

Subjective Wellbeing in the Workplace:

Kathryn Page

B.A

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Researcher's Name: **Kathryn Page**

Signed: _____ Date: _____

Supervisor's Name: **Prof. Robert Cummins**

Signed: _____ Date: _____

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CHAPTER 1:
LITERATURE REVIEW

ABSTRACT

The aim of this review was to show how findings within the area of subjective wellbeing (SWB) could be extended to apply to more specific domains of life, such as work. Selected findings were reviewed from the area of SWB such as its dispositional sources and components, the stability of SWB set-points and the roles of adaptation level theory and homeostatic theory. Work-related literature and their limitations were also reviewed. To address these limitations, I proposed the creation of a branch of SWB termed workplace wellbeing (WWB). This new construct integrates SWB constructs such as core affect and homeostasis, with work related constructs such as job satisfaction, work values, self-concordant goals and achievement motivation. It was concluded that the workplace wellbeing model may provide a more comprehensive account of how SWB influences (and is influenced by) work-related attitudes and behaviours.

Why is it that some people are happier than others? Is it because they make a conscious effort to 'look on the bright side of life', because they experience more pleasant events than others or because they just have naturally happier dispositions? The area of study dedicated to answering these types of questions is subjective wellbeing (SWB). SWB is the affective and cognitive evaluation we make about how happy and satisfied we are with our life. Over the last few decades, significant progress has been made in understanding this construct with much now known about the sources, components and benefits of SWB. Individual differences in SWB have been one of the primary focuses for researchers. This interest led to the landmark finding that individuals' levels of SWB are remarkably stable over time. This stability is due in part to SWBs dependence on dispositional factors such as personality and affect and also our ability to adapt to even extreme situations. A further theory is that certain psychological mechanisms such as self-esteem, optimism and a sense of control work together to hold our SWB levels at a generally positive level. This serves an adaptive function, providing us with the resources we need to cope with everyday stressors.

In the following article I will review some of the more significant SWB findings. I will also describe a selection of the theories that frame these findings and contrast the different approaches researchers take to explain SWB phenomena.

In the second half of this review, I will show how SWB findings can be extended to explain wellbeing in a more specific life domain, that of work. To achieve this objective, I will create a new branch of SWB, termed workplace wellbeing (WWB). The WWB model will integrate SWB research with work-related constructs such as job satisfaction and work values. It will also provide a more comprehensive account of the factors influencing employee satisfaction and possibly lead to more robust links with desirable job attitudes and behaviours such as motivation, goal striving and achievement.

2. SUBJECTIVE WELLBEING (SWB)

2.1 Dispositional sources of SWB

2.1.1 *Affect and personality*

Subjective wellbeing (SWB) is thought to be a combination of positive and negative affect and life satisfaction, and is often equated with what lay people call happiness (Diener, Oishi & Lucas, 2003; Shmotkin, 1998). A particularly notable and well-documented finding within this area is that an individual's level of SWB is held at a 'set-point' (e.g. Cummins, 1995; Headey & Wearing, 1989; Lucas, Clark, Georgellis & Diener, 2003). That is, an individual who reports a high level of SWB at Time 1 is likely to report a similar level of wellbeing at Time 2, regardless of the time interval between the two measurements (Emmons & Diener, 1985).

The constructs thought to determine individual SWB set points are personality (particularly extraversion and neuroticism; Cummins, Gullone, & Lau, 2002; Emmons & Diener, 1985; Hotard, McFatterm, McWhirter, & Stegall, 1989; Steel & Ones, 2002) and positive and negative affect (Diener, 2000; Emmons & Diener, 1985). The constructs of personality and affect are also highly related. For example, Emmons and Diener (1985) found that positive affect (pleasant emotions such as joy and happiness) contributed considerable variance to extraversion while negative affect (unpleasant emotions such as anger and fear) contributed variance to neuroticism. The trait found to be most related to SWB was positive affect. From these results they concluded that people high in extraversion and positive affect are more satisfied with their lives than are people high in neuroticism and negative affect. These relationships have since been supported (e.g. Cummins et al., 2002; Hotard et al., 1989; Steel & Ones, 2002; Zheng, Sang & Lin, 2004).

2.1.2 *The measurement of SWB*

To better understand how personality and affective traits influence SWB, it is useful to look at how SWB is measured. One of the simplest methods is to directly ask individuals 'How satisfied are you with your life as a whole?' When answering this abstract question, individuals tend to make a relatively fast decision using cognitive short cuts called heuristics (Tversky & Kahneman, 1974). What individuals attend to when making this quick judgement, however, is not altogether agreed upon. Some researchers believe they attend to the most salient domains of their life overall (e.g. Diener, Lucas, Oishi & Suh, 2002), whilst others believe they attend to how they feel at the time of questioning (e.g. Veenhoven, 1996). As an example of the former view, Diener, Lucas, Oishi and Suh (2002) investigated the proposition that individuals' life satisfaction judgements differ as a function of the type of information they attend to (i.e. negative vs. positive). This assertion was supported by the finding that individuals scoring highly on life satisfaction focused on the domains of their life they were most happy with, while those low in life satisfaction focused on more negative information.

The opposing view involves the construct of core affect. Core affect has been defined by Russel (2003) as the 'simplest raw (non-reflective) feelings evident in moods and emotion' (p.148). He described the construct as an object-free blend of pleasant and unpleasant feelings and arousal that influences all human activity. Although Russel did not make a direct reference to how this affective state is linked to SWB, Davern (2004) has formed a bridge by creating a model of SWB that consists of four core affective adjectives (contented, happy, excited and satisfied). She found that when these adjectives were used together, they explained 64% of the variance in individuals' responses to the question, 'How satisfied are you with your life as a whole?' Davern's finding provides strong support for the proposition that responses to questions about global life satisfaction are influenced by how an individual feels at the time of measurement and not by the information they find most salient. She also suggests that an individual's unique blend of core affect may represent their SWB set point. If this is true, core affect may be a fixed entity rather than free floating as Russel (2003) initially indicated.

2.2 The stability of SWB set points

2.2.1 Adaptation level theory

Individual SWB set points are not only stable and consistent over time, but also remarkably resilient, even in the face of major life events (Diener, 2000). For example, a two-year longitudinal study by Suh, Diener and Fujita (1996) found that although major life events influenced SWB levels in the short term, these effects diminished in less than three months as wellbeing returned to the individual's set point. A commonly used explanation in relation to this finding is adaptation (Diener, 2000; Lucas, Clark, Georgellis & Diener, 2003; Suh, Diener and Fujita, 1996). Adaptation level theory asserts that although extremely pleasant or unpleasant events may affect one's SWB temporarily, the effect wears off over time. For example, a landmark study by Brickman, Coates and Janoff-Bulman (1978) found that lottery winners and debilitating accident victims were not significantly happier or unhappier, respectively, than controls just one to 12 months after the significant event.

As well as providing remarkable support for adaptation level theory, the findings of Brickman, Coates and Janoff-Bulman (1978) indicate SWB is influenced more by stable factors such as personality and affect than life circumstances. This observation led Brickman and Campbell (1971) to lament that individuals are trapped on a 'hedonic treadmill.' In other words, we wage a futile battle, continually pursuing the possibility of greater happiness yet doomed to remain as we started due to SWBs dependence on unchangeable factors. This raises the question, is it senseless for researchers to study SWB for the purpose of increasing individual or national wellbeing? A model that provides further insight into this phenomenon, and how we maintain stable set points even in the face of challenging life events, is that of SWB homeostasis (Cummins, 1995, 1998).

2.2.2 SWB homeostasis

The theory of SWB homeostasis, that is that SWB operates under homeostatic control, was first proposed upon the observation that there is very little variation in average wellbeing scores across populations (Cummins, 1995). Cummins investigated data from 16 life satisfaction studies using samples drawn from general Western populations. Each study used a Likert scale to measure life satisfaction, which Cummins converted into a standardized scale from 0 to 100. A combination of the data from these studies revealed a mean of 75.02 and a standard deviation of just 2.74. Thus, regardless of the country of residence, populations were, on average, three-quarters satisfied with their lives.

This finding has since been replicated with additional Western data and also extended to non-Western countries (Cummins, 1998). This secondary study indicated a normative world range of 60-80, with the international mean of SWB being 70 (SD= 5).

Homeostasis theory asserts that SWB is not just maintained by the stable forces of personality and positive and negative affect, but also via underlying psychological processes that serve to defend individual set points. These psychological mechanisms are analogous to the physiological processes that regulate internal body states such as body temperature. Evidence suggests three constructs are involved in this homeostatic process: Self-esteem (i.e. a feeling of self-worth and competence; Cummins & Nistico, 2002), perceived control (i.e. feeling that one can achieve desired outcomes through their own actions; Thompson et al., 1998) and optimism (i.e. positive expectations about the future; Peterson, 2000). Together, these constructs are termed cognitive buffers and are discussed by Cummins and Nistico (2002) as a means of buffering SWB levels from life demands.

In order to maintain high levels of self-esteem, optimism and control, Cummins and Nistico (2002) suggest individuals utilise a number of positive cognitive biases (PCBs). According to these authors, PCBs are a product of core affect. They are non-specific and empirically unfalsifiable in nature and pertain to peoples' tendency to hold self-enhancing biases (e.g. believing one is generally friendlier than most people). This 'better than average' effect, as it has also been called, has been recognized by other authors (e.g. Silvera & Seger, 2004). Cummins and Nistico, however, have expanded on previous research in the area by integrating the phenomenon closely into Cummins' homeostatic theory (Cummins, 1995, 1998). Within this theory, PCBs are believed responsible for maintaining an individual's cognitive buffers at a generally positive level,

which in turn stabilises SWB levels. Thus, both the cognitive buffers and their associated PCBs serve an adaptive function by providing individuals with the psychological resources they need to cope with everyday stressors.

The cognitive buffers, however, are not invincible. Long-term and/or severe stressors such as losing a family member or suffering long-term unemployment may lead to homeostatic defeat. In these situations, the PCBs weaken and self-esteem, control and optimism levels decrease. As a consequence, the individual may suffer a period of depression as SWB levels drop dramatically below set point.

2.3 Summary

Although the review thus far gives only a brief account of selected findings from within the SWB literature, it highlights the wealth of information on the causes, components and consequents of SWB. SWB set points are remarkably stable over time, regardless of day-to-day activities and major life events. These set points are primarily determined by an individual's personality, positive and negative affect and core affect are thought to be stabilised via the process of adaptation and/or homeostasis. In the following section, I will attempt to extend these findings to a more specific life domain, that of work.

3. WORKPLACE WELLBEING (WWB)

3.1 Major findings in the area of job satisfaction and new insight using SWB as a comparative framework

Over the last several decades researchers have focused much research in the area of job satisfaction, particularly because of its links with employee motivation (Herzberg, 1973), job involvement (Knoop, 1995; Nystedt, Sjöberg & Hägglund, 1999), job performance (Wright & Cropanzano, 2000), organisational commitment (Curry et al., 1986; Feather & Rauter, 2004), Knoop, 1995) and organisational citizenship behaviour (Lepine, Erez & Johnson, 2002; Williams & Anderson, 1991). Studies have also sought to understand the dispositional sources of job satisfaction, and how the construct may benefit ones overall satisfaction with life.

Although research in this area has been vast, it suffers from a number of limitations. The first of these is the lack of understanding surrounding the nature of job satisfaction itself. For example, is it purely a cognitive construct or does it include affective components? What aspects of work do individuals attend to when evaluating their job satisfaction? How stable is an individual's job satisfaction over time? I also believe the area requires an overarching framework or model that can organise relevant literature into a cohesive whole.

For the remainder of this review, I will argue that the way to address both these limitations is to create a branch of SWB concerned solely with how an employee feels at work, that is, workplace wellbeing. Although SWB is most commonly viewed as a global evaluation of overall life satisfaction, it can also be conceptualised as an aggregate of satisfaction in various life domains (e.g. work, relationships, health). A logical deduction from this is that SWB findings should extend to more specific areas of one's life, such as one's work life. To explore this idea, I will compare and combine relevant findings from both SWB and job satisfaction research with the aim of creating a model of workplace wellbeing.

3.1.1 The job/life satisfaction relationship

Although job satisfaction has not generally been discussed within the framework of SWB, it has been assumed that it should share a substantial amount of variance with the construct of life satisfaction because of the high proportion of time adults spend at work. Some speculation surrounds the causal ordering of these two constructs, some believing life satisfaction to be a determinant of job satisfaction (whereby overall life satisfaction 'spills over' into satisfaction with life domains) and others believing job satisfaction to be one of the determinants of overall life satisfaction (Rode, 2004). Regardless of the causal ordering of these two constructs, results have generally led to the conclusion that job satisfaction and life satisfaction are positively but not strongly related (Judge & Watanabe, 1993; Rice, Near & Hunt, 1980; Rode, 2004). For example, a meta-analysis by Rice, Near and Hunt (1980) reviewed empirical evidence from 23 studies examining the relationship between life and job satisfaction. They found an average correlation of .30, indicating the two constructs shared only 9% of variance. This average correlation has since been replicated by more recent meta-analyses (e.g. Judge & Watanabe, 1993; Rode, 2004).

The low correlations found in Rice, Near and Hunt (1980) raise a number of interesting points. On the one hand, if job satisfaction is just a component of overall life satisfaction, the low correlations may indeed be a true reflection of the relationship between the two constructs. After all, there are many other life domains, beside work, that may contribute to a person's SWB (e.g. relationships, leisure activities etc.) However, I believe an alternative explanation for the weak relationship lies in the deficiency of the constructs.

According to SWB literature, life satisfaction is just one of many components of SWB. In a similar fashion, job satisfaction could be viewed as just a component of the broader construct of WWB. If this were the case, the constructs of job and life satisfaction are incomplete measures of more informative and valuable constructs. Consequently, the typical life/job satisfaction studies possibly reveal only a partial reflection of the relationship between workplace and subjective wellbeing.

An interesting theory within which to discuss the potential relationship between workplace and subjective wellbeing is that of homeostasis. As mentioned earlier, SWB levels may be controlled and maintained by way of homeostasis (Cummins, 1995, 1998). Due to the function of cognitive buffers, an individual's level of SWB is remarkably resilient to psychological stressors (Cummins et al., 2003). Thus, unless an individual's homeostatic mechanisms are defeated due to extremely adverse conditions their SWB is quite insensitive to everyday life events (positive or negative; Emmons & Diener, 1985).

In terms of WWB, homeostatic theory suggests that an individual's work environment would only influence their SWB if it was perceived to be the source of problems severe enough to lead to homeostatic defeat (hence disabling the protective function of the buffers). If homeostasis was not defeated (which is more likely) then the buffers would maintain SWB levels at their unique set-point, thus limiting the influence of work satisfaction/dissatisfaction on their overall wellbeing. Thus, individuals are likely to score within the positive range on both wellbeing measures not necessarily because the two constructs share a positive relationship but because responses are predominantly controlled by personality and core affect.

3.1.2 Dispositional sources of job satisfaction

3.1.2.1 Personality

Like SWB, job satisfaction has received much attention from researchers attempting to understand its dispositional sources. In contrast to findings in the SWB literature, however, personality explains only minimal variance in job satisfaction, highlighting the need for more reliable predictors (Furnham, Petrides, Jackson, & Cotter, 2001). For example, Judge, Heller and Mount (2002) conducted a meta-analysis that reviewed 334 correlations from 163 studies investigating the relationship between the Big Five personality traits and job satisfaction. They found that neuroticism (-.29) was the strongest predictor, followed closely by conscientiousness (.26) and extraversion (.25). As the strongest predictor, however, neuroticism could only explain 8.4% of variance in job satisfaction. This result suggests that job satisfaction is not strongly influenced by personality. Fortunately, a new construct has emerged recently that provides insight into the dispositional sources of job satisfaction and possibly also into WWB: Core self-evaluations.

3.1.2.2 Core Self- Evaluations

Core self-evaluations are defined as the fundamental, subconscious evaluations individuals make about themselves (Judge, Locke, & Durham, 1997; Judge, Locke, Durham, & Kluger, 1998) and are thought to represent their deepest personal assumptions (e.g. I can handle any of life's challenges).

The core self-evaluations model, as proposed by Judge et al. (1997), includes four dispositional traits: self-esteem, generalised self-efficacy, locus of control, and neuroticism. The construct has shown to be a far better predictor of job satisfaction and job related variables than are either personality factors or the four self-evaluation traits used alone (Bono & Judge, 2003; Erez & Judge, 2001; Judge, Locke, Durham, & Kluger, 1998; Judge, Erez, Bono, & Thoresen, 2003).

Despite the constructs' impressive predictive validity, core self-evaluations may be redundant to constructs and theories already existing within the SWB and or/homeostatic framework. This assertion stems from the observation that the components of the

construct (self efficacy, self esteem, locus of control and neuroticism) bear a conceptual similarity to Cummins and Nistico's (2002) cognitive buffers (optimism, self esteem and control). Both constructs refer to satisfaction with the self and/or positive self-regard and highlight the positive consequences that a sense of personal competence has on wellbeing levels (whether in the workplace or life overall). Thus, both constructs are possibly driven by core affect, PCBs and personality. Indeed, core self-evaluations already acknowledge one of the Big Five traits (neuroticism) while the buffers are frequently discussed in relation to neuroticism and extraversion (e.g. Cummins, Gullone, & Lau, 2002; Emmons & Diener, 1985; Steel & Ones, 2002). With these points in mind, one could speculate that individuals high in core self-evaluations are likely to have a high SWB set point and likely to rate highly in both extraversion and positive affect (given the positive relationship between the latter two traits and SWB).

Whether the construct of core self-evaluations and Cummins' buffers each add unique variance to either SWB and/or job satisfaction is yet to be determined. For now, each is considered valid in its own right, with the cognitive buffers studied regularly within a SWB framework (e.g. Cummins & Nistico, 2002; Cummins, Gullone, & Lau, 2002) and core self-evaluations becoming increasingly useful in work-related research (e.g. Judge, Bono, & Locke, 2000).

3.1.3 A self-concordance model: Work goals and achievement

One of the ways in which core self-evaluations may be useful as a measure of WWB is by influencing goal-directed behaviour and task achievement. According to Li and Lee (2004), people who expect to perform well on a task will often achieve desirable outcomes because they are more motivated to achieve. They define achievement motivation as 'a person's efforts to strive for task success, persist in the face of difficulty, obtain better performance than others and take pride in exercising excellence' (p. 445). Thus, it is likely that people with positive self-evaluations will be more motivated to strive for goal achievement.

Personal goals are defined as future-oriented representations of what individuals seek to attain in various life domains (Maier & Brunstein, 2001). The importance of goal pursuit and attainment within work contexts has been of much interest to researchers of late. Particular areas of interest are individual differences in goal setting (e.g. Sheldon &

Elliot, 1999) and the effect of goal attainment on wellbeing (e.g. Judge, Bono, Erez, & Locke, 2005). Findings within this area have indicated that goals, particularly self-concordant goals (i.e. those that match an individuals' interests and values; Sheldon & Elliot, 1999) have positive consequences on both life and job satisfaction. For example, Judge et al. (2005) found that the degree to which individuals set and attained self-concordant goals partly mediated the relationship between core self-evaluations and job satisfaction. In other words, employees who believed they were competent were more likely to choose self-concordant goals which, when achieved, was highly predictive of job satisfaction. These relationships have been well documented in research with the general conclusion being that people who choose self-congruent goals are more motivated, effortful and persistent in their pursuit of goals, more likely to attain their goals and more likely to experience enhanced wellbeing (Locke & Latham, 2004; Maier & Brunstein, 2001; Sheldon & Elliot, 1999).

3.1.4 Extending the self-concordance model

3.1.4.1 Life values

In order to understand which work goals individuals are likely to derive satisfaction from, several researchers have turned to the study of values. Within the SWB context, investigating how personal values influence the satisfaction individuals derive from daily activities has been highly informative. For example, Oishi, Diener, Suh and Lucas (1999) asked participants to record the values most important to them before recording their daily activities in a 23-day diary. Participants also rated their daily SWB levels. Oishi et al. found that individuals' value orientations influenced the types of activities that gave them most satisfaction. For example, individuals who valued achievement reported feeling particularly satisfied on days that they achieved something such as a high grade.

3.1.4.2 Work values

This provides important insight into how work values can be used to predict the types of activities and or goals employees would most enjoy pursuing within their workplace. Work values denote the degree of worth, importance and desirability an individual places

on what happens at work (e.g. recognition for work well-done, use of abilities and knowledge; Knoop, 1991). Because work values specify what aspects of work are important to a person (and presumably what they enjoy doing at work), they may provide a valuable means of understanding WWB. Unfortunately, however, no studies have yet investigated how work values moderate the satisfaction employees' gain from their daily work tasks. Nonetheless, work values have provided some interesting insight into job satisfaction (e.g. Elizur, 1884; Knoop, 1994), and may be a useful addition to the WWB model.

Work values may be particularly useful from a measurement standpoint. As discussed earlier, SWB is commonly measured with one of two approaches: global single items such as 'How satisfied are you with your life as a whole' or as an aggregate of scores on various life domains. A SWB measure that combines both these approaches is the Personal Wellbeing Index (PWI; International Wellbeing Group, 2005). The PWI measures satisfaction in seven core life domains: standard of living, health, achievement, personal relationships, safety, community connectedness and future security (e.g. How satisfied are you with your future security?). Hypothetically, WWB could be measured in a similar way. For example, a WWB index could combine global questions such as 'How satisfied are you with your job as a whole' with more specific (work value related) questions such as 'How satisfied are you with the recognition you receive at work?' In this scenario, work values would represent the domains of WWB.

A second advantage to this style of measurement is the possibility of comparing items measuring SWB with items measuring WWB (i.e. work values and job satisfaction). This would provide extensive information about specific relationships between components of each construct. Similarly, an individual's score on one of the work value items could be compared with their overall PWI score, which would indicate which aspects of work are most related to SWB. Thus, work values promise to be a very useful indicator of SWB in the workplace

3.2 Summary and Conclusions

The aim of this review was to show how findings within the area of SWB could be applied to more specific domains of life. I proposed the creation of a new construct termed WWB. Although considered a branch of SWB, WWB, integrates findings from both SWB

and job satisfaction areas. As well as including job satisfaction however, the WWB model encompasses other work-related constructs such as core self-evaluations, self-concordant goals and achievement motivation. It is important to note here that the latter two constructs could be represented as either sources or outcomes of WWB.

Perhaps the most promising addition to the hypothetical model would be the construct of work values. By representing the domains of WWB, work values could provide useful information about the specific aspects of work that diminish and/or enhance both workplace and subjective wellbeing. Employers could then use this information to improve problem areas within a workplace.

Developing a WWB index would be beneficial to both employees and employers. For example, if an employer actively encourages employees to set work goals that are congruent with their personal values and interests, both the company and the employee stand to benefit. The employee would benefit because he/she is more committed to their work goals, more likely to achieve them and thus more likely to achieve a wellbeing boost, whilst the company would benefit from the increase in employee motivation, productivity and achievement.

In my opinion, too many researchers have been interested in job satisfaction purely to provide gains for the employer. This is evident in the vast amount of research that has focused on links between job satisfaction and job performance criterion such as motivation and productivity. Although the construct of WWB can also be used to predict these criteria, its primary advantage lies in its link to SWB. This link opens the door to a wealth of insight that could lead to the development of workplace interventions designed to protect and nurture their staff as well as motivate them to be better employees.

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CHAPTER 2: EMPIRICAL REPORT

ABSTRACT

The aim of this study was to show how findings within the area of subjective wellbeing (SWB) could be extended to apply to more specific domains of life, such as work. To achieve this aim, a new construct was devised termed workplace wellbeing (WWB). It was hypothesized that WWB bears a conceptual similarity to SWB and is defined as an affective sense of wellbeing resulting from the satisfaction of intrinsic and/or extrinsic work values. A secondary aim was to use the constructs of WWB and SWB to more definitively ascertain the importance of work factors on overall wellbeing. It was predicted that there would be no relationship between the constructs, after shared variance attributable to core affect was removed. The participants were 150 employees of Australian Unity (60% female, 40% male) with a mean age of 38.95 years ($SD=10.56$ years). Participants were required to complete an 84-item questionnaire in order to assess their levels of SWB and WWB. Dispositional variables such as personality and core affect were also measured. Although the conceptualisations of both SWB and WWB as primarily involving the constructs of core affect and cognitive evaluations of domain satisfaction were supported, it was found that core affect was the strongest predictor of those used. Given the apparent comparability of the constructs of WWB and SWB, the relationship between the two was assessed. It was found that the two constructs do not share a relationship beyond that attributable to core affect. The implications of these findings were discussed in relation to the workplace, with the suggestion that improving the quality of working life may lead to increases in motivation and performance. Additionally it was recommended that the measurement of subjective variables should control for the effects of core affect so as to ensure robust results.

With the recent controversy over the Australian government's proposed industrial reforms, increasing attention has been given to the quality of working life. But how much do we really know about how governmental changes affect the quality of working life, other than what the media or political campaigns would have us believe? More generally, how does people's satisfaction within the workplace affect their satisfaction with life overall?

This latter question is not a new one within the psychology literature, with it generally assumed that job satisfaction should share substantial variance with life satisfaction because of the high proportion of time adults spend at work. Some speculation surrounds the causal ordering of these two constructs, some believing life satisfaction to be a determinant of job satisfaction (whereby overall life satisfaction 'spills over' into satisfaction with life domains) and others believing job satisfaction to be one of the determinants of overall life satisfaction (Rode, 2004). Regardless of the causal ordering, results have generally indicated that job and life satisfaction are positively but not strongly related (Judge & Watanabe, 1993; Rice, Near & Hunt, 1980; Rode, 2004).

The low correlations generally found between these two constructs raise a number of interesting points. On the one hand, if job satisfaction is just a component of overall life satisfaction, the low correlations may indeed be a true reflection of the relationship between the two constructs. After all, there are many other life domains, beside work, that may contribute to a person's subjective wellbeing (SWB) (e.g. relationships, leisure activities etc.) However, I believe an alternative explanation for the weak relationship lies in the deficiency of the constructs, which, as the names suggest, pertain only to satisfaction and not, more generally, to wellbeing.

Subjective wellbeing can be conceptualised as the mixture of cognition and affect that represents the general sense of wellbeing we have in relation to our life. Within this definition, life satisfaction is often thought to relate most strongly to the cognitive component, involving evaluations of specific life domains such as work or relationships (Cummins, Gullone, & Lau, 2002; Cummins & Nistico, 2002; Diener, Oishi, & Lucas, 2003; Shmotkin, 1998; Suh, Diener, & Fujita, 1996). The constructs used most often to measure the affective component of SWB are positive and negative affect (PA and NA

respectively; Diener, 2000; Emmons & Diener, 1985), which refer to emotions such as joy and happiness or anger and fear.

Thus, although life satisfaction is an essential element within the conceptualisation of SWB, it is not the only element. In a similar fashion, job satisfaction could be viewed as just a component of a broader construct pertaining to SWB in the workplace. If so, the constructs of job and life satisfaction are incomplete measures of more informative and valuable constructs and, the typical life/job satisfaction studies may reveal only a partial indication of the importance of work life on overall SWB.

The aim of this study was to conceptualise and measure the construct of workplace wellbeing (WWB) so as to shed light on the effects of the workplace on SWB. To do this, two sources of knowledge will be drawn upon: the SWB and the job satisfaction literatures.

5.1 Subjective Wellbeing (SWB): Core affect plus satisfaction with life domains

5.1.1 Component One: Core affect

Over the last few decades, significant progress has been made in understanding SWB with much now known about its sources, components and benefits. Individual differences in SWB have been a primary focus for researchers. This interest led to the landmark finding that individuals levels of SWB are held at a 'set-point' that is remarkably stable over time (Cummins, 1995, 1998; Emmons & Diener, 1985; Headey & Wearing, 1989; Lucas, Clark, Georgellis, & Diener, 2003). This stability is believed to be due, in part, to SWBs dependence on dispositional factors such as personality (particularly extraversion and neuroticism) and affect (Cropanzano, Weiss, Hale, & Reb, 2003; Hotard, McFatterm, McWhirter, & Stegall, 1989; Steel & Ones, 2002). More recently however, the construct of core affect has shown to be a useful indicator of individual differences in SWB and perhaps even more important than personality (Davern, 2004).

Core affect has been defined by Russel (2003) as the 'simplest raw (non-reflective) feelings evident in moods and emotion' (p.148). He described the construct as an object-free blend of pleasant and unpleasant feelings and arousal that influences all human activity. Although Russel did not make a direct reference to how this affective state is linked to SWB, Davern (2004) has formed a bridge by creating a model of SWB that

consists of four core affective adjectives (contented, happy, excited and satisfied). She found that when these adjectives were used together, they explained 64% of the variance in individuals' responses to the question, 'How satisfied are you with your life as a whole?'

Simply asking individuals, 'How satisfied are you with your life as a whole?' is one of the simplest methods of measuring global SWB. When answering this abstract question, individuals tend to make a relatively fast decision using cognitive short cuts called heuristics (Tversky & Kahneman, 1974). Thus, rather than making a thorough evaluation of all the domains in their life, people attend to how they feel at the time of questioning (Veenhoven, 1996). Davern's (2004) results suggest that core affect may be what it is we access when asked to make abstract evaluations about our life such as the classic 'life as a whole' question. That is, core affect may represent the SWB set point.

5.1.2 Component Two: Satisfaction with life domains

While abstract questions provide a useful method of measuring the affective component of SWB, it does not allow a specific measurement of SWB in relation to personal circumstances (Cummins, Eckersley, Pallant, Van Vugt, & Misajon, 2003). Thus, a secondary mode of SWB measurement is to ask more specific questions such as satisfaction with life domains. Unlike questions of global satisfaction, questions pertaining to life satisfaction are generally thought to provide a degree of cognitive evaluation as respondents are directed to attend to a particular life domain (Diener, 2000).

There are, quite literally, hundreds of scales claiming to measure SWB in relation to life domains (see <http://www.deakin.edu.au/research/acqol/instruments/index.htm> for a review). One such measure is the Personal Wellbeing Index (PWI; International Wellbeing Group, 2005). In comparison to other measures, the PWI is unique in that its seven core domains are conceptualised to represent the first level breakdown of the classic 'life as a whole' question. Those domains are: standard of living, health, achievement, personal relationships, safety, community connectedness and future security (e.g. How satisfied are you with your future security?).

5.2 Workplace Wellbeing (WWB): Core affect plus satisfaction with work domains

If the WWB construct is to be directly comparable to the SWB so as to more definitively assess their relationship, its conceptualisation should be modelled after that of SWB. In other words, WWB could be thought of as a blend of core affect and satisfaction with work domains. Two areas that may be combined to form the domains of WWB are extrinsic and intrinsic motivation and work values.

5.2.1 Extrinsic and Intrinsic Motivation

Extrinsic motivation refers to the desire to work due to external factors such as pay. Intrinsic motivation refers to a desire to work due for the psychological rewards associated with the work itself such as achievement and responsibility. Herzberg (1973), one of the pioneering researchers in this area, terms these the hygiene and motivator factors respectively. He believes hygiene factors are extrinsic to the job, including factors such as company policy, salary, interpersonal relationships, working conditions and supervision. These stimuli induce pain-avoidance behaviour, that is, behaviour that ensures the environment remains comfortable or basic needs are met. The motivator factors are intrinsic to the job such as achievement, recognition for achievement, responsibility and advancement. From this, Herzberg (1987) asserted that the key to motivating employees is enhancing the intrinsic aspects of the work itself rather than the extrinsic factors.

In the decades that have followed Herzberg (1973, 1987), a multitude of studies have supported and extended his assertions. For example, using a sample of health care workers, Randolph (2005) found that intrinsic factors such as professional growth and having a work environment in line with personal values were more significant in predicting job satisfaction and desire to stay on the job than were extrinsic factors such as pay. Supporting these findings in a Taiwanese sample, Lu (1999) found that intrinsic work factors were positively related to overall job satisfaction while extrinsic factors were positively related to depression. As well as predicting job satisfaction, high intrinsic motivation has been related to the subjective experience of time passing more quickly, a tendency to lose track of time and other general symptoms of high work involvement and interest sustainment or 'flow' (Conti, 2001). Indeed, Xiang, Chen and Bruene (2005)

found that interest in the activity (or job) was the most important intrinsic factor in predicting future motivation, over and above other intrinsic and extrinsic factors.

5.2.2 Work Values

A related construct to intrinsic and extrinsic motivation is that of work values. These denote the degree of worth, importance and desirability an individual places on what happens at work (e.g. recognition for work well-done, use of abilities and knowledge; Knoop, 1991, 1995). Because work values specify what aspects of work are important to a person (and presumably what they enjoy doing at work), they also provide a valuable means of understanding both the intrinsic and extrinsic aspects of WWB. For example, a study by Knoop (1994) used a factor analysis to assess the relationship between 16 work values taken from Elizur (1984) and 5 job satisfaction items taken from Hatfield, Robinson and Huseman's (1985) Job Perception-Scale. He found that a combination of these work values and job satisfaction items factor analysed into distinct intrinsic and extrinsic factors. For example, work values such as doing meaningful work, using one's abilities and knowledge and exercising responsibility loaded on the intrinsic factor while job satisfaction factors such as satisfaction with pay, supervisors and promotions and work values such as working conditions and convenient hours of work loaded on an extrinsic factor. Although Knoop's primary interest was to assess the independence of work values and job satisfaction, his study provides an excellent base from which to derive a construct of WWB.

5.3 Summary and Hypotheses

On the basis of the previously reviewed literature, WWB may be defined as an affective sense of wellbeing resulting from the satisfaction of intrinsic and/or extrinsic work values. To test the theories that led to this conceptualisation, the following hypotheses were proposed for the current study:

5.3.1 Model of SWB: Hypothesis 1

That core affect plus satisfaction with life domains, as measured by the PWI, will explain substantial variance in the global measurement ‘How satisfied are you with your life as a whole’. SWB is conceptualised as containing both affective and cognitive components. Thus, it may be predicted that a considerable proportion of its variance will be explained by combining a measure of general affectivity with a measure of domain satisfaction.

5.3.2 Model of WWB: Hypothesis 2

That core affect plus satisfaction with intrinsic and extrinsic work values, will explain substantial variance in the global measurement, ‘How satisfied are you with your job as a whole’. Rather than stemming from theory, this hypothesis is based on current understanding of the components of SWB. As WWB is hypothetically an extension of SWB to within the workplace, it is argued that the theories and knowledge pertaining to SWB also pertain to WWB.

5.3.3 The relationship between SWB and WWB: Hypothesis 3

That WWB, as measured by either the WWBI or satisfaction with job as a whole (SJAW), will not account for unique variance in SWB, as measured by either the PWI or satisfaction with life as a whole (SLAW), after core affect has been controlled for. Previous studies have shown that, at best, only a weak relationship exists between the constructs of life and job satisfaction (Rice et al., Rode, 2004). It is expected that this weak relationship will extend to the broader constructs of SWB and WWB. As it has been found that wellbeing is primarily affective however (Davern, 2004), it is predicted that any relationship existing between SWB and WWB will be a product of core affect.

6. METHOD

6.1 Participants

Participants were selected as a sample of convenience from Australian Unity (AU). AU is an integrated financial services group that specialises in health care, investments and insurance. Participation was voluntary and consent was indicated by the return of an anonymous questionnaire. Of the 552 questionnaires sent out, 27% were returned giving a sample of 150 participants, ranging in age from 16 to 64 years. The mean age was 38.95 (SD=10.56) years. 60.7% of the sample was female, which is highly representative of the female to male ratio of employees at AU (62:38 respectively).

Although the target population included AU employees within almost all states of Australia (excluding the Northern Territory and Tasmania), an overwhelming proportion of the sample was from Victoria (87.3%). The majority of the sample was married (51.3%), whilst others reported being either unmarried (21.3%) or in de facto relationships (16.7%). A small number of employees were separated, widowed or divorced (3.3, 1.3 and 6% respectively).

The majority of the sample was employed full-time by AU (86%) with only small proportions working either part-time or casually (11.3 and 2.7% respectively). This ratio is also highly representative of the AU population, where the ratio of fulltime to part-time to casual employees is 83:9:8. More than half of the sample classified themselves as team members (56%) with the remainder being either team leaders/supervisors (9.3%), managers (33.3%) or general managers (1.3%). The median length of continuous employment was 2 to 5 years. Eight percent of the sample reported AU as their only place of employment with 12 percent stating they had another job outside of AU.

6.2 Materials

An 84-item questionnaire was constructed titled the *Australian Unity Workplace Wellbeing Index* (Appendix A). This contained 10 demographic items, which were taken from AU's annual *Our People* survey, version 6, and survey 12 of the *Australian Unity Wellbeing Index*. All of the component scales were changed from their original response format (generally 5- or 7-point Likert scales) to 11-point end defined scales. Eleven-point

end defined scales are more sensitive than Likert scales and thus are the recommended means of SWB measurement (Cummins & Gullone, 2000).

6.2.1 SWB

Two methods were employed for the measurement of SWB: The Personal Wellbeing Index (PWI; International Wellbeing Group, 2005) and a single-item measure asking ‘How satisfied are you with your life as a whole?’ The single item was included as a comparison to the PWI and although it refers to ‘satisfaction with life’ it is intended as an abstract measure of SWB and not as a measure of life satisfaction. As was mentioned earlier, SWB is broader in scope than life satisfaction and the primary focus of this study.

The PWI represents SWB as the aggregation of satisfaction with seven domains: standard of living, health, current achievement, personal relationships, safety, community belonging and future security. These domains are designed to represent the first level deconstruction of satisfaction with life as a whole and, when summed, indicate an individual's SWB. Each is prefaced by/with the stem, ‘How satisfied are you with...’, for example, ‘How satisfied are you with your standard of living’. The scale anchors are ‘Very Dissatisfied’ (0) and ‘Very Satisfied’ (10). Cummins (2003) reported a reliability coefficient of .82. The corresponding coefficient in this study was .85.

6.2.2 The Big-Five Model of Personality

Although most of the inventories designed to measure the Big-Five model of personality typically use around 40 to 240 items (e.g. the 60-item NEO-FFI; Costa & McCrae, 1992), recent studies have found the five factors (i.e. extraversion, neuroticism, openness to experience, agreeableness and conscientiousness) can be reliably measured using just 10 items (Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow & Swann, 2003). These authors report that the TIPI has adequate levels of convergent and discriminant validity, test-retest reliability (.72) and patterns of external correlates.

6.2.3 Core Affect

Core affect was measured by a scale consisting of the four core affective adjectives used by Davern (2004; Content, Happy, Excited, Satisfied). Participants were instructed to rate how strongly each of the affects describes how they generally feel (e.g. 'How content do you generally feel?') The response scale is 'Not at all' (0) and 'Extremely' (10). Although the psychometric properties of this scale are yet to be extensively reviewed, the current study found a Cronbach alpha level of .92. Principal components analysis revealed that all four items were loading strongly on just one factor which was interpreted to be the general affectivity Davern defined as core affect (see Appendix B for factor loadings). This factor explained just over 80% of the variance in the four items.

6.2.4 WWB

A new scale was constructed for the purpose of measuring the construct of WWB, which is a construct unique to this study. As discussed earlier, WWB is conceptualised as an application of SWB to the area of work. Thus, it is defined as mixture of affect and cognition that represents our personal sense of wellbeing within, or in relation to, the workplace. Because of its conceptual similarities to the construct of SWB, the process for its measurement was fashioned after that of SWB (i.e., using both a single-item and multiple-item scale).

Constructing the single-item WWB scale simply involved changing the wording of the single-item SWB scale to 'How satisfied are you with your job as a whole?' The multiple-item scale, which was named the Workplace Wellbeing Index (WWBI), contained items requiring more specific evaluations of WWB and was intended as the first level breakdown of satisfaction with job as whole. The scale was formed on the basis of research by Knoop (1994), who combined a five-item measure of job satisfaction with a 16-item measure of work values to create a five-factor model of work values/satisfaction: intrinsic work-related values, intrinsic work-outcome values, extrinsic job outcome values, extrinsic job-related values and extrinsic people-related values. The items included in this factor analysis were deemed appropriate to form the domains of WWB on the basis of the following: (a) they covered a broad range of workplace specific items, (b) they were evaluative in nature, thus requiring the use of cognition as well as affect, (c) they allowed

the use of the stem 'How satisfied are you with...', thus being directly comparable to the PWI without the influence of methodological effects and (d) combining job satisfaction with work values fit the theoretical underpinnings of the construct as being broader and more affective than typical job satisfaction measures.

Six of the initial 21 items used in Knoop (1994) were removed for reasons of redundancy, low factor loadings or ambiguity. The remaining 15 items formed the WWBI, which was measured using very dissatisfied (0) and very satisfied (10) as the scale anchors. The preface was 'Thinking now about your work at Australian Unity, how satisfied are you...' e.g. 'with how meaningful your work is?' The full scale as used in this study can be seen in Appendix A.

As this is a new scale, its psychometric properties were tested prior to analysis using PCA and are included as Appendix B. As a result of this analysis, two factors were extracted and labelled as extrinsic and intrinsic satisfiers. The Cronbach alpha levels of these scales were .92 and .89 respectively. The two subscales were strongly and negatively correlated ($r=-.55$) and thus could also be combined to form a composite construct, termed WWB.

6.3 Procedure

Following approval from the Deakin University Human Research Ethics Committee and Australian Unity (AU; both Appendix C), an email was sent to all employees (Appendix D) by the Group Strategy and Development general manager, Mr. Nic Mesic. The purpose of this email was to notify employees that they would soon receive a questionnaire at their home address. It outlined the purpose of the study and invited them to participate, stressing that participation was not a condition of employment. The email also informed employees that the questionnaire was to be completed anonymously and that AU would not have access to individual responses.

Approximately one week after receiving this email, AU employees received a package at their home address, which included a covering letter signed by AU (Appendix D), the plain language statement (Appendix D), the questionnaire and a reply-paid envelope. The package was sent by AU's mail house to protect participants' identities. Participants were given two weeks to complete the questionnaire, within which period

they were to return the questionnaire to Deakin University using the reply paid envelope provided.

7. RESULTS

7.1 Data Screening and Preliminary Analyses

SPSS version 12.0 (SPSS Inc., 2003) was used to screen and analyse data. All data are presented according to Percentage Scale Maximum scores (%*SM*). For any scale that is rated 0-*x*, %*SM* is calculated through the formula:

$$x \times \frac{100}{k \text{ scale points}-1}$$

This procedure standardizes data onto a 0-100 scale.

7.1.1 Accuracy of data entry and univariate outliers

The plausibility of all means, standard deviations and range of all values was first considered to eliminate data entry errors and to assess for unreasonable values such as those caused by response sets. The means and standard deviations for all measured variables are presented in Table 1.

A total of 27 univariate outliers and three extreme values were found by examining *z*-scores in the data file. The variables on which these were found were SWB, personality, core affect and intrinsic and extrinsic WWB. Comparison of the means of these variables with their corresponding 5% trimmed means revealed that none of the outliers influenced mean scores (Pallant, 2001). Thus, it was decided to retain all outliers.

Table 1
Means and Standard Deviations for all Measured Variables

Measured Variables	<i>X</i>	<i>SD</i>
SWB	71.11	12.54
Agreeableness	70.54	15.86
Extraversion	58.95	19.49
Conscientiousness	76.44	13.70
Emotional Stability	62.69	20.85
Openness to Experience	68.48	14.69
Core Affect	69.45	14.25
Intrinsic WWB	70.57	18.02
Extrinsic WWB	64.45	17.50
WWB composite score (WWB)	66.79	16.34
Satisfaction with Life as a Whole (SLAW)	73.27	16.89
Satisfaction with Job as a Whole (SJAW)	67.67	21.30

7.1.2 Missing values

The level of missing data across variables was less than 5% with the exception of household income for which 8% of cases had missing data. As recommended by Tabachnick and Fidell (2001), a series of *t*-tests, via the SPSS missing values analysis, were used to ascertain whether missing data on household income were related to any other variables. All *t*-tests were non-significant indicating that such values were missing at random. Therefore, missing values, including those for household income, were replaced by regression and rounded to the nearest integer. Regression replacement is a more sophisticated technique of replacement than mean substitution and more objective than using prior knowledge (Tabachnick & Fidell, 2001). Following this, responses to all scales were averaged to form composite scores for those scales with multiple items. Only composite scores were used for the remaining data screening and analysis.

7.1.3 Normality

Each scale was assessed for significant departures from normality. *Z*-scores for skew and kurtosis were derived; those exceeding 3 were considered as containing possible departures from normality, and were assessed further by examination of the histogram, normal probability plot, and detrended probability plots. Variables that did not show clear departures from normality in these plots were retained unaltered. Excessive negative skewness was found for three variables: satisfaction with life as a whole (SLAW), satisfaction with job as a whole (SJAW) and intrinsic WWB ($z=-6.85$, $z=-5.42$ and $z=-6.46$ respectively). Intrinsic WWB was also significantly and positively kurtotic ($z=6.72$). Although it is recommended that *z*-scores should fall within the range of -3.0 to 3.0, skewness or kurtosis is not considered severe enough to influence data unless it falls outside of -7.0 to 7.0 (Cohen & Cohen, 1983). As no *z*-scores were outside this range, no transformations were made.

7.1.4 Evaluation of multiple regression assumptions

As the analyses for this study consists only of multiple regressions, all 12 variables were entered into a standard regression for the purpose of testing assumptions. Prior to this, the ratio of cases to IVs was assessed to ensure an adequate power level and a meaningful regression solution. The rule of thumb suggested by Tabachnick and Fidell (2001) was adopted:

$$N \geq 50 + 8m$$

where *m* is the number of IVs. It suggested 146 cases were required, which was within the confines of this study ($N=150$).

All variables were tested for multicollinearity and singularity. Low tolerance values, which suggest the possibility of multicollinearity (Tabachnick & Fidell, 2001), were found for several of the variables: SLAW, SJAW, SWB, Core Affect and WWB (Intrinsic). Very high bivariate correlations were found between Core Affect and SWB ($r=.76$), Core Affect and SLAW ($r=.80$), SLAW and SWB ($r=.77$) and SJAW and Intrinsic WWB ($r=.76$). Although Tabachnick and Fidell (2001) suggest some risk is

associated with retaining highly correlated variables ($>.70$) due to the risk of inflated regression coefficients, it was decided to retain all variables for further analysis, as each of these constituted an essential variable in the proposed analyses.

Thereafter, the assumptions of normality, linearity and homoscedacity of residuals were assessed from normal probability plots and residual scatterplots. No violations were found. Furthermore, examination of the Durbin Watson statistic revealed that no serious autocorrelation of errors was present in the data.

Two cases were identified by Mahalanobis distance as multivariate outliers, $p < .001$. Examination of both cases revealed that the values adopted over each of the 12 variables were reasonable. Therefore, it was decided to retain these for the analyses, as they represented acceptable values from the population.

7.2 Data analysis

7.2.1 Model of SWB: Hypothesis 1

To test the hypothesis that a combination of core affect and domain satisfaction would significantly predict variance in satisfaction with life as a whole, a sequential multiple regression was conducted. Core affect (comprising of excited, happy, satisfied and content) was entered at step 1 whilst satisfaction with life domains, as measured by the PWI, was entered at step 2. Table 2 displays the results of this regression.

Table 2

Summary of Sequential Regression Analysis for Variables Predicting Satisfaction with Life as a Whole (N=150)

	<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²
Step 1				
Core Affect	.67	.05	.72***	.58
Step 2				
Standard of Living	.32	.06	.28***	.05
Health	.04	.05	.04	.00
Current Achievements	.21	.06	.23**	.02
Relationships	.16	.05	.19*	.02
Safety	.05	.07	.04	.00
Community	-.03	.05	-.03	.00
Future Security	-.08	.06	-.08	.00

Note. $R^2 = .64^{**}$ (Adj. $R^2 = .63$) for Step 1; $\Delta R^2 = .13^{**}$ for Step 2.
 * $p < .01$; ** $p < .001$; *** $p < .0001$

Core affect contributed 64% of the variance in participant's responses to the global measure of SWB ($R^2 = .64$, $F_{inc}(1, 148) = 259.29$ $p < .0001$). Domain satisfaction added 13% of variance to the prediction which was also significant ($F_{inc}(7, 141) = 11.25$, $p < .0001$). Together, core affect and domain satisfaction explained almost 77% of the variance in satisfaction with life as a whole.

7.2.2 Model of WWB: Hypothesis 2

A sequential regression analysis was also used to test the model of WWB, which included core affect as step 1 and satisfaction with intrinsic and extrinsic work values at step 2 and 3 respectively. The decision to enter the WWB factors in this order was based on previous studies finding intrinsic factors to be more predictive of job satisfaction than extrinsic factors. This decision was supported by the finding that intrinsic WWB correlated more

highly with SJAW than did extrinsic WWB ($r=.76, p<.01$ vs. $r=.54, p<.01$). As can be seen in Table 3, both core affect and intrinsic WWB explained significant proportions of variance in SJAW ($R^2=.36, F_{inc}(1,148)=84.08, p<.0001$ and $\Delta R^2=.36, F_{inc}(1,146)=191.82, p<.0001$ respectively). Extrinsic WWB also added significantly to the prediction ($\Delta R^2=.05, F_{inc}(1,146)=34.24, p<.0001$). Together, core affect, intrinsic and extrinsic WWB accounted for 77.6% of the variance in satisfaction with job as a whole ($p<.0001$).

Table 3

Summary of Sequential Regression Analysis for Variables Predicting Satisfaction with Job as a Whole (N= 150)

	<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²
Step 1				
Core Affect	.09	.01	.60*	.36
Step 2				
Intrinsic WWB	.08	.01	.71	.03
Step 3				
Extrinsic WWB	.04	.01	.32*	.05

Note. $R^2=.36^*$ (Adj. $R^2=.36$) for Step 1; $\Delta R^2=.36^*$ for Step 2; $\Delta R^2=.05^*$ for Step 3
* $p<.0001$

7.2.3 The relationship between subjective and workplace wellbeing: Hypothesis 3

As has been shown by the previous analyses, core affect plays a significant role in the constructs of WWB and SWB, whether measured by abstract single questions or multiple-item scales (the WWBI and the PWI respectively). As a function of this, it was expected that the relationship between these two constructs would be largely explained by core affect. To test this prediction, a number of regressions were run. As there have been two

different methods employed to test the two constructs of SWB and WWB (i.e. a single-item and a multiple-item scale for each) the DVs and IVs used in these regressions differed slightly so as to ascertain whether the relationship between the two constructs (and core affect) differs as a function of measurement. The results of these four analyses are presented in Table 4.

Table 4

Summary of Standard and Sequential Regression Analyses using Workplace Wellbeing (WWBI and SJAW) to predict Subjective Wellbeing (PWI and SLAW; N=150)

DV	PWI					SLAW			
	<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²		<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²
WWBI	.41	.05	.53***	.28	SJAW	.45	.05	.56	.32
	<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²		<i>B</i>	<i>SE B</i>	β	<i>sr</i> ²
Step 1					Step 1				
Core Affect	.67	.05	.76***	.58	Core Affect	.10	.01	.80***	.64
Step 2					Step 2				
WWBI	.14	.05	.18**	.02	SJAW	.10	.05	.13*	.01

Note. R^2 for standard regression of WWBI against PWI is .28*** (Adj. R^2 =.28)
 R^2 for sequential regression of WWBI against PWI is .58*** (Adj. R^2 =.58) for Step 1; ΔR^2 =.02** for Step 2
 R^2 for standard regression of SJAW against SLAW is .32*** (Adj. R^2 =.31)
 R^2 for sequential regression of SJAW against SLAW is .64*** (Adj. R^2 =.63) for Step 1; ΔR^2 =.01* for Step 2
 * p <.05; ** p <.01; *** p <.0001

To begin, the relationship between SWB and WWB, as measured by the PWI and WWBI respectively, was explored using a standard regression. The results indicated that WWB explained 28.3% of the variance in SWB ($F_{inc}(1, 148)=58.31, p<.0001$.) However, in a subsequent sequential analysis that controlled for the effects of core affect, the amount of variance explained in SWB by WWB reduced to 2.3% ($F_{inc}(1, 147)=8.53, p<.01$). A

similar relationship was found between SLAW and SJAW. Using a standard regression, SJAW explained almost 32% of the variance in SLAW ($F_{inc}(1, 148)=69.13, p<.0001$). However, when core affect was controlled for in a sequential analysis, the amount of variance SJAW explained in SLAW reduced to 1.1% ($F_{inc}(1,147)=4.62, p<.05$.)

7.3 Summary of Results

The conceptualisations of SWB and WWB as primarily involving the constructs of core affect and cognitive evaluations of domain satisfaction were supported. For the SWB model, a combination of core affect and responses to the PWI explained almost 77 percent of the variance in the question ‘How satisfied are you with your life as a whole?’ This question was used as a global measure of SWB. For the WWB model, a combination of core affect and satisfaction with intrinsic and extrinsic work values explained almost 78 percent of the variance in the global measure of WWB, ‘How satisfied are you with your job as a whole?’ Given the apparent comparability of the constructs of WWB and SWB, the relationship between the two was assessed. It was found that the two constructs do not share a relationship beyond that attributable to core affect.

8. DISCUSSION

8.1 SWB as core affect and satisfaction with life domains

Using sequential regression analysis, almost 77 percent of the variance in SWB was explained by a combination of their core affect and satisfaction with life domains. As core affect is thought to represent how it is we generally feel (Davern, 2004) and satisfaction with life domains is commonly perceived to be a cognitive process (Cummins et al., 2003), this result supports the conceptualisation of SWB as a mixture of cognition and affect.

However, although domain satisfaction was an important addition to the model, core affect was a far greater influence, contributing 64 percent of variance to the prediction. This result directly replicates the findings of Davern (2004) and supports her conclusion that SWB is primarily an affective construct. This finding, coupled with evidence in the literature that SWB levels are remarkably stable over time, suggests that SWB set point may be genetically determined. If individuals are genetically programmed

to experience set levels of happiness over the course of their lifetimes, it may be that interventions aimed at increasing levels of happiness beyond this point are futile. This is not the first time such an implication has been made. For example, in a previous study, Brickman and Campbell (1971) lamented that people are permanently trapped on a 'hedonic treadmill', continually pursuing the possibility of greater happiness yet doomed to remain as they started due to SWBs dependence on unchangeable factors.

8.2 WWB as core affect and satisfaction with intrinsic and extrinsic work values

The conceptualisation of WWB as an affective sense of wellbeing resulting from the satisfaction of valued work domains was supported by the finding that a model of WWB consisting of core affect and satisfaction with intrinsic and extrinsic work values explained almost 78 percent of the variance in employees satisfaction with their job as a whole. As this model was based on current understanding of the construct of SWB, this supports the aim of this study to create a construct of WWB that is directly comparable to SWB. The construct of WWB may be useful for a number of reasons. The first is that it allows a more comprehensive understanding of the impact of work life on overall SWB. This can be achieved not only by directly measuring the correlation between WWB and SWB (see hypothesis 3) but also by comparing answers to individual items on the WWBI (e.g. 'How satisfied are you with the sense of achievement you receive from your work') to items on the PWI (e.g. 'How satisfied are you with what you are currently achieving in life') or even to the individual's SWB overall. An additional advantage lies in the specificity of the WWBI. This may help employers understand what aspects of the workplace need to be changed in order to improve employee wellbeing.

An additional finding in relation to the construct of WWB was that its intrinsic elements were more predictive of employee's satisfaction with their job as a whole than were the extrinsic elements. Although interesting, this relationship is not surprising given Herzberg's motivator-hygiene theory (1974). According to this theory, it is the work itself (e.g. opportunities for achievement and recognition) and not the work environment (eg, work conditions, pay and supervisors) that both satisfy and motivate employees. Although this theory was formed several decades ago, current research in the area continues to provide the theory with empirical support (e.g. Randolph, 2005; Xiang et al., 2005). If

employee satisfaction with intrinsic work factors is indeed linked to greater motivation and performance as Herzberg (1974) and others suggest (e.g. Wiley, 1995; Li & Lee, 2004; Gaziel, 2001), the current findings have important implications for how employers should manage employees. For example, rather than changing external factors such as salary or work conditions, it may be beneficial for employers to actively work to enrich the content of the work itself, such as opportunities for achievement and recognition (Xiang et al., 2005). As a result of such enrichment, employees may be more intrinsically motivated, task-focused and productive (Conti, 2001; Li & Lee, 2004; Locke & Latham, 2004).

8.3 The influence of WWB on SWB

As was shown in the final analysis, although a significant relationship was originally found between SWB and WWB, this correlation reduced to almost nothing after controlling for the effects of core affect. Furthermore, this result remained, regardless of the method used to measure the two constructs (i.e. single or multi-item scales). Two primary issues must be noted in relation to this finding. The first relates to the troubling implication that core affect may have inflated the correlations between these two constructs in the past. The second and even more alarming implication is that the correlations between a number of other subjective variables, particularly those measured at an abstract level, may also be inflated by core affect. This suggests that future studies involving subjective variables or abstract measurements may be required to control for core affect if they are to obtain robust results.

If indeed the effects of core affect have been confounding past results as this study suggests, then the finding that almost no relationship exists between the two constructs after core affect is controlled for may be the most accurate estimation to date. As such, it must be speculated as to why this is the case. The first and most obvious possible explanation is that we may simply draw our sources of SWB from more meaningful life domains such as leisure and relationships and not from our work. Given that we spend so much of our adult working lives in employment however, this explanation is perplexing. A more likely explanation may be that we cognitively manipulate our perceptions of what happens to us at work so as to limit its influence on our overall wellbeing. For example, someone who feels he is not achieving anything at work may decrease the importance of this work value and instead focus on more positive aspects such as relationships with co-

workers. The tendency for people to exhibit focusing illusions (def) or self-deception in order to foster wellbeing has been previously noted in the literature (Colvin & Block, 1994; Diener, Lucas, Oishi, & Suh, 2002; Robinson & Ryff, 1999). A further possible explanation is that employees simply adapt to problems or stressors in the workplace to a point where they no longer influence overall happiness (Brickman, Coates, & Janoff-Bulman, 1978; Lucas et al., 2003; Lyubomirsky, Sheldon, & Schkade, 2005)

8.4 Limitations and conclusions

The results of the current study should be interpreted within the context of a number of limitations. Firstly, the self-report nature of the study may have introduced bias due to social desirability effects. Secondly, this study utilised a convenience sample, which may limit the generalisability of findings. However, as the demographics of the sample show, there was quite a large degree of variability within the sample in terms of age, employment type, job position and job type. This may allow more freedom for generalising results than typical convenience samples offer. Lastly, a confounding may have arisen in relation to the variables of core affect and SLAW, due to both measurements using the word 'satisfied'. It is suggested that future research replaces the single-item measure of SWB, that is, 'How satisfied are you with you life as a whole' with 'How do you feel about your life as a whole.' This use of the word 'feel' rather than 'satisfied' would be particularly appropriate given the significant finding in this study that the construct of SWB is largely affective.

The current study suggests that knowledge of the antecedents, components and outcomes of SWB can be applied to more specific life domains such as work. Core affect, in particular, has shown itself to be a highly influential construct in relation to both SWB and WWB. As a result, it is suggested that core affect should replace PA, NA and personality as the primary indicator of differences in both general and domain specific SWB. Perhaps more importantly, this study suggests that care be taken to control for the effects of core affect when measuring subjective or abstract factors so as to avoid the possibility of inflated correlations.

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