this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |

To what extent do you agree with the following statements. I engage in ${q://QID2/ChoiceTextEntryValue/2}, as a leisure activity ...

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Because I find ${q://QID2/ChoiceTextEntryValue/2} interesting. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I find it engaging. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because it's fun. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I believe this activity is valuable. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I value this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because my goals in ${q://QID2/ChoiceTextEntryValue/2} fit with my broader life goals. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because ${q://QID2/ChoiceTextEntryValue/2} is a big part of who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because this activity helps to define me. | ❍ | ❍ | ❍ | ❍ | ❍ |

Comparing your work role and your experiences during ${q://QID2/ChoiceTextEntryValue/2}, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| My work tasks are similar to the activities I do while ${q://QID2/ChoiceTextEntryValue/2}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I require similar skills and abilities to be successful in my job and ${q://QID2/ChoiceTextEntryValue/2}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| The mental demands of ${q://QID2/ChoiceTextEntryValue/2} are similar to my work role. | ❍ | ❍ | ❍ | ❍ | ❍ |
| The physical demands of this activity are like those of my work role. | ❍ | ❍ | ❍ | ❍ | ❍ |

The following questions ask how you feel about Activity 3, ${q://QID2/ChoiceTextEntryValue/3}.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| This activity is very important in describing who I am. | ○ | ○ | ○ | ○ | ○ |
| I intend to become accomplished in this activity. | ○ | ○ | ○ | ○ | ○ |
| I regularly train for this activity. | ○ | ○ | ○ | ○ | ○ |
| I believe I have the potential to be good at this activity. | ○ | ○ | ○ | ○ | ○ |

The next questions are about your work life.

What is your current employment status:

○ Employed
○ Self Employed
○ Unemployed
○ Retired
○ Student
○ Homemaker

What is your current occupation?

Please give a brief description of your specific job role:

How long have you been in your current job role?

Years
Months


Please enter the time you formally start your workday. If you have a flexible work schedule please indicate the average time you would start work (Drop down menu).

○ 00:00
○ 01:00
○ 02:00
○ 03:00
○ 04:00
○ 05:00
○ 06:00
○ 07:00
○ 08:00
○ 09:00
○ 10:00
○ 11:00
○ 12:00
○ 13:00
○ 14:00
○ 15:00
○ 16:00
○ 17:00
○ 18:00
○ 19:00
○ 20:00
○ 21:00
○ 22:00
○ 23:00

Please enter the time you formally finish your workday (not including unpaid overtime). If you have a flexible work schedule please indicate the average time you would finish work (Drop down menu).

- ❍ 12:00
- ❍ 13:00
- ❍ 14:00
- ❍ 15:00
- ❍ 16:00
- ❍ 17:00
- ❍ 18:00
- ❍ 19:00
- ❍ 20:00
- ❍ 21:00
- ❍ 22:00
- ❍ 23:00
- ❍ 00:00
- ❍ 01:00
- ❍ 02:00
- ❍ 03:00
- ❍ 04:00
- ❍ 05:00
- ❍ 06:00
- ❍ 07:00
- ❍ 08:00
- ❍ 09:00
- ❍ 10:00
- ❍ 11:00

How many hours per week are you contracted to work?

To what extent do you agree with the following statements about your work:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| My job allows me to make decisions about what methods I use to complete my work. | ○ | ○ | ○ | ○ | ○ |
| My job gives me considerable opporutnity for independence and freedom in how I do the work. | ○ | ○ | ○ | ○ | ○ |
| My job allows me to decide on my own how to go about doing my work. | ○ | ○ | ○ | ○ | ○ |
| I feel emotionally drained from my work. | ○ | ○ | ○ | ○ | ○ |
| I feel used up at the end of the workday. | ○ | ○ | ○ | ○ | ○ |
| I feel tired when I get up in the morning and have to face another day on the job. | ○ | ○ | ○ | ○ | ○ |
| Working all day is really a strain for me. | ○ | ○ | ○ | ○ | ○ |
| I feel burned out from my work. | ○ | ○ | ○ | ○ | ○ |

When thinking about the organisation you currently work for, to what extent would you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I would be very happy to spend the rest of my career with this organisation | ❍ | ❍ | ❍ | ❍ | ❍ |
| I really feel as if this organisations problems are my own | ❍ | ❍ | ❍ | ❍ | ❍ |
| I do not feel a strong sense of belonging to my organisation | ❍ | ❍ | ❍ | ❍ | ❍ |
| I do not feel emotionally attached to this organisation | ❍ | ❍ | ❍ | ❍ | ❍ |
| I do not feel like "part of the family" at my organisation | ❍ | ❍ | ❍ | ❍ | ❍ |

When thinking about how you go about your work, in general, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| In general I help others who have been absent | ❍ | ❍ | ❍ | ❍ | ❍ |
| I help others who have heavy workloads. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I take time to listen to co-workers' problems and worries. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I take a personal interest in other employees. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I pass along information to co-workers. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I carry out the core parts of my job well. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I complete my core tasks well using the standard procedures. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I ensure my tasks are completed properly | ❍ | ❍ | ❍ | ❍ | ❍ |

The next questions are about yourself and your life more generally.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I see myself as someone who is primarily striving to reach my "ideal self"- to fulfill my hopes, wishes, and aspirations | ❍ | ❍ | ❍ | ❍ | ❍ |
| In general, I am focused on achieving positive outcomes in my life | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often imagine myself experiencing good things that I hope will happen to me. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Overall, I am more oriented toward achieving success than preventing failure. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I frequently imagine how I will achieve my hopes and aspirations | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often think about the person I would ideally like to be in the future | ❍ | ❍ | ❍ | ❍ | ❍ |
| I typically focus on the success I hope to achieve in the future | ❍ | ❍ | ❍ | ❍ | ❍ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| In general I am focused on preventing negative events in my life | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am anxious that I will fall short of my responsibilities and obligations | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often think about the person I am afraid I might become in the future | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often imagine myself experienceing bad things that I fear might happen to me | ❍ | ❍ | ❍ | ❍ | ❍ |
| I frequently think about how I can prevent failures in my life | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am more oriented toward preventing losses than I am towards achieving gains | ❍ | ❍ | ❍ | ❍ | ❍ |
| I see myself as someone who is primarily striving to become the self I "ought" to be- to fulfil my duties, responsibilities, and obligations | ❍ | ❍ | ❍ | ❍ | ❍ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I actively attack problems. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Whenever something goes wrong, I search for a solution immediately. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Whenever there is a chance to get actively involved, I take it. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I take initiative immediately even when others don't. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I use opportunities quickly in order to attain my goals. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Usually I do more than I am asked to do. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am particularly good at realizing ideas. | ❍ | ❍ | ❍ | ❍ | ❍ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I will be able to achieve most of the goals that I have set for myself. | ❍ | ❍ | ❍ | ❍ | ❍ |
| When facing difficult tasks, I am certain that I will accomplish them. | ❍ | ❍ | ❍ | ❍ | ❍ |
| In general, I think that I can obtain outcomes that are important to me. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe I can succeed at most any endeavor to which I set my mind. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I will be able to successfully overcome many challenges. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am confident that I can perform effectively on many different tasks. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Compared to other people, I can do most tasks very well. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Even when things are tough, I can perform quite well. | ❍ | ❍ | ❍ | ❍ | ❍ |

The following question contains a list of descriptions of moods and emotions. While our moods can change as a result of things that are happening around us we also have a general tendency towards certain moods. We are interested in these general moods. So for the following list of emotions please indicate to what extent you generally feel this way, that is, how you feel on average:

| | Very slightly or not at all | A little | Moderately | Quite a bit | Extremely |
|---|---|---|---|---|---|
| Enthusiastic | ○ | ○ | ○ | ○ | ○ |
| Excited | ○ | ○ | ○ | ○ | ○ |
| Strong | ○ | ○ | ○ | ○ | ○ |
| Interested | ○ | ○ | ○ | ○ | ○ |
| Determined | ○ | ○ | ○ | ○ | ○ |
| Irritable | ○ | ○ | ○ | ○ | ○ |
| Jittery | ○ | ○ | ○ | ○ | ○ |
| Hostile | ○ | ○ | ○ | ○ | ○ |
| Upset | ○ | ○ | ○ | ○ | ○ |
| Nervous | ○ | ○ | ○ | ○ | ○ |

And to finish, we have a few demographic questions:

What is your gender?

○ Male
○ Female

What is your age?

What is the highest level of education you've completed?

○ GCSE
○ A-Level
○ Technical qualification/professional diploma
○ Bachelor degree (e.g. BA, BSc)
○ Masters Degree
○ PhD
○ Other _____

What is your average yearly household income before tax?

What is your relationship status?

○ Married / living with partner
○ In a relationship (not living with partner)
○ Divorced / widowed
○ Single

How many children (under 18) are in your household?

Do you have any other caring responsiblities? If yes, please give details.

○ Yes _____
○ No

Please enter your mobile number. We will use this to alert you that we have sent you a follow up survey. Your number will not be passed on to any third parties and will be deleted as soon as the research has concluded.

Mobile phone number

If you have any comments you would like to make, or additional information that you think might be relevant, please enter it in the box below.

And that's it, you're done!

Thanks for filling in this background survey.
The research team is now going to be embarrassingly excited about getting some numbers to crunch. And we have started on our way to finding out more about how work and leisure influence each other.

Look out for the email which you will receive with instructions about the rest of the study.

## 5. Study 1 Episodic Serious Leisure; Morning Survey

The University Of Sheffield.

Balancing Work and Leisure- Morning Survey

Please fill out this survey in the morning before you begin your work for the day.

Please indicate to what extent you feel like this right now, at the present moment:

|  | Very slightly or not at all | A little | Moderately | Quite a bit | Extremely |
|---|---|---|---|---|---|
| enthusiastic | ○ | ○ | ○ | ○ | ○ |
| excited | ○ | ○ | ○ | ○ | ○ |
| inspired | ○ | ○ | ○ | ○ | ○ |
| joyful | ○ | ○ | ○ | ○ | ○ |
| fatigued | ○ | ○ | ○ | ○ | ○ |
| tired | ○ | ○ | ○ | ○ | ○ |
| exhausted | ○ | ○ | ○ | ○ | ○ |
| spent | ○ | ○ | ○ | ○ | ○ |

How would you evaluate last night's sleep quality?

○ Very Poor
○ Poor
○ Good
○ Very Good

To what extent do you agree with the following statements about how you feel about the coming day:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Today, I feel capable of handling unexpected events successfully. | ○ | ○ | ○ | ○ | ○ |
| Today, I trust my inventiveness to know how to deal in unforeseen situations. | ○ | ○ | ○ | ○ | ○ |
| Today, I feel that whatever happens, I can handle it. | ○ | ○ | ○ | ○ | ○ |
| Today, if I am in a difficult situation, I will know what to do. | ○ | ○ | ○ | ○ | ○ |

Thinking about how you spent your day on Sunday, to what extent do you agree with the following statements...

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I learned new things. | ○ | ○ | ○ | ○ | ○ |
| I sought out intellectual challenges. | ○ | ○ | ○ | ○ | ○ |
| I did things that challenge me. | ○ | ○ | ○ | ○ | ○ |
| I did something to broaden my horizons. | ○ | ○ | ○ | ○ | ○ |
| I forgot about work. | ○ | ○ | ○ | ○ | ○ |
| I didn't think about work at all. | ○ | ○ | ○ | ○ | ○ |
| I distanced myself from my work. | ○ | ○ | ○ | ○ | ○ |
| I got a break from the demands at work. | ○ | ○ | ○ | ○ | ○ |

Please enter the amount of time you spend in these activities on Sunday

| | Did you engage in these activities yesterday? | | If you ticked yes, please enter the amount of time you spent engaged in these actvities | |
|---|---|---|---|---|
| | Yes | No | Hours | Minutes |
| ${e://Field/A1} | ○ | ○ | | |
| ${e://Field/A2} | ○ | ○ | | |
| ${e://Field/A3} | ○ | ○ | | |

How much time did you spend on other activities on Sunday?  If there are multiple categories that the  activity could fit into then choose the one which you consider the most  appropriate. Do not count an activity twice.  For example you may consider going to the gym with a friend both  physical and social, but if the main reason for the activity is to exercise then you would include it in the physical activity category.  Low effort activities are those which you do mainly because they don't require any energy or effort, an example might be watching tv or taking a  bath.   This question is about all your additional activities. Please do not count time from your three named activities (${e://Field/A1}, ${e://Field/A2} or ${e://Field/A3}).

| | Did you engage in these activities yesterday evening? | | If you ticked yes, please enter the amount of time you spent engaged in these actvities | |
| --- | --- | --- | --- | --- |
| | Yes | No | Hours | Minutes |
| Work activities (e.g. overtime) | ○ | ○ | | |
| Household and childcare activities | ○ | ○ | | |
| Low effort activities | ○ | ○ | | |
| Physical activities | ○ | ○ | | |
| Social activities | ○ | ○ | | |

Thinking specifically about and your experience of engaging in Activity 1, ${e://Field/A1} on Sunday , to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Yesterday, I really mastered ${e://Field/A1} or tasks associated with it. | ○ | ○ | ○ | ○ | ○ |
| Yesterday, I felt competent at this activity. | ○ | ○ | ○ | ○ | ○ |
| Yesterday, I was good at the things I did during this leisure activity. | ○ | ○ | ○ | ○ | ○ |

Thinking specifically about yesterday evening and your experience of engaging in Activity 2, ${e://Field/A2}, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Yesterday, I really mastered ${e://Field/A2} or tasks associated with it. | ○ | ○ | ○ | ○ | ○ |
| Yesterday, I felt competent at this activity. | ○ | ○ | ○ | ○ | ○ |
| Yesterday, I was good at the things I did during this leisure activity. | ○ | ○ | ○ | ○ | ○ |

Thinking specifically about yesterday evening and your experience of engaging in ${e://Field/A3}, to what extent do you agree with the following statements:

|  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I really mastered ${e://Field/A3} or tasks associated with it. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Yesterday, I felt competent at this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Yesterday, I was good at the things I did during this leisure activity. | ❍ | ❍ | ❍ | ❍ | ❍ |

Thinking about the activities you did yesterday, to what extent do you agree with the following statements:

|  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I felt like I decided for myself what to do. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I took care of things the way that I wanted them done. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I did exactly what I wanted to do. | ❍ | ❍ | ❍ | ❍ | ❍ |

What time is your work day beginning / has your work day begun today? Please use the 24 hour clock (e.g. 08:25 or 13:30)

Thanks for filling in this morning snap shot survey.

I appreciate you taking the time to fill it out before work. Each of the surveys helps us build an accurate picture of how your leisure and work life really affect each other.

I will be sending you an end of workday snap shot survey this afternoon. Look out for it in your inbox!

As usual, if you have any problems or questions please let me know.

Ciara Kelly
c.kelly@sheffield.ac.uk

## 6. Coding Instructions for Leisure Activity Type

Please code the participants' leisure activities under the following categories

| Code | Category | Type | Example |
|------|----------|------|---------|
| 1 | Physical Sports and Games | Sports (competitive activities) | Football, gymnastics |
| | | Outdoor Pursuits (self competitive - i.e. personal bests etc) and exercise (gym, exercise classes) | Running, climbing |
| 2a | Creative Arts and Hobbies | Arts, music, theatre, (performance activities) | playing in a band, acting, |
| | | Hobbies | crafts, gardening, gaming, writing |
| 2b | Relaxing/consumptive leisure | | Watching tv, browsing the internet, reading |
| 4 | | Socialising & Family time | Seeing friends and family |

# 7. Study 2 Habitual Serious Leisure; Survey Invitation Email with Survey Link

Hello,

We wanted to extend an invitation to you to be a part of our final study in the Balancing work and leisure project.

It's amazing how things can change over time, and this study looks at the fascinating question of how leisure and work may influence each other from month to month.
To show our appreciation for your time we will also enter you in a prize draw for an Apple iPod when you take part.

You can find a reminder of all the project information here:
https://dl.dropboxusercontent.com/u/39468046/BMC%20Work%20Study_Project%20information%20for%20participants.pdf

In this first survey we are asking you about your life, work and leisure in general.
Because this is a one-off, general survey it takes about 20 minutes to complete.
The follow up surveys will be shorter, as we only need to ask some questions once.

**Follow this link to the Survey:**
${l://SurveyLink?d=Take the Survey}
Or copy and paste the URL below into your internet browser:
${l://SurveyURL}
Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

## 8. Study 2 Habitual Serious Leisure; Initial Survey



Balancing Work and Leisure Project    Welcome to the project. We are delighted to have you on board!  "Remind me what I signed up for again?"  You have been chosen to be part of our 6 month study of leisure and work. We will send you one survey a month during this time. "Six months? Why not just the one survey?"  Monthly surveys are a great way to find whether your leisure habits influence your work over time. So by filling these in you will be helping us to identify patterns which are not immediately obvious, as they develop slowly over time. In this first survey we are asking you about your life, work and leisure in general. This background information will help us make more sense of your experiences. Because this is a one-off, general survey it takes about 20-25 mins to complete. The follow up surveys will be shorter as we only need to ask some questions once.   This survey contains questions about your mood and well being. If your answers to these questions cause you to be concerned then we recommend you discuss this with your doctor.  If you have any questions or issues you may contact Ciara Kelly at c.kelly@sheffield.ac.uk. This research is being supervised by Dr Karoline Strauss and Prof John Arnold.

Informed Consent

By ticking the box you confirm that

❑ You have read and understand the information sheet (included in your welcome email). You have had the opportunity to consider the information, ask questions of a member of the research team and have had these answered satisfactorily. You understand that your participation is voluntary and that you are free to withdraw at any time without giving any reason. You understand that no individual will be identified, all data will be held securely and all responses will remain confidential. You understand that that your information will be held and processed for the following purposes: to be analysed by the researcher for the purposes of completing their PhD research and, where relevant, for the writing of associated academic journal articles. You agree to take part in the study

People have different approaches to leisure activities and leisure time. In this study, we are interested specifically in your leisure activities that come closest to the following description. You consider this activity to be an important part of who you are. You invest time and effort into this activity. You persevere with this activity even if you encounter difficulties or set backs. You intend to continue pursuing this activity in the future and improving or growing your skills within it. Please enter the name of the leisure activity that comes closest to this description for you, into the box below. If you feel you do more than one activity that fits this description then please enter the one that is the best fit into the box for "Activity 1" and up to two more in extra boxes provided.

Activity 1
Activity 2
Activity 3

How long have you been pursuing these activities?

|  | Please respond with numbers rather than words (i.e. type "3" rather than "three") | |
| --- | --- | --- |
|  | Years | Months |
| ${q://QID2/ChoiceTextEntryValue/1} |  |  |
| ${q://QID2/ChoiceTextEntryValue/2} |  |  |
| ${q://QID2/ChoiceTextEntryValue/3} |  |  |

How frequently have you engaged in
${q://QID2/ChoiceTextEntryValue/1} in the last month?

○ Daily
○ 2-3 Times a Week
○ Once a Week
○ 2-3 Times a Month
○ Once a Month
○ Less than Once a Month
○ Never

How many hours approximately did you spend in total on
${q://QID2/ChoiceTextEntryValue/1} in the past month?

Thinking about you experience of ${q://QID2/ChoiceTextEntryValue/1}
over the past month, to what extent do you agree with the following
statements:

|  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| ${q://QID2/ChoiceTextEntryValue/1} is very important in describing who I am. | ○ | ○ | ○ | ○ | ○ |
| I intend to become accomplished in this activity. | ○ | ○ | ○ | ○ | ○ |
| I regularly train for this activity. | ○ | ○ | ○ | ○ | ○ |
| I believe I have the potential to be good at ${q://QID2/ChoiceTextEntryValue/1}. | ○ | ○ | ○ | ○ | ○ |

Thinking about you experience of ${q://QID2/ChoiceTextEntryValue/1} over the past month, to what extent do you agree with the following statementsI engage in ${q://QID2/ChoiceTextEntryValue/1}, as a leisure activity ...

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Because I find this activity interesting. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I find it engaging. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because it's fun. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I believe this activity is valuable. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because this activity is important. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because I value this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because my goals in ${q://QID2/ChoiceTextEntryValue/1} fit with my broader life goals. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because ${q://QID2/ChoiceTextEntryValue/1} is a big part of who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Because this activity helps to define me. | ❍ | ❍ | ❍ | ❍ | ❍ |

Comparing your work activities with
${q://QID2/ChoiceTextEntryValue/1}, to what extent do you agree with
the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| My work tasks are similar to the activities I do while ${q://QID2/ChoiceTextEntryValue/1}. | ○ | ○ | ○ | ○ | ○ |
| I require similar skills and abilities to be successful in my job and ${q://QID2/ChoiceTextEntryValue/1}. | ○ | ○ | ○ | ○ | ○ |
| The mental demands of ${q://QID2/ChoiceTextEntryValue/1} are similar to my work role. | ○ | ○ | ○ | ○ | ○ |
| The physical demands of this activity are like those of my work role. | ○ | ○ | ○ | ○ | ○ |

Thinking about your experience of ${q://QID2/ChoiceTextEntryValue/1} over the past month, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| When things went well in this activity , my outlook regarding my job was improved. | ○ | ○ | ○ | ○ | ○ |
| Having a good experience engaging in this leisure activity allowed me to be optimistic at work. | ○ | ○ | ○ | ○ | ○ |
| Being in a positive mood during ${q://QID2/ChoiceTextEntryValue/1} helped me to be in a positive mood at work. | ○ | ○ | ○ | ○ | ○ |
| Feeling happy doing this activity improved my spirits at work. | ○ | ○ | ○ | ○ | ○ |
| Skills developed in this leisure activity helped me in my job. | ○ | ○ | ○ | ○ | ○ |
| Successfully performing tasks in this leisure activity helped me to more effectively accomplish tasks at work. | ○ | ○ | ○ | ○ | ○ |
| Behaviours required in ${q://QID2/ChoiceTextEntryValue/1} led to behaviours that assisted me at work. | ○ | ○ | ○ | ○ | ○ |
| Carrying out my work responsibilities was made easier by using behaviours performed during ${q://QID2/ChoiceTextEntryValue/1} . | ○ | ○ | ○ | ○ | ○ |
| Values developed in this leisure activity made me a better employee. | ○ | ○ | ○ | ○ | ○ |
| I applied the principles from this leisure activity in work situations. | ○ | ○ | ○ | ○ | ○ |
| Values that I learned through experiences of this leisure activity assist me in fulfilling my work responsibilities. | ○ | ○ | ○ | ○ | ○ |

Thinking specifically about and your experience of engaging in Activity 1, ${q://QID2/ChoiceTextEntryValue/1}  on over the past month , to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I really mastered ${q://QID2/ChoiceTextEntryValue/1} or tasks associated with it. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I felt competent at this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I was good at the things I did during this leisure activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I don't really feel competent when engaging in this activity | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have the feeling that I can even accomplish the most difficult tasks in this activity | ❍ | ❍ | ❍ | ❍ | ❍ |

The next four questions are about your second activity, ${q://QID2/ChoiceTextEntryValue/2}.

How many hours approximately did you spend in total on ${q://QID2/ChoiceTextEntryValue/2} in the past month?

Thinking about you experience of ${q://QID2/ChoiceTextEntryValue/2} over the past month, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| ${q://QID2/ChoiceTextEntryValue/2} is very important in describing who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I intend to become accomplished in this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I regularly train for ${q://QID2/ChoiceTextEntryValue/2}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe I have the potential to be good at this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |

The next four questions are about your third activity, ${q://QID2/ChoiceTextEntryValue/3}.

How many hours approximately did you spend in total on ${q://QID2/ChoiceTextEntryValue/3} in the past month?

Thinking about you experience of ${q://QID2/ChoiceTextEntryValue/3} over the past month, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| ${q://QID2/ChoiceTextEntryValue/3} is very important in describing who I am. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I intend to become accomplished in this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I regularly train for ${q://QID2/ChoiceTextEntryValue/3}. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe I have the potential to be good at this activity. | ❍ | ❍ | ❍ | ❍ | ❍ |

When thinking about your leisure time over the last month, to what extent do you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I learn new things. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I seek out intellectual challenges. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I do things that challenge me. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I do something to broaden my horizons. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I forget about work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I don't think | ❍ | ❍ | ❍ | ❍ | ❍ |

| | | | | | |
|---|---|---|---|---|---|
| about work at all. | | | | | |
| I distance myself from my work. | ○ | ○ | ○ | ○ | ○ |
| I get a break from the demands at work. | ○ | ○ | ○ | ○ | ○ |

The following section is about your work life.

What is your current employment status:

○ Employed
○ Self Employed
○ Unemployed
○ Retired
○ Student
○ Homemaker

What is your current occupation?

Please give a brief description of your specific job role:

Is this a managerial role? If yes, please state how many people report directly to you.

○ Yes _____
○ No

How long have you been in your current job role?

    Years
    Months

How many hours per week are you contracted to work?

How many extra hours, if any, have you worked over the whole of the past month?

The next set of questions are about your experiences of work over the past month. It may be useful to take a moment to reflect on the last four weeks now, before answering the questions. Your answers should reflect this specific time frame, but you don't feel you need to spend a long time considering each question. An initial reaction is often quite accurate.You are now halfway through the questionnaire. The remaining 2 sections cover your experiences of work and some background information about you.

Thinking specifically about your feelings about work in the past month, to what extent do you agree that these statements reflect your feeling at work.During the past month I felt that.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| At work, I am able to achieve most of the goals that I have set for myself. | ❍ | ❍ | ❍ | ❍ | ❍ |
| When facing difficult tasks at work, I am certain that I will accomplish them. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I think that I can obtain outcomes that are important to me at work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I believe that at work I can succeed at most any endeavor to which I set my mind. | ❍ | ❍ | ❍ | ❍ | ❍ |
| At work I am able to successfully overcome many challenges. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am confident that I can perform effectively on many different work tasks. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Compared to other people, I can do most | ❍ | ❍ | ❍ | ❍ | ❍ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| tasks at work very well. | | | | | |
| Even when things are tough at work, I can perform quite well. | ❍ | ❍ | ❍ | ❍ | ❍ |

Thinking specifically about your feelings about work in the past month, to what extent do you agree that these statements reflect how you felt.During the past month I felt that.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| When I have a setback at work, I have trouble recovering from it, moving on. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I usually manage difficulties one way or another at work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I usually take stressful things at work in my stride. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I can get through difficult things at work because I have experienced difficulty before. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I feel I can handle many things at a time at this job. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I can be "on my own", so to speak, at work if I have to. | ❍ | ❍ | ❍ | ❍ | ❍ |

Thinking specifically about your feelings about work in the past month, to what extent do you agree that these statements reflect how you felt.During the past month I felt that.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I feel emotionally drained from my | ❍ | ❍ | ❍ | ❍ | ❍ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| work. | | | | | |
| I feel used up at the end of the workday. | ○ | ○ | ○ | ○ | ○ |
| I feel tired when I get up in the morning and have to face another day on the job. | ○ | ○ | ○ | ○ | ○ |
| Working all day is really a strain for me. | ○ | ○ | ○ | ○ | ○ |
| I feel burned out from my work. | ○ | ○ | ○ | ○ | ○ |

Thinking specifically about your feelings about work in the past month, to what extent do you agree that these statements reflect how you felt.During the past month I felt that.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I felt bursting with energy. | ○ | ○ | ○ | ○ | ○ |
| I felt strong and vigorous at my job. | ○ | ○ | ○ | ○ | ○ |
| When I got up in the morning I felt like going to work. | ○ | ○ | ○ | ○ | ○ |
| I was enthusiastic about my job. | ○ | ○ | ○ | ○ | ○ |
| My job inspired me. | ○ | ○ | ○ | ○ | ○ |
| I was proud of the work that I do. | ○ | ○ | ○ | ○ | ○ |
| I felt happy when I was working intensely. | ○ | ○ | ○ | ○ | ○ |
| I was immersed in my work. | ○ | ○ | ○ | ○ | ○ |
| I got carried away when I was working. | ○ | ○ | ○ | ○ | ○ |

The next set of questions are about your experiences and actions in work over the past month.

Thinking specifically about your work in the past month, to what extent do you agree that these statements reflect your experiences and actions.During the past month I felt that.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| My job allows me to make decisions about what methods I use to complete my work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| My job gives me considerable opportunity for independence and freedom in how I do the work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| My job allows me to decide on my own how to go about doing my work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| My job requires working very fast. | ❍ | ❍ | ❍ | ❍ | ❍ |
| My job requires working very hard. | ❍ | ❍ | ❍ | ❍ | ❍ |
| My job requires lots of physical effort. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am not asked to do an excessive amount of work. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have enough time to get the job done. | ❍ | ❍ | ❍ | ❍ | ❍ |

Thinking specifically about your work in the past month, to what extent do you agree that these statements reflect your experiences and actions.During the past month.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I actively attack problems. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Whenever something goes wrong, I search for a solution immediately. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Whenever there is a chance to get actively involved, I take it. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I take initiative immediately even when others don't. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I use opportunities quickly in order to attain my goals. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Usually I do more than I am asked to do. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I am particularly good at realising ideas. | ❍ | ❍ | ❍ | ❍ | ❍ |

To what extent do you agree that the following statements describe your behaviour in work over the past month?

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I attempt to institute new work methods that are more effective for the company. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I try to bring about improved procedures for the work unit or department. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I try to implement solutions to pressing | ❍ | ❍ | ❍ | ❍ | ❍ |

| | | | | | |
|---|---|---|---|---|---|
| organizational problems. | | | | | |
| I try to introduce new structures, technologies, or approaches to improve efficiency. | ○ | ○ | ○ | ○ | ○ |

When thinking about your feelings you've had over this past month about the organisation you currently work for, would you agree with the following statements:During the past month.....

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I would be very happy to spend the rest of my career with this organisation | ○ | ○ | ○ | ○ | ○ |
| I really feel as if this organisation's problems are my own | ○ | ○ | ○ | ○ | ○ |
| I do not feel a strong sense of belonging to my organisation | ○ | ○ | ○ | ○ | ○ |
| I do not feel emotionally attached to this organisation | ○ | ○ | ○ | ○ | ○ |
| I do not feel like "part of the family" at my organisation | ○ | ○ | ○ | ○ | ○ |

When thinking about how you go about your work, over the past month, to what extent do you agree with the following statements:During the past month.....

|  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I have helped others who have been absent | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have helped others who have heavy workloads. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have taken time to listen to co-workers' problems and worries. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have taken a personal interest in other employees. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have passed along information to co-workers. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have carried out the core parts of my job well. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have completed my core tasks well using the standard procedures. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I have ensured my tasks are completed properly | ❍ | ❍ | ❍ | ❍ | ❍ |

You have filled in the majority of the survey questions now. There are three sets of questions about yourself and a few background questions in the rest of the questionnaire.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| In general I am focused on preventing negative events in my life | ○ | ○ | ○ | ○ | ○ |
| I am anxious that I will fall short of my responsibilities and obligations | ○ | ○ | ○ | ○ | ○ |
| I often think about the person I am afraid I might become in the future | ○ | ○ | ○ | ○ | ○ |
| I often imagine myself experiencing bad things that I fear might happen to me | ○ | ○ | ○ | ○ | ○ |
| I frequently think about how I can prevent failures in my life | ○ | ○ | ○ | ○ | ○ |
| I am more oriented toward preventing losses than I am towards achieving gains | ○ | ○ | ○ | ○ | ○ |
| I see myself as someone who is primarily striving to become the self I "ought" to be- to fulfil my duties, responsibilities, and obligations | ○ | ○ | ○ | ○ | ○ |

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I see myself as someone who is primarily striving to reach my "ideal self"- to fulfill my hopes, wishes, and aspirations | ❍ | ❍ | ❍ | ❍ | ❍ |
| In general, I am focused on achieving positive outcomes in my life | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often imagine myself experiencing good things that I hope will happen to me. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Overall, I am more oriented toward achieving success than preventing failure. | ❍ | ❍ | ❍ | ❍ | ❍ |
| I frequently imagine how I will achieve my hopes and aspirations | ❍ | ❍ | ❍ | ❍ | ❍ |
| I often think about the person I would ideally like to be in the future | ❍ | ❍ | ❍ | ❍ | ❍ |
| I typically focus on the success I hope to achieve in the future | ❍ | ❍ | ❍ | ❍ | ❍ |

The following question contains a list of descriptions of moods and emotions. While our moods can change as a result of things that are happening around us we also have a general tendency towards certain moods. We are interested in these general moods. So for the following list of emotions please indicate to what extent you generally feel this way, that is, how you feel on average:

| | Very slightly or not at all | A little | Moderately | Quite a bit | Extremely |
|---|---|---|---|---|---|
| Enthusiastic | ○ | ○ | ○ | ○ | ○ |
| Excited | ○ | ○ | ○ | ○ | ○ |
| Strong | ○ | ○ | ○ | ○ | ○ |
| Interested | ○ | ○ | ○ | ○ | ○ |
| Determined | ○ | ○ | ○ | ○ | ○ |
| Irritable | ○ | ○ | ○ | ○ | ○ |
| Jittery | ○ | ○ | ○ | ○ | ○ |
| Hostile | ○ | ○ | ○ | ○ | ○ |
| Upset | ○ | ○ | ○ | ○ | ○ |
| Nervous | ○ | ○ | ○ | ○ | ○ |

This is the final page of questions before your answers are submitted.

What is your gender?

○ Male
○ Female

What is your age?

What is the highest level of education you've completed?

○ GCSE
○ A-Level
○ Technical qualification/professional diploma
○ Bachelor degree (e.g. BA, BSc)
○ Masters Degree
○ PhD
○ Other _____

What is your average yearly household income before tax?

What is your relationship status?

○ Married / living with partner
○ In a relationship (not living with partner)
○ Divorced / widowed
○ Single

How many children (under 18) are in your household?

Do you have any other caring responsiblities? If yes, please give details.

○ Yes _____
○ No

Please enter your mobile number. We will use this to alert you that we have sent you a follow up survey. Your number will not be passed on to any third parties and will be deleted as soon as the research has concluded.

Mobile phone number

Have there been any unusual circumstances or a change in your circumstances over the past month that might influence your work or life more generally?

**And that's it, you're done!**

The research team is now going to be embarrassingly excited about having some numbers to crunch.
And with that, we have started on our way to finding out more about how work and leisure influence each other.
Thank you for your time and effort, it is very much appreciated.

**You will receive another link to a follow up survey in one month.**
**Keep an eye out for it in your inbox!**