

Business and Well Being:  
The Experience of Entrepreneurs

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## Abstract

### Business and Well Being: The Experience of Entrepreneurs

Stéphanie Brun de Pontet

This study examined the role of self-regulation moderating the effects of business stressors on quality of life for Canadian entrepreneurs. Research finds the inability to make progress towards goals can negatively influence a person's quality of life (Carver & Scheier, 1998). It was predicted that business difficulties would deplete the emotional and physical resources of entrepreneurs. Challenges to the business were expected to affect the owner's experience of business regrets, and in turn, these would affect their well-being. Building on work demonstrating that self-regulation capacities involved in the adjustment of personal goals serve adaptive functions (Wrosch, Scheier, Miller, Schulz, & Carver, 2003), a theoretical model was elaborated, implying that the relations between business struggles, regrets and entrepreneurial well-being would be moderated by the entrepreneur's goal adjustment abilities. Findings are based on a cross-sectional sample of 140 entrepreneurs from across Canada. Analyses suggest the entrepreneur's health and well-being are adversely affected by negative business outcomes only for those who are not able to adjust their business goals. Further, it was found that among entrepreneurs facing business struggles, those who could reengage in new goals suffered fewer intrusions about their business regrets. Finally, the intensity of the negative emotions about a regret was a predictor of aversive outcomes for quality of life measures, and this was also moderated by the goal adjustment ability of the entrepreneur. The implications of the findings for adaptive self-regulation of business goals are discussed.

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## Table of Contents

List of Figures.....	vi
List of Tables.....	vii
Introduction.....	1
Review of the Literature.....	3
The Present Research.....	31
Method.....	34
Results.....	42
Discussion.....	68
References.....	87
APPENDIX A: Summary means and standard deviations for socio-demographic variables entered as controls in analyses.....	98
APPENDIX B: Summary means and standard deviations for sample business- related characteristics.....	100
APPENDIX C: Correlations of control variables with outcome measures and moderators.....	102
APPENDIX D: Goal adjustment .....	104
APPENDIX E: Business regrets.....	106
APPENDIX F: Quality of life measures: CES-D, Symptom checklist & Life satisfaction.....	109
APPENDIX G: Business performance data.....	111
APPENDIX H: Demographic questionnaire.....	113
APPENDIX I: Consent form.....	115

## List of Figures

### FIGURE 1:

Basic Model .....	33
-------------------	----

### FIGURE 2a:

Business Performance × Reengagement Predicting Depressive Symptoms (CES-D) .....	50
---	----

### FIGURE 2b:

Business Performance × Reengagement Predicting Life Satisfaction .....	50
--	----

### FIGURE 3:

Business Performance × Disengagement Predicting Physical Health Problems.....	52
---	----

### FIGURE 4:

Goal Reengagement × Business Performance Predicting Intrusions.....	58
---	----

### FIGURE 5:

Hot/Despair Emotions × Reengagement Predicting Depressive Symptoms (CES-D) .....	65
---	----

### FIGURE 6a:

Hot/Despair Emotions × Disengagement Predicting Physical Stress Symptoms.....	67
---	----

### FIGURE 6b:

Hot/Despair Emotions × Reengagement Predicting Physical Stress Symptoms.....	67
--	----

List of Tables

TABLE 1

Zero-Order Correlation of Control Variables (Socio-Demographic  
& Business) ..... 43

TABLE 2:

Zero-Order Correlation of Outcome Measures and Moderators ..... 46

TABLE 3:

Hierarchical Regression Analyses Predicting Entrepreneur’s Health Problems,  
Depressive Symptomatology and Life Satisfaction by Goal Disengagement,  
Goal Reengagement and Business Performance ..... 48

TABLE 4a:

Sequential Logistical Regression Analyses Predicting the Presence of  
Omission Regrets by Goal Disengagement, Goal Reengagement and  
Business Performance..... 54

TABLE 4b:

Hierarchical Regression Analyses Predicting the Experience of Emotions and  
Intrusions About the Omission Regret by Goal Disengagement, Goal  
Reengagement and Business Performance..... 55

TABLE 5a:

Hierarchical Regression Analyses Predicting Entrepreneur’s Health Problems,  
Depressive Symptomatology and Life Satisfaction by Goal Disengagement,  
Goal Reengagement and the Presence of Omission Regrets ..... 60



List of Tables (Continued)

TABLE 5b:

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems,  
Depressive Symptomatology and Life Satisfaction by Goal Disengagement,  
Goal Reengagement and the Hot/Despair Emotions About the Omission  
Regret ..... 61

TABLE 5c:

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems,  
Depressive Symptomatology and Life Satisfaction by Goal Disengagement,  
Goal Reengagement and the Intrusions about the Business Omission Regret ..... 62

## Introduction

The North American economy relies on entrepreneurs to fuel income growth, create jobs, and develop innovative products and services (Shane, 1995). In Canada there are 2.6 million small businesses or self-employed individuals. These entrepreneurs are vital to our economy, accounting for 60% of private sector jobs and 43% of private sector economic output (Industry Canada, 2004). While successful small businesses are usually more than a simple extension of their founders, the majority of these businesses cannot function without that entrepreneur. These leaders often possess a unique combination of skills that are difficult to replace or replicate.

The entrepreneur is an individual who identifies an economic opportunity and assembles the human and capital resources to profit from that opportunity. As a result, employment is generated, products or services are created, and other goods and services are purchased – all contributing to the health of an economic system. Given the central role of entrepreneurship in our economy and the unique importance of entrepreneurs to their businesses, it is imperative that we improve our understanding of entrepreneurs. As small businesses are dependent on their founders, when an entrepreneur's well-being or health is compromised, there is a significant risk to the business, and by extension, the employees, and other members of the shared economic community.

Though each entrepreneur is different and the businesses they create unique, their willingness to take the risk to launch a business, and their tenacity to see it through, suggest entrepreneurs share some common traits that set them apart. Further, the ongoing management of a small business involves a host of challenges and stressors that can be considered typical of entrepreneurs. Business founders often have a great deal of their

personal identity vested in the business, making stressors in this domain particularly salient. Stressors in this domain are also very likely as the majority of small businesses face problems and many of them fail. The most common statistic cited is that four out of five ventures will fail within their first five years of operation (e.g., Hisrich, 1990). Even short of failure, over time, stressful experiences are an inherent part of business.

While each entrepreneur's specific experiences are unique, the importance of the business to that entrepreneur and the struggles for survival of small businesses, such as: cash flow shortfalls, employee struggles, etc., are common to most experiences of entrepreneurship. These shared experiences suggest that entrepreneurs may be studied as a group, with the goal of gaining a better understanding of the consequences of business stressors on entrepreneurs' well-being. While it seems likely that a struggling business will generate aversive consequences for its owner, it is important to qualify the nature of this relation. In addition, it is valuable to examine ways an entrepreneur's coping in response to these particular stressors might protect their well-being, and by extension, the stability of their business.

On the basis of these considerations, the present study examined the effects of business performance on measures of well-being for a sample of entrepreneurs across Canada. The role of recent business performance was considered in predicting both the entrepreneur's quality of life, and the presence and intensity of his or her business regrets. These business regrets were also evaluated as predictors of the entrepreneur's well-being. Finally, I examined the moderating role of the entrepreneurs' ability to cope through disengagement from futile business goals, and reengagement in new business goals, in predicting the relationships considered.

## Review of the Literature

### Role of Entrepreneurs in Business and Society

Entrepreneurs have always been key to the free market economies of North America. They have recently gained in importance in the move away from the industrial age, as the economy must accommodate a significant reorganization in the nature of work and how it is executed. Over the last two decades, while large US corporations reduced their payrolls by 5 million jobs, unemployment fell – in part because smaller, entrepreneurial firms created tens of millions of new jobs (Baron, 2000; Kuratko & Hodgetts, 2001). In Canada, we have seen major shifts in the nature of work that have contributed to the growth of entrepreneurship. For example the numbers of self-employed people have grown to represent 16.2% of the labor force, up from 12.6% only two decades ago (Finnie, Laporte, & Rivard, 2002). Across North America, economic statistics suggest that entrepreneurial businesses account for up to 60% of private sector employment and between 40 and 45% of business output (e.g., Carland, Hoy, Boulton, & Carland, 1984; Industry Canada, 1998).

Where few would dispute that entrepreneurship is an essential ingredient to the healthy functioning of a free-market economy, the risks to the individual pursuing this dream are great. The rate of business failure for entrepreneurs in North America is extremely high. It is reasonable to assume that there are certain types of people who willingly pursue such risks, and others who would not. Given our economy's dependence on the risky pursuits of emerging entrepreneurs, a field of study emerged to understand what would motivate a person to undertake such risks, and if there were certain personality variables of entrepreneurs that could predict better business outcomes.

## Field of Entrepreneurship Research

Entrepreneurship studies have existed for decades in the academic domains of business and management. In this field of research, one limitation frequently mentioned is the absence of a universal definition of entrepreneurship (Brockhaus, 1982; Bygrave & Hofer, 1991; Brandstätter, 1997; Miner, 2000). Researchers typically use definitions that suit their academic specialization (Sexton & Bowman-Upton, 1991). For example, some authors suggest an entrepreneur is any manager of a business under a particular size (number of employees or annual revenues), others insist that to qualify as an entrepreneur the person must have created an innovative business process, and yet others require that the entrepreneur has founded the business (Carland et al., 1984). Research has been further hampered by limited use of advanced research methods in this field (Sexton, 1997). In addition, as the field is dominated by business academics, the unit of measure has often been the business entity or innovation (Schumpeter, 1934), not the business leader. This is surprising as a young business is unstructured and likely to be materially affected by the ability and style of the entrepreneur (Markman & Baron, 2003).

Within the subset of the literature focusing on the entrepreneur, most researchers agree that entrepreneurial activity involves accepting risk and failure, taking initiative, putting in effort, using creative thinking and transforming financial or social assets into an economic unit. In addition, studies have found entrepreneurs tend to be energetic, goal oriented, and independent (e.g., Carland et al., 1984; Hisrich, 1990). In recent years, as the importance of entrepreneurship has grown, a renewed research interest has evolved with an increasingly interdisciplinary approach. While current research now incorporates

ideas from economics, sociology and management, very few have examined the role that psychology could play, which is unfortunate (Baron, 2000).

### Research on the Entrepreneurial Personality

Psychological research involving entrepreneurs has been inconsistent (Baron, 1999). There is the groundbreaking work of McClelland (1961) that explored the motivations and personality attributes of successful individuals, including entrepreneurs. His work suggests that entrepreneurs have a high need for achievement: they prefer situations that require creativity, in which they can take personal responsibility, set moderately difficult goals and receive performance feedback (McClelland 1961, 1987). Subsequent to this early work into the personality of entrepreneurs, there were many failed efforts to understand the psychology of entrepreneurs and discover which traits would reliably predict business success. The premise behind these studies was that unique traits found in entrepreneurs could explain how they perceived and pursued opportunities (Baron, 1998). The earliest of these projects were limited in part, because the scientifically tested theories of personality were in their infancy. In addition, conflicting results are almost inevitable when the group under study is not reliably and consistently defined (Sexton & Bowman-Upton, 1991).

A host of reasonable objections to this line of research have been raised. These include the lack of consistent definition of the term “entrepreneur,” the likelihood that samples will be biased towards successful entrepreneurs (as entrepreneurial failures are more difficult to find and perhaps less likely to participate) and the probability that these traits may be found among any successful group of people (Sexton & Bowman-Upton, 1991). Another meaningful objection was that even if consistent traits can be attributed

to entrepreneurs, it is difficult to determine if these are the cause or the effect of entrepreneurial behavior. In a study that aimed to address this concern, Brandstätter (1997) examined small business owners and compared the personality traits (using Cattell's 16 PF model) of those who had founded their business to those who had inherited or bought into a business. He found that the nature of the entrepreneurial work and experience was similar for both groups but that there were significant differences between these groups on characteristics of emotional stability, independence and openness to experience. In addition, business founders had more personality traits in common with a group of individuals who were intending to start a business, further support that these traits exist a priori to the entrepreneurial experience itself.

Other personality attributes that are frequently associated with entrepreneurs include a need for achievement, a willingness to take risks, self-confidence, perseverance and high energy (e.g., McClelland, 1987; Koh, 1996; Sagie & Elizur, 1999). As compared to managers who are often specialists, entrepreneurs tend to be generalists and "doers", involved in all aspects of their organization (Bird, 1989). Two findings are reliably supported: the personality of an individual can more accurately predict if a person will pursue an entrepreneurial path than whether or not that pursuit will yield success (Herron & Robinson, 1993 cited in Monaughan, 2000); and achievement motivation shows a consistent relationship to entrepreneurial activity (Shaver, 1995). Although there is evidence to suggest that there are certain characteristics that are typical of entrepreneurs (i.e., orientation to achievement and being proactive [McClelland, 1987]), these do not negate the modern contention that there is no single entrepreneurial profile (e.g., Hisrich, 1990; Shaver, 1995).

Though attempts to define the “ideal” entrepreneurial personality have often fallen short, this does not imply that there is no merit in seeking to better understand some characteristics of entrepreneurs as a group. One element common to the vast majority of small businesses is the basic challenge of survival. In fact, small business is treated as a sector of research not because it is a homogeneous group but rather, because of the shared limitations they face by virtue of their limited resources (Carland et al., 1984). Fewer resources imply that these businesses are more vulnerable. For example, limited access to capital may force a small business to shut down in an economic downturn, where a larger business could weather the storm. In addition, smaller businesses are frequently very dependent on the owner-manager. As a result of this dependence, the personal strengths and limitations of the entrepreneur are likely to be reflected in his or her business (Hornaday, 1982). This implies that vulnerability in the entrepreneur translates into vulnerability for the business directly.

While many researchers study entrepreneurs with the assumption that they are individuals with a unique set of character traits (Koh, 1996), most of these studies have been limited by their small ( $N < 60$ ) sample sizes (e.g., McClelland, 1987; Koh, 1996; Monaughan, 2000), and/or analogue samples drawn from business students instead of actual entrepreneurs (e.g., Miner, 2000; Sagie & Elizur, 1999). In addition, business is a diverse field in which it should not be surprising to learn that there are many paths to success, which makes finding common denominators to success even more elusive. Finally, the attempt to match character types with business outcomes is perhaps less informative than research that considers how outcomes are affected by an interaction between personality variables of entrepreneurs and business stressors.



### Social-Cognitive Perceptions of Entrepreneurs

In attempting to resolve some of the inconsistencies found in the research on entrepreneurs, contemporary researchers have begun to turn to theories informed by cognitive psychology (Baron, 1998). For example, given the high rate of business failure, early researchers sought to explain entrepreneurial behavior through the perspective of a high tolerance for risk. Even though research failed to find this trait reliably differentiated entrepreneurs from others, it is an objective fact that entrepreneurs do face a great deal of risk (Busenitz, 1999). Entrepreneurs face at least five different sorts of risks: financial, social and familial, physical and psychological, and organizational and also career development (Bird, 1989). One possible explanation for why the early research did not find that entrepreneurs had an unusual view of risk is that it did not use measurement tools that distinguished risk-taking propensity from measures of perceived risk (Brockhaus, 1982). When the perception of risk is evaluated (cognition), there is a pattern that appears to differentiate entrepreneurs from others.

A cross-cultural study found that cognitions could reliably differentiate entrepreneurs from non-entrepreneurs (Mitchell, Smith, Morse, Seawright, Peredo, & McKenzie, 2002). Examining cognitions, researchers found that entrepreneurs did not perceive themselves as risk takers (Palich & Bagby, 1995 in Busenitz, 1999). Compared to non-entrepreneurs, however, business owners are more likely to expect success and believe they have control over outcomes (Monaughan, 2000). As a result of these distortions, they fail to perceive certain risks and are willing acceptors of other risks. In other words, they appear to be risk takers because they misjudge the odds (Kahneman & Lovallo, 1994). Small business owners can perhaps best be described as “opportunity

seekers, not risk takers” (Sexton & Bowman-Upton, 1991, p. 17), as they see an opportunity where others would see unacceptable risk. Entrepreneurs may also manage their experience of risk through cognitive restructuring, such as speaking of business obstacles as “challenges” instead of problems (Bird, 1989).

Entrepreneurs perceive business situations more positively, rely on heuristics, and make cognitive errors due to biases like overconfidence (Baron, 2000). This confidence is resistant to change. Longitudinal research examining the relation between the perceived self-efficacy of entrepreneurs and their business performance demonstrates that perceptions of efficacy are not altered by actual business performance (Chandler & Jansen, 1997). There is some research suggesting the entrepreneur’s overconfidence is a result of their need for achievement and the related conviction that they can put the odds in their favor as a result of personal effort. High achievement individuals (like entrepreneurs) are not susceptible to over-optimistic estimations in straight gambling situations. This distortion emerges in situations where they perceive they can impact the outcome in some way (McClelland, 1961). More recently, Baron (1998) has argued that entrepreneurs are prone to attributing positive outcomes to themselves and negative outcomes to external factors, and can be susceptible to escalation of commitment effects. The escalation of commitment to a failing course of action occurs when an individual persists in a particular investment or strategy even when current feedback suggests that it would be better to abandon this course of action (Bobocel & Meyer, 1994).

Cognitive researchers have found that bias and the use of heuristics are inherent in decision-making processes (Kahneman & Lovallo, 1993). A review of the theories of cognition and the typical work circumstances of entrepreneurs led Baron (1998) to

conclude that the pattern of thinking typically found in entrepreneurs may be understood because “entrepreneurs operate in situations and under conditions that would be expected to maximize such errors and biases” (p.288).

“Entrepreneurs often work in situations that are, by definition, new, unpredictable, complex, and subject to high time pressures. Moreover, entrepreneurs’ commitment to their new ventures is often intense, so they may also experience powerful emotions in connection with their activities. Together, such factors may produce severe information overload, and it is precisely under such conditions that individuals often rely on heuristics to guide their thinking and decision making, and show enhanced susceptibility to various forms of cognitive bias or error.” (Baron, 2000, p.15)

Furthermore, some researchers have suggested that today’s entrepreneurs are faced with an overwhelming amount of information. The volume and diversity of information necessary to the start-up and management of a business can lead entrepreneurs to feel overwhelmed, which may encourage them to use avoidant behaviors and to rely on their instincts rather than rational analysis (Hansen & Allen, 1992).

In a study that examined decision making in entrepreneurs by comparing them to business managers in large organizations, it was found that entrepreneurs were more likely to make errors in decision-making tasks due to cognitive biases such as over-generalizing from one example and overconfidence (Busenitz, 1999). These tendencies may be exacerbated by circumstances. For example, especially in the early stages of the business’ life, the owner-manager is faced with a large number of critical decisions extending beyond their expertise and for which there may not be an established “right way”. As a result, entrepreneurs may rely on simplifying heuristics to cope with making

decisions in this complex environment. While this style may at times lead to choices adversely affected by cognitive biases, this tendency also may make it more likely that the entrepreneur will actually launch a business, as a more rational decision maker would be incapacitated by the amount of uncertainty present at the start-up phase of venture formation (Baron, 1998).

In a series of studies on positive illusions, Taylor and Gollwitzer (1995) found individuals who had committed themselves to a particular goal demonstrated a greater sense of personal invulnerability to risk, compared to those who were still deliberating options. Even when prompted to engage in constructive deliberation about their current goal, participants in the post-decision phase reported far fewer of these thoughts than those who had not yet committed to a course of action. The authors conclude it is adaptive to be realistic about one's abilities and options when in a deliberative stage, as this will lead to more informed and reasoned choices. Once a course of action has been selected, however, it may be helpful to have positive illusions as these may encourage the person to persist towards their goal. As entrepreneurs have moved forward on the goal of going into business for themselves, it may not be surprising to see them fall prey to biases such as illusions of control and an unwillingness to deliberate choices in this domain.

Research in the field of personality psychology has found that some individuals (e.g., younger people, or entrepreneurs) have an overly optimistic view about their ability to control their environment. This distortion can be adaptive as it provides them with the motivation to take on the environment and achieve more growth than they otherwise would (Schulz & Heckhausen, 1996). The findings that entrepreneurs may fall prey to cognitive biases that are at times advantageous, and at times problematic, suggest that

there is merit in further examining the interaction between the entrepreneur's approach to challenges, and the stressors they face at work. Further, the studies reviewed to date demonstrate the relevance of the field of psychology to the objective of increasing our understanding of entrepreneurship.

The central research question for the field of entrepreneurial psychology could be: is there something about how entrepreneurs think about, or perceive things, that set them apart from non-entrepreneurs (Baron, 1999)? For example, successful entrepreneurs have typically had a number of previous business defeats. This has led researchers to examine if the surviving entrepreneurs are those individuals who have persisted through setbacks, while non-entrepreneurs are those who give up after the initial failure. Coping well with failure experiences may be an exceptionally adaptive trait in the domain of entrepreneurship. In fact, there is research that suggests entrepreneurs think differently about success and failure (Shaver, 1995), they are more likely than others to dust themselves off and start over after a mistake. In addition, they may have a preference for personal responsibility. In a comparative study of the achievement motivation of students, it was found that those with an entrepreneurial orientation were interested in assuming personal rather than shared responsibility for outcomes (Sagie & Elizur, 1999).

#### Entrepreneurial Motivation and Goals

The psychological constructs of motivation and goal-directed behavior are also important elements of the entrepreneurial process (Kuratko, Hornsby, & Naffziger, 1997). In most cases, an entrepreneurial career is an active choice (Shane, 1995). Though there are many reasons people choose the path of business ownership, the most common reason cited in a sample of 468 women entrepreneurs, and other studies

including men and women entrepreneurs, was independence, or the desire to be one's own boss (Hisrich, 1990; Katz, 1992; Markman & Baron, 2003).

In a study examining the motivation of over 200 active entrepreneurs, Kuratko, Hornsby, and Naffziger (1997) found a four-factor solution to describe goals identified as currently salient for business ownership. These included extrinsic rewards, intrinsic rewards, independence and security for family. These findings imply that research using an outcome measure that defines success exclusively by business performance (often the case in entrepreneurship studies) may not adequately capture the motivation behind entrepreneurial behavior. Broader measures of outcome (e.g., entrepreneur's life satisfaction) may also need to be included in studies of entrepreneurial psychology.

Goals are important because they provide direction, structure and meaning to our lives (Carver & Scheier, 1998). Frese, Fay, Hilburger, Leng, & Tag (1997) found that those who take a lot of initiative are more likely to translate goals into action. They also report that entrepreneurs demonstrate a greater degree of initiative than other sorts of workers. Three different standards can be considered to evaluate one's performance within a particular domain: an absolute threshold of the "best ever," a standard the individual can apply in comparing their current performance to their previous history, and a third standard where the individual compares his or her performance to the standard of their group of reference (others like them) (Schulz & Heckhausen, 1996).

One of the hallmarks of high-achievement oriented individuals (typical of entrepreneurs) is that they tend to set challenging but achievable goals for themselves (McClelland, 1961). In the pursuit of these challenges, these individuals will need to be able to overcome negative feedback or initial failure experiences (more likely in a

challenging rather than non-challenging goal). As a result, psychological resilience to failure is an important ingredient to the successful pursuit of challenging goals. At the same time, while most people understand that performance is dependent on effort, there is a great deal of variability in the beliefs that individuals may have about their ability to invest the required effort in the face of the challenges inherent to their goal (Bandura & Locke, 2003). Based on this line of reasoning, it seems likely that entrepreneurs possess a higher sense of self-efficacy about their ability to persist towards goal attainment. In support of this premise, a link has been demonstrated between self-efficacy and both entrepreneurial intention and performance (Neck, Neck, Manz, & Goodwin, 1999).

As previously stated, entrepreneurs are defined as high achievement-oriented individuals who strive for high but obtainable goals. As even the most successful person will occasionally encounter failure experiences, how individuals cope with setbacks may influence the eventual outcomes of their goals (Schulz & Heckhausen, 1996; Wrosch et al., 2003). There has been some experimental research demonstrating that failure experience in a highly self-relevant life domain will lead individuals to perform better on a subsequent goal-relevant task but worse on a subsequent goal-irrelevant task (Brunstein, 2000). The offered explanation of this research is that individuals will concentrate and work harder on future goal-relevant tasks to reclaim their desired identity, yet will not be able to direct as much attention to less relevant tasks due to intrusions about the relevant setback. Failure experience in non-self-relevant domains will not lead to the same effects, as these setbacks do not generate as many intrusions. This research implies that the centrality of a goal will influence the severity of the consequences of failure.

It is reasonable to assume that a person who is in business for themselves considers the success of their business to be an important goal and is likely to commit a great deal of effort to achieving this goal. Given the high rate of business failure, it is also likely that business people will frequently encounter challenges to this goal. Research suggests that the negative consequences associated with failure experiences can be significantly reduced if a person engages in adaptive self-regulation (Carver & Scheier, 1998; Wrosch, et al., 2003). Entrepreneurs specifically, as they operate in an environment that is constantly changing, will benefit from an ability to respond flexibly to changes and a willingness and ability to try out new things (Brandstätter, 1997).

#### Challenge for Entrepreneurship Research: Variability in Entrepreneurs

One problem with research comparing entrepreneurs to non-entrepreneurs is that this approach assumes too much homogeneity within each group. Some entrepreneurial ventures, like the neighborhood convenience store, begin and remain small, never growing beyond an opportunity for employment for a handful of individuals. Other businesses grow rapidly and eventually change the very nature of their industry, like Microsoft. Even among privately-held, “small businesses,” there is a great deal of variability in the individuals running these enterprises and the stressors they face by virtue of their professional experience. Nonetheless, variability across entrepreneurs is rarely measured, except in studies that seek to establish that more of trait X – i.e.: achievement orientation, will lead to more of outcome Y – i.e.: business success.

It is likely that the dearth of commentary on the variability within the population of entrepreneurs can be attributed to three issues. First, there is the lack of a uniform definition of entrepreneurship. As the category lacks clear parameters, it makes it



difficult to perceive variation within those boundaries. Second, most studies that looked at differences within entrepreneurs were attempting to find a linear relation between a particular trait and business performance, as described above, i.e., more of X will lead to more of Y. These efforts have limited success for reasons previously addressed: lack of definition, poor measures, mediocre samples, etc. The third reason may be a side effect of the need some researchers have to overcompensate for the lack of rigor often found in the field. In order not to be accused of conducting “soft science,” some studies attempt to place entrepreneurs in a complex model, using elaborate mathematical constructs, examining the effects of the variability in the environment and how this influences a singular, fixed construct, “entrepreneur” (e.g., Bygrave & Hofer, 1991).

Although it is rarely addressed in their studies, researchers who study entrepreneurs through the lens of a common personality trait acknowledge that there will be variance on the dimensions of these traits within a group of entrepreneurs (Quick, Nelson, & Quick, 1990). In addition, researchers who argue that there are more salient measures to predict business success (e.g., skills) also argue that even these measures will inevitably interact with contextual variables like business strategy and the nature of a particular industry (Herron & Robinson, 1993). What are lacking are studies that seek to understand this variability directly. For example, though research has found entrepreneurs are good at seeing and exploiting opportunities, few studies have directly measured the variability within this behavior. As an illustration, while many entrepreneurs saw an opportunity for business in the growth of the internet, the size, nature, and quality of the individual businesses each created varied tremendously (Shane, Locke, & Collins, 2003). Furthermore, in a review of studies that considered the risk-

taking propensity of entrepreneurs as compared to the general population, Brockhaus (1982) reports that the variability of scores obtained from the entrepreneurs was similar to that obtained by non-entrepreneurs, suggesting that there is no more homogeneity on this characteristic among entrepreneurs than across the population at large.

Though an excellent case can be made to suggest that entrepreneurs frequently share certain traits as well as experience similar professional challenges, this does not imply that they are a homogeneous group. Regrettably, most of the published research done in this field reports only very summarized statistics, and measures of standard deviation are not typically given to permit comparison between the variability of entrepreneurs versus the variability of non-entrepreneurs on any given construct. The Mitchell et al. (2002) cross-cultural study on entrepreneurial cognitions provides some indirect evidence for variability across entrepreneurs. In this study the authors find differences from one culture to another on the relative importance of certain cognitive sets for entrepreneurs. While the suggestion is that it is cultural context that is influencing these differences, it is an illustration of how the environment can affect the cognitive style of an entrepreneur. In a similar way, we could expect that the childhood experiences, previous professional experiences, gender, race, education, current life circumstances and reasons for starting a business (to name only a few) will all contribute to shaping the actual cognitive style of any individual, including entrepreneurs.

There is research suggesting that entrepreneurs are more optimistic and future-oriented in their thinking than the general population, yet what has not been examined is how the variability along these constructs, within a sample of entrepreneurs, can affect measures of outcome both for the business and the businessperson. This is an important

gap in the literature because the way in which an entrepreneur may manage regrets or perceive new opportunities will represent important coping mechanisms that could influence how they manage the daily stressors of their work. Different coping strategies may be more or less adaptive in the context of small business and these could have a bearing on the success of the entrepreneur's business venture as well as on their own health and well-being.

#### Central Stressors in a Person's Life will Influence Quality of Life

There is a vast literature that examines the role of psychological distress and external stressors on health and well-being in individuals (Lazarus & Folkman, 1984; see also Quick, Nelson, & Quick, 1990; Cohen, Miller, & Rabin, 2001; Tennant, 2001). Some researchers postulate that emotional distress influences health through the pursuit of negative health behaviors such as increasing fat consumption, decreasing exercise or increasing smoking (Ng & Jeffery, 2003). Research has also demonstrated that psychological stress has a measurable effect on biological systems (i.e., blood pressure, endocrine system, heart rate, and sympathetic arousal) that directly influence illness. The consensus is that "stress and other emotional responses are part of complex interactions of genetic, physiological, behavioral, and environmental factors that affect the body's ability to remain or become healthy or to resist or overcome disease" (Baum & Posluszny, 1999, p. 137).

Psychological stress can be experienced for a variety of reasons, many bad but some good. If the objective circumstances in a person's life are creating pressure and anxiety, most people will experience some kind of stress reaction. In the case of entrepreneurs, if their business is struggling, it is reasonable to assume that this is a

source of stress for them. This source of stress may be particularly costly for their well-being as it has been found that the more time an individual devotes to an activity that they deem personally important, the greater the potential consequences to their well-being if that activity generates stress or negative outcomes (Parasuraman, Purohit, Godshalk, & Beutell, 1996). Research also suggests that the way an individual experiences stress is largely a function of that person's perception of the stressor. On the one hand, eustress is defined as the healthy response to a stressor that leads to flexibility and top performance. On the other hand, distress is a negative reaction to the stressor and will lead to poorer outcomes. Furthermore, there is variability in the way people react to stress that will determine if their reaction is more or less adaptive (Quick, Nelson, & Quick, 1990).

Stress related to one's occupation has been found to be one of the most important workplace hazards of developed countries. While there is inconsistent evidence about the role personal control over work can play in mitigating this stressor, the general view is that high-demand jobs lead to adverse reactions only among employees who have low control over their work, as perceived control may lead to more constructive approaches to coping with the work stress (Karasek, 1990). It is worth considering how these processes apply to a population of entrepreneurs. Four factors that have been linked to entrepreneurial stress are: 1) loneliness (absence of peers), 2) immersion in the business, 3) lack of interpersonal skills to deal with employees, and 4) fatigue as a result of need to achieve (Boyd & Gumpert, 1983). On the one hand, entrepreneurs work for themselves, so compared to "regular workers" they may have more control over their work. On the other hand, they have all the responsibility and may perceive they have little control over environmental variables that can influence their business (prevailing market conditions,

currency valuations, etc). In addition, they may feel personal responsibility for the economic welfare of all their employees, which can represent a significant source of stress and anxiety.

Another field of research that uncovers inconsistent pressures on entrepreneurs involves the examination of role stress. The theory is that extensive time spent in one life domain (i.e., work) due to stressors in that domain, may take away resources available for other life domains (i.e., family), thereby generating role conflict and a secondary source of stress. Given the stressors inherent to small business ownership, and the centrality of this role for many entrepreneurs, it is likely that these individuals face both significant work stress and role-conflict stress. At the same time, as entrepreneurs work for themselves, they are in a more autonomous role, which has been associated with increased job satisfaction and decreased felt stress (Parasuraman et al., 1996). Their autonomy may give entrepreneurs more freedom to choose when and where to allocate their time and energy, which could facilitate the management of role-conflicts.

In a study of 200 business executives who reported a high level of stressful life events, Kobasa (1979) compared some personality traits of those who fell ill to those who remained healthy. What she found was that the half who remained healthy responded to stress with a more optimistic approach, perceiving situations as opportunities rather than threats, and they felt more in control than those who fell ill. The study concluded that this cognitive approach to stress was a measure of hardiness that protected the business people from the physical illness effects that are often associated with stress. This study further implies that aspects of personality can serve as a protective buffer for health and well-being in the face of significant stress loads. It seems stress does not affect all people

in the same manner, that there are personality or character traits that might imply an orientation towards stressors that are more adaptive than others. There is great variability in how business people react to similar loads of stress (Quick, Nelson, & Quick, 1990).

McClelland (1989) also suggested a relation between certain personality attributes and health in his work examining the role of achievement, power, and affiliation needs in individuals. Specifically, he found that men with a high need for achievement (typical of entrepreneurs) are at more risk for infectious diseases because their lives often have more chronic stress, which suppresses the immune system. Though there has been a great deal of research conducted on occupational stress in the fields of psychology, organizational behavior and even medicine, very little of this research has focused directly on small business owners (Mack, 2000).

Optimism is a personality trait frequently associated with entrepreneurs that is also believed to play a positive role in coping with stress. One explanation that has been offered is that it is an optimist's ability to attract broader social support that facilitates their adjustment to major life stressors (Brisette, Scheier, & Carver, 2002). These authors further postulate that optimists use more coping strategies than pessimists, and some of these strategies include emotion-focused coping, specifically, self-regulation such as "behavioral disengagement" (p. 108-109). As has been stated before, the ability to cope adaptively with stress is important. Many studies have determined that the way a person copes with stress can affect their emotional well-being and a few have begun to uncover associations between coping and physical health (e.g., Park & Adler, 2003)

In addition, a great deal of research has made a link between low scores of well-being and poor health (Allgower, Wardle, & Steptoe, 2001; Schulz, Martire, Beach, &

Scheier, 2000; Wrosch, Schulz, & Heckhausen, 2002). There seems to be little dispute that having good “quality of life” is desirable, but there are many different approaches to measuring this construct. Some of the important distinctions of measurement include whether the construct represents an objective (e.g., physical health condition) or a subjective indicator (e.g., life satisfaction) of well-being. Ideally, both should be evaluated as they are thought to each explain different facets of an individual’s actual quality of life (Wrosch & Scheier, 2003).

#### Counterfactual Thoughts/Regret as a Source of Stress

One emotion that can have a negative effect on well-being is regret. Regret, or counterfactual thought, as it is often called in research, is identified as the comparing of an obtained outcome with other possible or expected outcomes (Zeelenberg, van Dijk, van der Pligt, Manstead, van Empelen, & Reinderman, 1998). Engaging in a lot of counterfactual thinking can have aversive consequences on a person’s mood states (Roese, 1997). Recent findings suggest that regrets or counterfactual thinking could have an aversive affect on an individual’s health (Wrosch, Schulz, & Heckhausen, 2002). Other research has demonstrated that counterfactual thinking can serve a protective function, serving as a form of emotional self-regulation, like when an individual makes a downward comparison of their situation, believing that it could be worse (Roese, 1994). When counterfactual thinking leads to negative emotions, the experienced intensity of a regretted behavior may be a better predictor of a person’s general well-being than the actual number of regretted behaviors (Wrosch, Bauer, & Scheier, in press).

Regret is an emotion experienced in many life domains that can lead to psychological distress (Gilovich, Medvec, & Kahneman, 1998; Landman, 1987; Stewart

& Vandewater, 1999). The experience of regret can be an intensely felt emotion involving a sense of personal responsibility (I should have known better...) and at times a belief or desire to undo the regret. The sense of personal accountability and desire to remedy the regret may lead a person to suffer from negative emotions and intrusions as a result of the regret. In fact, regret is associated with some hot emotions like anger, as opposed to disappointment, which is more likely to be experienced due to situational factors and associated with emotions like sadness (Zeelenberg et al., 1998a). In addition, a number of studies demonstrate that individuals make decisions in a way that minimizes anticipated regret (e.g., Zeelenberg, 1999). This supports the notion that the experience or anticipation of regret can serve as a powerful motivator of behavior.

#### How Entrepreneurs Experience Regret

In a study that compared actual entrepreneurs, individuals who hoped to become entrepreneurs, and non-entrepreneurs, Baron (1999) found that entrepreneurs were far less likely than the others to engage in counterfactual thinking and had fewer regrets over past experiences. Also, the entrepreneurs found it easier to admit their past mistakes to themselves and to others, suggesting that if a person is able to accept their error or failure experience, they are less likely to “regret” the error they made. Furthermore, research suggests entrepreneurs think differently about success and failure (Shaver, 1995), and are more likely than others to start over after a mistake. These findings all support the notion that entrepreneurs may experience regret in a different way than the general population.

Being persistent and not dwelling on errors may be adaptive in many ways to entrepreneurs who are in the start-up phase of the business, however, this style comes with some risk. In a study examining the ability of core “entrepreneurship” traits to



distinguish between successful and average entrepreneurs, McClelland (1987) found that persistence did not differentiate the good from the poor entrepreneurs. His explanation was that “it is better to persevere only when there is a reasonable chance of success” (p. 226). This implies that the contextual regulation of these traits might be very important.

Though most people understand the concept of regret, in the majority of studies on the topic there is about 10% of the sample that tends to report not having any regrets (e.g., Wrosch, Bauer, Scheier, submitted). There is growing evidence that entrepreneurs, as a group, report fewer regrets than other people, possibly because they are more focused on the present and the future, and tend to dwell less on the past (Baron, 1999). Entrepreneurs may be less likely to regret their actions because they tend to “use failure as a tool for learning (rather than as a set-back or reason to give up)” (Zimmerer & Scarborough, 1996, p.7, cited in Neck et al., 1999).

Another reason that entrepreneurs may have a different experience of regret is that they often have a distorted view of risk – related to unreasonable optimism (Busenitz, 1999). This might lead them to take on the necessary risks to create their ventures, but it can eventually lead to poor choices. In addition, it could help explain their greater tendency to regret what they didn't do, as compared to the general population, which is more likely to report a regret of commission rather than a regret of omission (Baron, 1999). If entrepreneurs misperceive risk, they may be more frustrated with themselves for having not taken a risk that seemed minor to them (whereas a non-entrepreneur would simply not regret this inaction, it would appear to have been a good choice due to the high perceived risk of failure).

In addition, researchers have found that entrepreneurs are present or future-oriented in their thinking (Bird, 1989). Kahneman and Lovallo (1994) suggested that entrepreneurs sometimes make unreasonably optimistic forecasts about eventual outcomes because they tend to focus on the immediate situation while often ignoring previous outcomes from similar situations that could have helped them make better judgments. Palich and Bagby (1995) found entrepreneurs tend to perceive more potential for benefits in highly uncertain situations than non-entrepreneurs (cited in Baron, 2000). This optimistic, future-orientation bias of entrepreneurs may also help explain why they have an easier time than others disengaging from regretted past actions.

#### Adaptive Self-Regulation can be an Important Tool for Coping

Like many people in our society, entrepreneurs are often busy individuals who work to accomplish a range of different activities. To cope with the competing pressures of multiple demands, individuals typically set goals to help them direct effort and attention towards the activities that will be relevant to the attainment of important goals (Schulz & Heckhausen, 1996). As they proceed through life, people constantly make choices among the best strategies available to pursue their personal and professional goals (Carver & Scheier, 1998; Emmons, 1985; Heckhausen, 1999; Wrosch, Heckhausen, & Lachman, 2000). There are times when the best course of action is to persist and continue to allocate resources to the pursuit of a particular goal. At other times, it is best to change direction: abandon the efforts towards a current goal and commit to a better, or more realistic, or more pertinent goal. Research suggests individuals vary in their ability to identify these situations, and there is also a range of actual choices made when faced with these circumstances (Wrosch, Scheier, Miller, Schulz, & Carver, 2003a).

As goals can serve the adaptive function of prioritizing our personal resources, researchers have argued that flexibility in goal management is related to well-being outcomes. This flexibility is a form of adaptive self-regulation to challenges faced in significant life events and self-relevant goals (Brunstein, 2000; Wrosch & Scheier, 2003). While some previously discussed research suggests that entrepreneurs take an optimistic view of their business – which may frequently work in their favor, it is interesting to consider the effect of their goal adjustment ability in the face of business challenges. It has been consistently found that goals set by the individual for themselves will engender a great deal of commitment and persistence (Locke & Latham, 2002). However, as life inevitably includes some failure experience, individuals need to develop skills to cope with these set backs. Secondary control mechanisms are important for coping as they include methods where the person confronts failure by changing the experience of failure internally – redefining it as something else (Schulz & Heckhausen, 1996). Goal adjustment is a good example of a secondary control process.

A particular goal may become unattainable for a variety of reasons. Some goals are influenced by biological or social constraints (i.e., child-bearing years for women or when a person is expected to retire from work), while others are limited as a result of negative circumstances (i.e., divorce or a downturn in the economy), or a decision by an individual to pursue a different, more important goal (abandon piano studies to concentrate on college studies). When faced with goals that are objectively unattainable, in most cases the adaptive response is to disengage from the goal. This process involves the “reduction of effort” towards the pursuit of this goal and “relinquishment of

commitment,” or the diminishing of the psychological importance of this goal for the person (Wrosch & Scheier, 2003).

One of the advantages of disengaging is that it may help an individual avoid the negative psychological experience of the continued pursuit of an unattainable goal and it may free up resources that this person can apply towards achieving new goals (Carver & Scheier, 1998; Scheier & Carver, 2001; Heckhausen & Schulz, 1995; Wrosch et al., 2003). The ability to free up resources and allocate these to new pursuits may be particularly relevant to small business owners who have limited resources for their business and may pay a particularly steep price for the misallocation of those resources.

The ability to engage in new goals can also protect a person from the negative affect that stems from their desire to attain unattainable goals and give them a continued sense of purpose to their life (Wrosch et al., 2003a). Reengagement is made up of three components: “identify,” “commit to” and “initiate activities towards the attainment of” alternative goals. In the course of undertaking these efforts, the individual will benefit from an increase in the amount of positive, future-oriented thoughts and, as a result, should have less mental time for failure-related thoughts (Wrosch & Scheier, 2003).

“Expectancies about one’s eventual outcome are an important determinant of whether the person responds to adversity by continuing to exert effort at goal attainment or, instead, by disengaging from the attempt” (Carver & Scheier, 1990, p. 20). When a person is faced with a discrepancy between their desired goal and their current situation, this discrepancy is likely to have an emotional impact if the goal is one that is central to that person. In fact, often when an individual is faced with insurmountable obstacles in the pursuit of a self-relevant goal, the person is often unable to disengage, as abandoning

this goal would be akin to abandoning the self. Unfortunately, if the goal is genuinely unattainable and the individual cannot disengage, the most likely affective outcome will be depression (Carver & Scheier, 1990).

A number of studies have found an association between subjective well-being and adaptive self regulation of goal adjustment (e.g., Wrosch & Heckhausen, 1999; Wrosch, et al., 2003a). In addition, there is research that suggests depressive symptoms are associated with an increase in health problems (Schulz, et al., 2000). Finally, some preliminary research has begun to consider the link between goal adjustment abilities and physical health problems directly (Wrosch, Miller, & Brun de Pontet, submitted).

In a series of studies that sought to understand the relations between indicators of subjective well-being, goal disengagement, and goal reengagement, Wrosch and his colleagues (2003a) found a significant amount of variability in the ability of people to disengage from unattainable goals and an association between these differences and indicators of subjective well-being. Specifically, the research found that goal disengagement and goal reengagement can both serve to protect a person from negative affect associated with the experience of unattainable goals. These studies also found that an individual's ability to reengage in new meaningful goals could predict well-being scores over and above their ability to disengage. This research is particularly compelling as it was done across three very different samples: college students, comparing young and old adults, and comparing parents of children with cancer with parents of healthy children. These individuals face a variety of goal constraints yet the moderating effect of goal disengagement and goal reengagement abilities was a consistent predictor of measures of well-being across all three samples.

In the absence of self-regulation, a business owner may suffer the same aversive consequences to their well-being seen in other samples. In addition, they may be likely to fall into costly traps such as the escalation of commitment to a failing course of action. If an entrepreneur cannot disengage from a particular business goal even when objective feedback suggests they could better apply their resources elsewhere, they could pay a heavy price. By definition, entrepreneurs have put a lot at stake (time, their money, money of friends and family, pride, etc) towards the success of their business. As a result, they have a high need to justify their actions in the business and it would be hard for them to admit both to themselves and to important others that previous choices were in error. In addition, research suggests that individuals with a high need for achievement (like entrepreneurs) are likely to persist in the face of adversity (Senko & Harackiewicz, 2002). This combination of personality style and situation puts the small business owner at high risk for the trap of escalation of commitment (Brockner, 1992). This escalation could exacerbate the stressful situation and further deteriorate the entrepreneur's well-being and contribute to negative outcomes for the business as well.

### The Present Study

While the nature of businesses and their particular challenges will vary a great deal, the threat of survival is a particularly salient and common stressor in smaller, entrepreneurial ventures (typical of this sample). This threat represents a stressor that could be defined as central to the lives of most entrepreneurs. The findings reviewed here underscore the importance of research that seeks to better understand how business stressors actually affect the well-being of entrepreneurs, and if there are moderating factors that can influence the nature of these relationships. Given the centrality of their

work to most entrepreneurs (Kuratko et al., 1997), and the reliance of these businesses on their leader, it is reasonable to expect that outcome measures for the business and the entrepreneur will be related.

The present research builds on the basics of entrepreneurial studies in business but is also informed by the work of contemporary researchers who have shifted the emphasis from identifying “the” entrepreneurial personality to studies that seek to understand the social-cognitive and personality processes that are typical of entrepreneurs. While there is some agreement that entrepreneurs may share traits in common, contemporary research on the psychology of entrepreneurs is interested in understanding the cognitive processes that may emerge as a result of these traits. In addition, there is increasing interest in examining the interaction between the cognitive biases of entrepreneurs and the typical stressors they may face in their work life.

The purpose of this study was to examine how recent business performance might predict personal measures of well-being for a sample of entrepreneurs from across Canada. In addition, the entrepreneurs were asked to identify a regret of omission in their business and to report on measures of intensity for that regret. In the analyses, I consider whether recent business performance predicts the presence and intensity of business regrets, and further consider the role of these regrets in predicting the entrepreneur’s well-being. Finally, the entrepreneurs were asked about how they cope when faced with an important business goal that can no longer be attained. Measures of the entrepreneurs’ abilities to disengage from futile business goals and reengage in new business goals were taken and evaluated as moderating variables in the predictive relationships considered.

## The Present Research

### Hypotheses

The purpose of the study was to better understand how difficulties and regrets experienced with an entrepreneur's business could lead to effects on an entrepreneur's depressive symptoms, health problems and quality of life. I was further interested in examining the role of self-regulation strategies on these relations to determine if these personality characteristics served an adaptive or maladaptive role in the system. More specifically, my contention was that an entrepreneur's ability to disengage from futile business goals would allow him or her to manage failure experiences and thus reduce the negative affectivity generated from their professional pursuits. Additionally, an entrepreneur who was able to reengage in new business goals might be expected to have greater success in pursuing new opportunities when the inevitable business challenges arise. The theoretical model guiding this research is illustrated in Figure 1.

- 1a) It was predicted that an entrepreneur whose business was performing less well would have lower indicators of well-being, including a higher level of depressive symptoms, lower life satisfaction and more physical health symptoms.
- 1b) It was predicted that these relationships could be moderated by the self-regulation abilities of the entrepreneur, and only be found among entrepreneurs who are not able to adaptively self-regulate.



2a) It was predicted that compared to an entrepreneur whose business was performing well, an entrepreneur whose business was performing less well would:

- i) be more likely to report a business related regret, and
- ii) experience more negative emotions and intrusions about that regret

2b) It was predicted that these relationships could be moderated by the self-regulation abilities of the entrepreneur, and only be found among entrepreneurs who are not able to adaptively self-regulate.

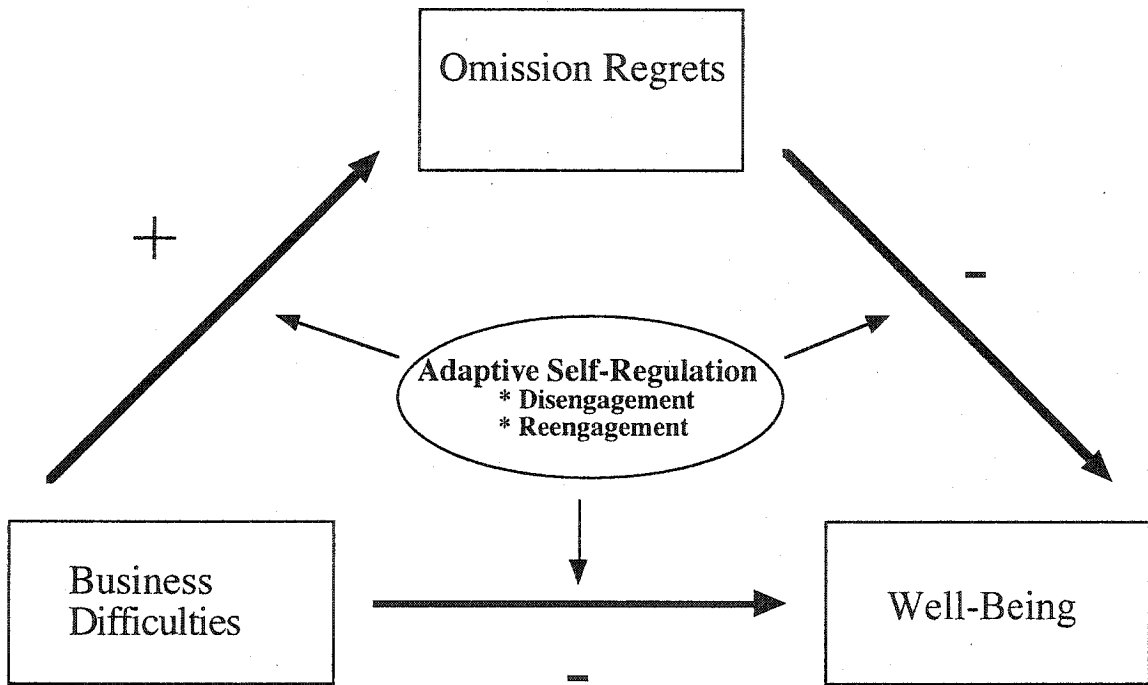
3a) It was predicted that an entrepreneur would have lower indicators of well-being, including a higher level of depressive symptoms, lower life satisfaction and more physical health symptoms, if they:

- i) reported a business regret, and / or
- ii) experienced more negative emotions and intrusions about that regret

3b) It was predicted that these relationships could be moderated by the self-regulation abilities of the entrepreneur, and only be found among entrepreneurs who are not able to adaptively self-regulate.

Figure 1

Basic Model



## Method

### Participants and Procedures

The participants were 140 adult business owners from across Canada who agreed to participate in a questionnaire study about business regrets and well-being. Business owners were recruited via a brief email solicitation. A solicitation email was sent to approximately 3,000 business owners whose coordinates were found on the web sites of various Canadian municipal Chambers of Commerce, in eight different provinces or from the membership directories of business associations. One of these business associations was the “Réseau des Femmes d’Affaires du Québec” (Quebec business women’s association), specifically chosen to ensure an adequate number of female business owners in the sample. While no direct compensation was granted, a drawing was held for a prize of \$250 among all questionnaires received.

An individual was sent a solicitation email if he or she were listed as the owner or president of a company and if they had listed an email address on the site. Those willing to participate in the research were asked to respond to the email. No further contact was made with those who did not respond to the initial email. Of the 247 individuals who indicated a willingness to participate, 140 completed and returned the questionnaire, resulting in a response rate of 57%. The participants were then asked to specify if we should mail them the questionnaire or provide it electronically as an attachment. When the questionnaire was mailed, a cover letter with instructions was included, as well as a postage-paid return envelope to facilitate the return of the completed instrument. When the questionnaire was requested electronically, it was sent as an attachment with an additional email note, which detailed instructions for completion.

No matter how the document was sent to the participant, a consent form was included and the instructions stressed the importance of its completion as well as the opportunity for the participant to withdraw from the study at any time. As it was necessary to rely on the honesty of participants that they were in fact business owners, no financial compensation was offered for completing the questionnaire. This decision was made to help ensure that those who participated were doing so due to a genuine interest in the topic (more likely if they were entrepreneurs), and a motivation to advance science. Though imperfect, this approach, paired with the initial recruitment from membership lists of Chambers of Commerce gives reasonable confidence that the participants were whom they say. Participants were invited to mail, fax or electronically return the questionnaire to the lab, depending on their preference. The vast majority of questionnaires were returned by mail but some were completed and returned electronically and a few were completed on paper and subsequently faxed. Once the data were received, it was entered into SPSS for analysis.

Forty-six percent (46%) of the sample was female. Eighty percent (80%) of the participants were between the ages of 30 and 60 years. The specific breakdown by age group is as follows: less than 30 years = 6%; 30-39 years = 20%; 40-49 years = 32%; 50-59 years = 28%; 60-69 years = 10%; 70 years and older = 4%. These business owners have a great deal of professional experience. Almost sixty-five percent (65%) of the sample identified their years of work experience as over 20 years and fewer than ten percent (10%) have worked for ten years or less. The sample was highly educated, sixty-seven percent (67%) indicating they had completed an undergraduate degree or more. Furthermore, seventy-six percent (76%) of these entrepreneurs describe themselves as

married or co-habiting (23% were single, divorced, or widowed). Though the questionnaire was only available in English, about thirty percent (30%) of the sample identified French as their primary language at home or at work. The means and standard deviations for the socio-demographic characteristics controlled for in the analyses are summarized in Appendix A.

There was also good variability in the characteristics of the businesses included in the sample (See Appendix B). For example, size of the businesses, as measured by annual revenues: \$5 million and more = 16%; \$1-\$5 million = 19%; \$500,000-\$1 million = 9%; \$100-\$500,000 = 23%; \$50-\$100,000 = 10%; less than \$50,000 = 23%. Furthermore, these business owners rely on their companies financially, as the businesses generate more than half the household income in about sixty-five percent (65%) of the cases. The participants have owned their businesses on average 10.30 years (SD = 8.60), and the majority worked long hours, with more than half the sample reporting that they work more than 45 hours per week (0-15 hours = 1.5%, 16-30 hours = 9.5%, 31-45 hours = 33%, 46-80 hours = 51%, more than 80 hours = 5%). While this sample includes an important proportion of very small businesses, this is representative of the landscape of entrepreneurship. Well over half of all businesses employ fewer than 5 people and close to 90 percent of all businesses employ less than 20 people (Kuratko & Hodgetts, 2001).

### Materials

This study required participants to complete a questionnaire that included 12 separate instruments. The data used in the analyses reported here came from the entrepreneurs' responses to a subset of these questionnaires, including: Goal Adjustment, Business Regrets, Health & Well-Being, Emotions, Your Company and Demographic

Data. (A copy of these instruments can be found in Appendices D - H.) In addition to these measures, each participant also signed and returned a consent form (Appendix I).

*Business Performance* was measured with a newly developed 10-item scale that assessed various domains of business and asked the entrepreneurs to identify the extent of change their business has seen in each of these domains in the past twelve months. The scale was a 5-point Likert-type scale (anchored, 1 = large decline, 5 = large increase). The domains measured include: sales, number of employees, debt level, marketing/sales campaigns, litigation, profitability, number of suppliers, cash flow, capital investment and number of customers. The measures given for debt level and litigation were reversed scored and an average value calculated to get a sense of overall business performance across all these important domains. ( $M = 2.68$ ,  $SD = .56$ ) The high Cronbach's alpha calculated for the scale ( $\alpha = .78$ ), provides assurance about its internal consistency. Further, the validity of the scale was examined by assessing the correlation of business performance with the participants' overall satisfaction with the performance of their business and found that a stronger value on the performance scale predicted a higher satisfaction with the business performance ( $r = .71$ ,  $p < .01$ ). (See Appendix G also for Business Satisfaction measure).

Quality of Life was evaluated based on measures of depressive symptoms, physical health symptoms and overall life satisfaction. *Depressive symptomatology* was assessed via a 10-item version of the Center for Epidemiological Studies Depression Scale, CES-D (Radloff, 1977). Participants were asked to indicate how often each statement applied to them during the past week on a 4-point Likert-type scale (anchored,

1 = rarely or none of the time, 4 = most or almost all of the time; sample item: I was bothered by things that usually don't bother me). The scores were converted to a 0 to 3 scale and then computed the sum score of the ten items ( $M = 6.05$ ,  $SD = 4.98$ ,  $\alpha = .81$ ).

Life Satisfaction was measured with a single-item 5-point Likert-type scale (anchored, 1 = not at all, 5 = very much). The item read: Overall, how satisfied are you with your life? ( $Range = 2-5$ ,  $M = 4.13$ ,  $SD = .84$ ). (Andrews & Withey, 1976).

Physical health problems. a symptom checklist was administered that included thirteen physical health problems. Participants were asked to report whether they had experienced or had been treated for any of the listed health problems during the past 12 months. A subscale of seven items were used in the analyses: 1) persistent skin trouble (e.g., eczema), 2) recurring stomach trouble, indigestion, or diarrhea, 3) being constipated all or most of the time, 4) chronic sleeping problems, 5) migraine headaches, 6) asthma, bronchitis, or emphysema, and 7) thyroid disease. The items were selected from a checklist that was previously used in a large US national probability sample (e.g., Wrosch, Heckhausen, & Lachman, 2000). These seven health symptoms were chosen because research suggests that association between negative mood states and these health symptoms exists (Wrosch, Bauer, & Scheier, 2003). If the participants had experienced or had been treated for a specific health problem, they received the score one for the symptom. A count variable was computed indicating the number of physical health problems ( $Range = 0-4$ ,  $M = .84$ ,  $SD = 1.00$ ).

The Goal Adjustment instrument is a self-report instrument that was adapted from a generic measure of disengagement and goal re-engagement tendencies, to measure the entrepreneurs' ability to adjust to unattainable business goals. Participants were asked to

consider how they usually react when answering the question: “if I have to stop pursuing an important goal in my business....” Business owners responded to 10 items, using 5-point Likert-type scales (anchored, 1 = almost never true, 5 = almost always true,). Four items measured a person’s tendency to disengage from unattainable business goals (e.g., it's easy for me to reduce my effort towards the goal) and six items measured a person’s tendency to reengage with new goals when faced with unattainable business goals (e.g., I start working on other new goals) (see Wrosch, et al., 2003a, for a more comprehensive description of the items). While the individual items used here are the same as those typically used by Wrosch and colleagues, by asking these questions about goal adjustment tendencies as they related to business goals rather than life goals in general, these answers address a more specific set of capacities. Mean scores of the goal disengagement ( $M = 3.02$ ,  $SD = .84$ ,  $\alpha = .84$ ) and the goal reengagement ( $M = 3.95$ ,  $SD = .49$ ,  $\alpha = .83$ ) items were computed.

Business regrets were identified by the participants in two sets of items that questioned them about the intensity of a regret, the domain of business affected by the regret and the timing of this regret. The entrepreneurs were asked to answer questions about both regrets of omission and regrets of commission, with the order of this presentation counterbalanced. A regret of omission is when a person reports regretting a failure to act, whereas a regret of commission is when a person reports regretting a particular action taken. Preliminary analyses of the entrepreneur’s regrets revealed an unusual pattern: about 14% (19 of 140) of the entrepreneurs reported no regret of omission, whereas almost 28% (39 of 140) of the entrepreneurs did not report a regret of commission. In order to test hypotheses that compared entrepreneurs with and without



regrets, it was decided to limit the analyses for this research to only regrets of omission, as the group of entrepreneurs with such regrets would provide a large enough sample that there might be sufficient power for the analyses.

In the analyses for this study, only the presence or absence of an omission regret was evaluated, as well as two scales about the experience of this regret for the entrepreneur. One scale considered was the extent to which entrepreneurs felt nine different emotions about this regret in the past few months, using 5-point Likert-type scales (anchored, 1 = not at all, 5 = extremely). The emotions were in three broad domains: hot emotions, despair emotions and contemplative emotions.

Supporting previous work (Wrosch & Heckhausen, 2002), preliminary analyses found little of interest with the contemplative emotions, leading me to drop these from the model. In addition, an exploratory factor analysis of the 9 emotion items (using oblimin rotation) revealed a two factor solution with Eigenvalues higher than 1.00. The six items retained for analysis loaded on one factor (*Eigenvalue* = 2.78, *loadings* = .50 to .78) and the contemplative items loaded on the other factor (*Eigenvalue* = 2.02, *loadings* = .54 to .81). This analysis was followed with an additional exploratory factor analysis with the six retained items (using oblimin rotation) and it was found that all six of these items loaded on the one factor that emerged (*Eigenvalue* = 2.74, *loadings* = .57 to .78). The hot / despair emotions were: Angry, Embarrassed, Irritated, Sorrow, Helpless, and Desperate. ( $n=121$ ,  $M = 2.09$ ,  $SD = .77$ ,  $\alpha = .75$ ).

The other business regret scale that was considered was the extent to which the entrepreneurs reported intrusions about their regret during the past few months, using 4-point Likert-type scales (anchored, 1 = not at all, 4 = often). Five separate items were

assessed, asking questions like: “I had trouble falling asleep because I couldn’t stop thinking about the regret” and “Once I start thinking about the regret I find it hard to think about (focus my attention on) other things.” ( $n = 121$ ,  $M = 1.79$ ,  $SD = .74$ ,  $\alpha = .85$ ).

## Results

The main hypotheses were tested using hierarchical regression analyses. Throughout all analyses, socio-demographic (sex, age, education, and partnership status) and business-related (annual revenues, years of ownership, hours of work, and percentage of household income derived from the business) variables were included as controls in the first step. The socio-demographic variables were controlled because research finds there are relations between variables like gender, age and socio-economic status (as represented by Education level) and measures of well being (e.g., Cheng, 1999). In addition, in this study these variables were related to some of the outcome measures and other predictors in the model (e.g., entrepreneurs who are married or cohabiting [intimate partnership] reported better business outcomes than those who were not in an intimate partnership). The business measures selected served to control for characteristics of the business that could influence the outcome measures including: size (as defined by annual revenues), the years of experience of the entrepreneur with that business, and the importance of the business to the entrepreneur (daily time invested and financial dependence of family on business' revenues). In addition, throughout all the analyses, the predictor variables were centered.

Table 1 presents zero-order correlations to summarize the associations between sample characteristics. In terms of demographic variables, there were some important differences between men and women. Women were less likely than men to be married or cohabitating ( $r = -.25, p < .01$ ), had owned their business for fewer years ( $r = -.27, p < .01$ ), reported lower annual revenues ( $r = -.40, p < .01$ ), and worked fewer hours per

Table 1

## Zero-Order Correlations of Control Variables (Socio-Demographic &amp; Business)

Variables	1	2	3	4	5	6	7
1) Gender							
2) Age of Entrepreneur	-.06						
3) Intimate Partnership	-.25**	-.18*					
4) University Schooling	.13	-.01	-.04				
5) Hours Spent at Business	-.23**	.00	.04	-.04			
6) Years of Ownership	-.27**	.53**	-.03	-.01	.08		
7) Annual Business Revenues	-.40**	.06	.27**	-.04	.41**	.40**	
8) % of Household Income	-.30**	-.04	-.02	-.04	.28**	.23**	.44**

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

week ( $r = -.23, p < .01$ ). The difference in relationship status by gender is important because this sample shows a positive correlation between intimate partnership status and size of the business by annual revenues ( $r = .27; p < .01$ ). Annual revenues were also associated with more hours of work ( $r = .41; p < .01$ ) and more years of ownership ( $r = .40; p < .01$ ). In addition, older as compared with younger entrepreneurs were less likely to be married or cohabitating ( $r = -.18, p < .05$ ).

As a follow-up to the pattern of differences seen by gender in the correlations, a series of *t*-tests were conducted to determine the magnitude of these differences. These analyses revealed that men were far more likely to be involved in an intimate partnership ( $M = .87, SD = .34$ ) than women ( $M = .66, SD = .48$ ),  $t(136) = 2.97, p = .00$ . In addition, male entrepreneurs work more hours ( $M = 3.66, SD = .71$ ) than their female counterparts ( $M = 3.30, SD = .85$ ),  $t(135) = 2.71, p = .01$ . The men of this sample have also owned their businesses for substantially more years ( $M = 12.63, SD = 10.52$ ) than the women ( $M = 7.81, SD = 5.77$ ),  $t(130) = 3.24, p = .00$ ; and their businesses also generate more annual revenues ( $M = 4.03, SD = 1.70$ ) than those of the women ( $M = 2.58, SD = 1.53$ ),  $t(133) = 5.16, p = .00$ . Finally, the men of this sample live in households more dependent on the financial performance of their business ( $M = 2.38, SD = .99$ ) than the women ( $M = 1.73, SD = 1.12$ ),  $t(134) = 3.61, p = .00$ .

Two adjustments were made to demographic variables to simplify their use and ensure their accuracy. First the marital status question was reduced to a variable identifying the partnership status of the participant. Those who identified themselves as married or cohabitating were deemed to be in a partnered relationship whereas those who were single, divorced, or widowed were deemed to be without an intimate partnership. In

a similar vein, the level of education variable was simplified because a number of participants identified graduate school as their highest level of completed education and it is unclear if perhaps participants misunderstood that category as the one to use if they had simply graduated from university. To ensure data accuracy, all participants with undergraduate or graduate education were grouped together in the category of university level or higher and the remaining participants were all grouped together as subjects who had less than a university degree.

The zero order correlations between the outcome measures are summarized in Table 2. This table indicates that there are several negative and positive correlations between these measures that merit a more comprehensive analysis using hierarchical regressions. A correlation table of the outcome and moderator variables against the control variables directly is also provided in Appendix C.

The first hypotheses examined the relation between business difficulties and measures of well-being of the entrepreneur. It was predicted that difficulties in the business would affect the entrepreneur's well-being. It was further hypothesized that the entrepreneur's ability to disengage from, or reengage in, business goals could moderate this relationship. Separate hierarchical regression analyses in a multivariate approach were run to test the main effects of business performance, goal disengagement, and goal reengagement in predicting depressive symptomatology, overall life satisfaction, and a number of physical health problems of the entrepreneur. In a first step, the demographic and business control variables were considered as predictors. The second step examined the main effects between predictors and outcome measures and, as a final step, the two-way interactions among the three predictors were tested separately for significance.

Table 2

Zero-Order Correlations of Outcome Measures and Moderators

Variables	1	2	3	4	5	6	7	8
1. Business Performance								
2. Presence of Regret	.01							
3. Intrusions Regret	-.22*	n/a						
4. Emotions Regret	-.27**	n/a	.60**					
5. CES-D	-.16 <sup>t</sup>	.17*	.50**	.44**				
6. Stress Health	-.06	.17 <sup>t</sup>	.37**	.19*	.28**			
7. Life Satisfaction	.32**	-.12	-.38**	-.33**	-.65**	-.08		
8. Disengagement	.18*	-.20*	-.27**	-.27**	-.40**	-.17*	.17*	
9. Reengagement	.19*	.03	-.24	-.24**	-.20*	-.02	.31**	.34**

\*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend)

With respect to the control variables predicting measures of well-being, only a few revealed a main effect. A negative relationship was uncovered for education level predicting depressive symptoms as well as physical health problems. Participants who had received less education were more likely to report health troubles than those who had attained at least a university degree,  $F(1, 131) = 4.07, R^2 = .03, \beta = -.17, p < .05$ . In addition, less highly educated participants reported more depressive symptoms than did those who had at least a university-level education,  $F(1, 131) = 6.15, R^2 = .04, \beta = -.21, p < .05$ . A relation was also found between the number of hours the entrepreneur reported working in their business and their depressive symptoms, as well as life satisfaction. The more hours the entrepreneur worked, the more depressive symptoms they reported,  $F(1, 131) = 6.23, R^2 = .04, \beta = .23, p < .05$ , and the lower was their reported life satisfaction,  $F(1, 131) = 5.01, R^2 = .04, \beta = -.21, p < .05$ . Finally, there was a sex effect predicting physical health problems, with women reporting more health problems than men,  $F(1, 131) = 4.19, R^2 = .03, \beta = .19, p < .05$ .

The subsequent step in this analysis was to consider the main effects (see Table 3 for summary of results). In the case of depressive symptoms, a main effect for goal disengagement was found, suggesting that entrepreneurs who are able to disengage from business goals in general will report fewer depressive symptoms than those for whom this “letting go” is difficult,  $F(1, 128) = 10.46, R^2 = .06, \beta = -.29, p < .01$ . In addition, main effects were revealed for goal reengagement and business performance predicting the reported life satisfaction of the entrepreneurs. Overall, the better an entrepreneur was able to reengage in new goals, the higher was their life satisfaction,  $F(1, 128) = 10.12, R^2 = .06, \beta = .27, p < .01$ . As predicted by the hypothesis, the better the business’ recent



Table 3

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems, Depressive Symptomatology and Life Satisfaction by Goal Disengagement, Goal Reengagement, and Business Performance

Predictors <sup>a</sup>	CESD		Life Satisfaction		Health Symptoms	
	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>
Main Effects	.10**		.17**		.01	
Goal Disengagement (GD)	.06**	-.29**	.00	-.01	.01	-.09
Goal Reengagement (GR)	.00	-.06	.06**	.27**	.00	.01
Business Performance (BP)	.01	-.09	.08**	.30**	.00	-.05
<u>2-way-interaction effects</u>						
BP x GD	.02	-.14	.00	.00	.03*	.18*
BP x GR	.07**	.28**	.02*	-.15*	.03 <sup>t</sup>	.16 <sup>t</sup>
GD x GR	.01	-.11	.01	.10	.01	.10

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and *R*<sup>2</sup> s represent unique effects in each step of analyses.

performance, the higher the life satisfaction of the entrepreneur,  $F(1, 128) = 12.81, R^2 = .08, \beta = .30, p < .01$ . Finally, using physical health as the outcome measure, there were no main effects: the recent performance of an entrepreneur's business does not appear to have a bearing on the entrepreneur's physical health symptoms. Further, the entrepreneur's abilities to adjust business goals did not predict these health symptoms as main effects.

The third step of this analysis considered the interactions between the objective business performance measure and the moderator variables of goal disengagement and goal reengagement predicting the entrepreneur's well-being. As reported in Table 3, the analyses revealed significant interaction effects between business performance and goal reengagement predicting depressive symptomatology and life satisfaction. This interaction also yielded a trend towards significance in predicting health symptoms of entrepreneurs, while this outcome was significantly predicted by the interaction between business performance and goal disengagement.

To illustrate the significant interaction effects, the associations between business performance and indicators of quality of life were plotted one standard deviation above and below the mean of the respective goal adjustment capacities (i.e., goal disengagement and goal reengagement) by employing commonly used regression techniques (cf. Aiken & West, 1991). Figure 2a shows the significant interaction between the entrepreneur's ability to reengage in new business goals and the recent performance of their business predicting depressive symptoms. A test of the simple slopes revealed that an entrepreneur whose business has recently been struggling would be likely to have significantly higher depressive symptoms if they were not able to reengage in new

Figure 2a

Business Performance X Reengagement

Predicting Depressive Symptoms (CES-D)

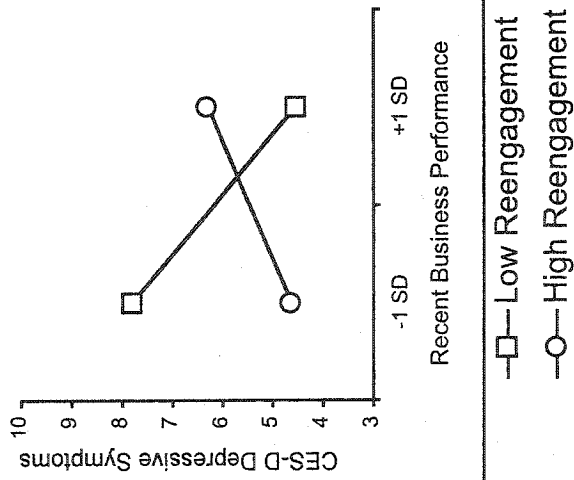
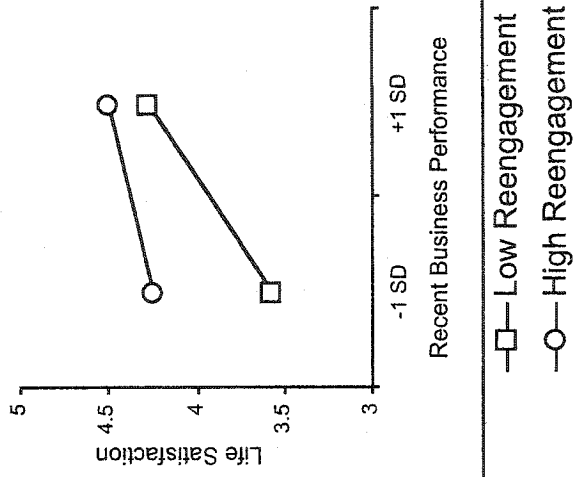


Figure 2b

Business Performance X Reengagement

Predicting Life Satisfaction



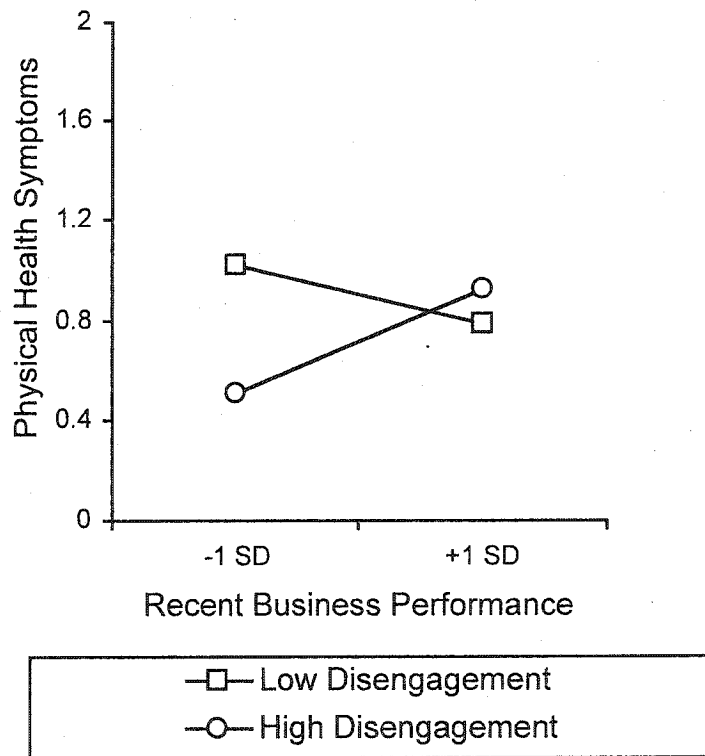
business goals (- 1 *SD*:  $\beta = -.33, p < .01$ ; +1 *SD*:  $\beta = .17, p > .05$ ). In addition, among the entrepreneurs who were poor at reengaging in new business goals, those whose business had been struggling were more likely to report higher depressive symptoms than those whose business had been doing well (-1 *SD*:  $\beta = -.32, p < .01$ ; +1 *SD*:  $\beta = .18, p > .05$ ).

Another significant interaction found for these hypotheses suggests a moderating effect of goal reengagement on life satisfaction in the face of objective business performance,  $F(1, 127) = 4.03, R^2 = .02, \beta = -.15, p < .05$ . A test of the simple slopes reveals that a struggling business has a much greater impact on the life satisfaction of an entrepreneur when that entrepreneur is not easily able to reengage in new business goals (- 1 *SD*:  $\beta = .43, p < .01$ ; + 1 *SD*:  $\beta = .15, p > .10$ ) (see Figure 2b). The simple slope suggests that of the entrepreneurs who are not able to reengage in new business goals, those whose businesses have been recently struggling will evaluate their overall life satisfaction more negatively than those whose businesses are doing well (- 1 *SD*:  $\beta = .42, p < .01$ ; + 1 *SD*:  $\beta = .14, p > .10$ )

Finally, the analyses revealed a significant interaction between the entrepreneur's ability to disengage and the recent performance of their business predicting health symptoms (See Figure 3). Figure 3 illustrates this two-way interaction. A test of the simple slopes revealed that entrepreneurs with lower levels of recent business performance (-1 *SD*:  $\beta = -.26, p < .05$ ; + 1 *SD*:  $\beta = .07, p > .10$ ) reported fewer health symptoms only if they were good at disengaging from business goals. None of the other simple slopes tested here were significant.

Figure 3

Business Performance X Disengagement Predicting Physical Health Problems



The analyses conducted show partial support for the first set of hypotheses. The recent performance of an entrepreneur's business appears to affect their self-reported life satisfaction but not their levels of depressive symptoms nor certain measures of physical health. In addition, goal adjustment abilities have some moderating influence on the impact of recent business performance on all well being outcome measures assessed in this study.

The second set of hypotheses examined the role of business difficulties predicting business regrets and regret intensity. As the presence or absence of regret is a dichotomous variable, the hypotheses were examined with a logistic regression analysis to determine if objective business performance would predict the presence of a regret of omission, and if this relation would be moderated by goal disengagement and goal reengagement (see Table 4a). As an additional step, hierarchical regression analyses were also calculated, using only those entrepreneurs in the sample who did express a regret of omission, and evaluating the relationship of business performance to the emotions and intrusions experienced about the business regret. The analyses also included an evaluation of the moderating role of the measures of goal disengagement and reengagement (see Table 4b).

In the first step of the logistic regression analysis, the control variables were introduced and evaluated for significance. The only control variable that was found to predict the presence of a regret of omission was age. The older the entrepreneur, the less likely they were to report such a regret ( $Wald = 5.87$  ( $df = 1$ ),  $\beta = -.60$ ,  $p < .05$ ). The next step was to examine the main effects of the predictors and this analysis revealed that goal disengagement predicted the presence of a regret of omission. The more an entrepreneur

Table 4a

Sequential Logistical Regression Analysis Predicting the Presence of Omission Regrets  
by Goal Disengagement, Goal Reengagement and Business Performance

Predictors <sup>a</sup>	Presence of Omission Regret			
	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>Exp(B)</i>
<u>Main Effects</u>				
Goal Disengagement (GD)	-1.03*	.43	5.72*	.36
Goal Reengagement (GR)	.56	.67	.71	1.75
Business Performance (BP)	-.20	.58	.11	.82
<u>2-way-interaction effects</u>				
BP x GD	-.67	.71	.90	.51
BP x GR	.48	1.15	.18	1.62
GD x GR	.45	.85	.29	1.57

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and  $R^2$  s represent unique effects in each step of analyses.

Table 4b

Hierarchical Regression Analyses Predicting the Experience of Emotions and Intrusions about the Omission Regret by Goal Disengagement, Goal Reengagement and Business Performance

Predictors <sup>a</sup>	Hot/Despair Emotions <sup>c</sup>		Intrusions about Regret <sup>c</sup>	
	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>
<u>Main Effects</u>	.10**		.08**	
Goal Disengagement (GD)	.02	-.14	.01	-.11
Goal Reengagement (GR)	.02	-.15	.02	-.14
Business Performance (BP)	.03 <sup>t</sup>	-.17 <sup>t</sup>	.03 <sup>t</sup>	-.17 <sup>t</sup>
<u>2-way-interaction effects</u>				
BP x GD	.00	-.02	.01	-.09
BP x GR	.00	.05	.04*	.21*
GD x GR	.00	-.07	.00	.06

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and *R*<sup>2</sup> s represent unique effects in each step of analyses. <sup>c</sup> The analyses are based on a subset of the sample that reported an omission regret ( $n = 121$ ).



was able to disengage from their business goals, the less likely they were to report an omission regret ( $Wald = 5.72$  ( $df = 1$ ),  $\beta = -1.03$ ,  $p < .05$ ). Finally, none of the interactions between business performance and business goal engagement and goal disengagement ability were found to significantly predict the presence of a business regret of omission. None of the hypotheses tested by these analyses were supported.

The subsequent analyses examined the subset of the sample that reported a regret of omission and evaluated if the performance of their business would predict the emotions and intrusions that these entrepreneurs reported about this regret (See Table 4b). In addition, the moderating role of the disengagement and reengagement ability of the entrepreneur were evaluated in predicting these emotions and intrusions.

For the control variables introduced at the first step of the analyses, it was found that the entrepreneur's level of education could serve as a predictor for both emotions,  $F(1, 112) = 7.08$ ,  $R^2 = .06$ ,  $\beta = -.24$ ,  $p < .01$  and intrusions about business regrets,  $F(1, 112) = 7.67$ ,  $R^2 = .06$ ,  $\beta = -.25$ ,  $p < .01$ . What these findings imply is that the more educated the entrepreneur, the less likely they were to suffer from intense emotions or intrusions about their regret. The only other control variable that showed a meaningful result was the number of weekly hours worked by the entrepreneur. In this case, the more hours the entrepreneur worked in their business, the more likely they were to report higher levels of intrusions about their regret of omission,  $F(1, 112) = 5.02$ ,  $R^2 = .04$ ,  $\beta = .22$ ,  $p < .05$ .

In the second and third step of these analyses, the main effects and interactions were evaluated. In this case no significant main effects were found, however, the recent performance of an entrepreneur's business showed a trend predicting both the emotions

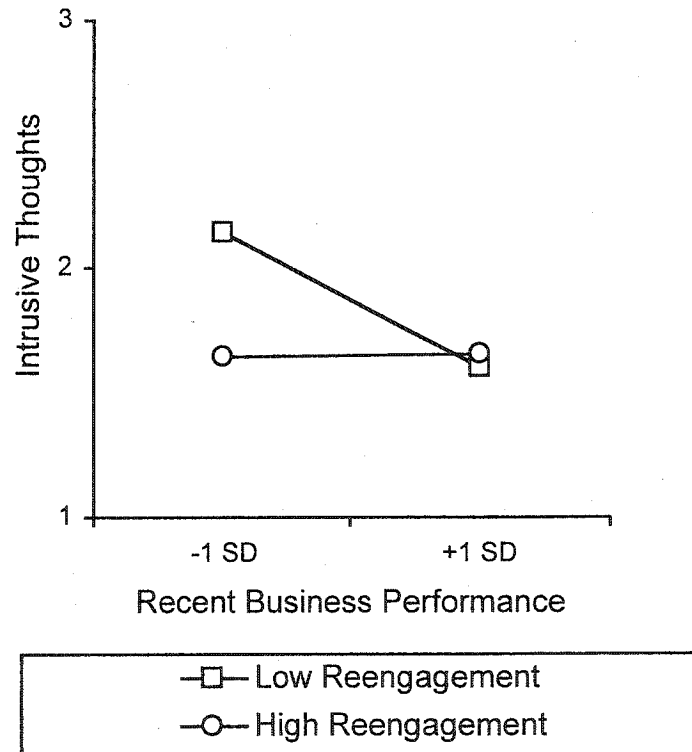
that entrepreneurs reported about their regret of omission and the intrusions about that regret. A further analysis of the variables found a significant interaction between business performance and the entrepreneur's ability to reengage in new business goals predicting intrusions. Entrepreneurs with a struggling business have more intrusions about their business regret only if they also report a low ability to reengage in new business goals,  $F(1, 108) = 3.07, R^2 = .04, \beta = .21, p < .05$  (See Figure 4).

A calculation of the simple slopes reveals that two of these slopes are significant. First, among those entrepreneurs whose recent business performance is struggling (- 1  $SD: \beta = -.37, p < .01$ ; + 1  $SD: \beta = .02, p > .10$ ) those who suffer more intrusive thoughts are the ones who are poor at reengaging in new business goals. Among this same group, those who report that they are generally able to reengage in new business goals will not experience these intrusive thoughts about their business regret. Second, an examination of the subset of entrepreneurs who are poor at reengaging in new business goals reveals that among these, it is only those whose businesses are struggling who suffer more intrusive thoughts about their business regret (- 1  $SD: \beta = -.34, p < .01$ ; + 1  $SD: \beta = .04, p > .10$ ). In terms of the second series of hypotheses, the only portion that is supported by the data is the suggestion that the ability to reengage in new goals can moderate the intensity of intrusions about a business regret when an entrepreneur's business has been recently struggling.

The final set of hypotheses addressed by the model predicts that the presence of regrets, and the emotions and intrusions these may generate, will adversely affect measures of global well-being for entrepreneurs. Further, the role of adaptive self-regulation of goals is considered as a moderator in these associations. Though these

Figure 4

Goal Reengagement X Business Performance Predicting Intrusions



analyses were all driven by the experience of regret, it was felt the results would be more clearly understood if each predictor were evaluated separately. In particular as the presence of regret is a predictor that is based on the entire sample ( $N = 140$ ) whereas the other two are based on the portion of the sample that actually reported a regret ( $n = 121$ ). Also, while emotions and intrusions about a regret are related, they are not the same construct and it was deemed of interest to see if there were any differences in the outcomes with each of these predictors.

As a result, three separate hierarchical regressions were conducted. The first evaluated the presence of regret as a predictor, the second the emotions about this regret as the predictor and the third used the intrusions reported about the regret as the predictor. All three analyses were predicting entrepreneurs' depressive symptoms, life satisfaction and physical health problems. These results are summarized in Tables 5a, 5b and 5c. Table 5a summarizes the findings that involve the presence of an omission as a predictor. In this case, all participants were used as part of the analysis. In the hierarchical regressions that are summarized in Tables 5b and 5c, the subset of entrepreneurs who reported an omission regret were used, as this measure was only completed by those participants who reported a regret of omission ( $n = 121$ ).

In all three regressions, the control variables were entered at the first step and the same pattern of results was found in these analyses as was found in the regressions testing the first set of hypotheses. That is, level of education predicts physical health and depressive symptoms, the number of hours the entrepreneur works per week predicts both depressive symptoms and life satisfaction, and gender predicts physical health symptoms.

Table 5a (Presence of Regret)

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems, Depressive Symptomatology and Life Satisfaction by Goal Disengagement, Goal Reengagement and the Presence of Omission Regrets

Predictors <sup>a</sup>	CES-D		Life Satisfaction		Health Symptoms	
	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>
<u>Main Effects</u>	.10**		.10**		.02	
Goal Disengagement (GD)	.06**	-.28**	.00	.01	.00	-.07
Goal Reengagement (GR)	.01	-.08	.08**	.31**	.00	-.01
Presence of Regret (OM)	.01	.09	.01	-.10	.01	.12
<u>2-way-interaction effects</u>						
OM x GD	.00	.00	.00	-.05	.00	.03
OM x GR	.00	.03	.01	.10	.00	.03
GD x GR	.01	-.12	.01	.13	.01	.09

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and *R*<sup>2</sup> s represent unique effects in each step of analyses.

Table 5b (Emotions)

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems, Depressive Symptomatology and Life Satisfaction by Goal Disengagement, Goal Reengagement and the Hot/Despair Emotions about the Business Omission Regret

Predictors <sup>a</sup>	CES-D		Life Satisfaction		Health Symptoms	
	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>
Main Effects	.20**		.18**		.02	
Goal Disengagement <sup>c</sup> (GD)	.04*	-.22*	.00	-.06	.00	-.03
Goal Reengagement <sup>c</sup> (GR)	.00	.00	.06**	.28**	.00	.02
Emotions Regret <sup>c</sup> (ER)	.11**	.37**	.08**	-.30**	.02	.14
<u>2-way-interaction effects</u>						
ER x GD <sup>c</sup>	.00	-.04	.00	-.05	.04*	-.21*
ER x GR <sup>c</sup>	.03*	-.17*	.00	.06	.03*	-.19*

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and *R*<sup>2</sup> s represent unique effects in each step of analyses. <sup>c</sup> These variables are based on a subset of the sample that reported an omission regret ( $n = 121$ ).

Table 5c (Intrusions)

Hierarchical Regression Analyses Predicting Entrepreneur's Health Problems, Depressive Symptomatology and Life Satisfaction by Goal Disengagement, Goal Reengagement and the Intrusions about the Business Omission Regret

Predictors <sup>a</sup>	CES-D		Life Satisfaction		Health Symptoms	
	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>	<i>R</i> <sup>2</sup>	<i>Beta</i> <sup>b</sup>
Main Effects	.22**		.18**		.10**	
Goal Disengagement <sup>c</sup> (GD)	.04*	-.22*	.00	-.05	.00	-.01
Goal Reengagement <sup>c</sup> (GR)	.00	.01	.06**	.28**	.00	.05
Intrusions Regret <sup>c</sup> (IR)	.14**	.42**	.08**	-.31**	.09**	.34**
<u>2-way-interaction effects</u>						
IR x GD <sup>c</sup>	.00	.07	.02	-.14	.01	-.09
IR x GR <sup>c</sup>	.00	-.03	.00	.04	.00	.00

Note. \*\*  $p < .01$ ; \*  $p < .05$ ; <sup>t</sup>  $p < .10$  (trend); <sup>a</sup> Sex, age, education level, partnership status, business annual revenues, % of household income derived from business, years of ownership, and hours of work per week, were included as control variables into the analyses; <sup>b</sup> *Betas* and *R*<sup>2</sup> s represent unique effects in each step of analyses. <sup>c</sup> These variables are based on a subset of the sample that reported an omission regret ( $n = 121$ ).

The precise findings were a bit different in the second two regressions as the sample used for these analyses was a subset of the whole.

In a second step, the main effects were considered, looking separately at the effects of goal disengagement, goal reengagement, the presence of a regret of omission, and the emotions, or intrusions about that regret predicting well-being measures for the entrepreneur. A consistent finding across all three of these analyses was that goal disengagement yields a main effect in predicting depressive symptoms and goal reengagement predicts life satisfaction. The specific amount of variance accounted for by each varies depending on the third variable in the analysis. (Please refer to Tables 5a, 5b & 5c for the specific  $R^2$  and  $Beta$  values).

The results also showed that the presence or absence of a regret of omission does not predict any of the well-being outcome measures in this sample, therefore this part of hypothesis three is not supported. However, the intensity of the regret, as measured by the reported emotions and intrusions about those regrets, do yield significant main effects. The emotions an entrepreneur reported about their regret of omission are a significant predictor for depressive symptoms (CES-D). The more intense the emotions about the regret, the more depressive symptoms were reported,  $F(1, 109) = 17.42$ ,  $R^2 = .11$ ,  $\beta = .37$ ,  $p < .01$ . In addition, these emotions are also predictive of the entrepreneur's satisfaction with his or her life. The more negative emotions the entrepreneur reported about their regret of omission, the lower they rated their satisfaction with life,  $F(1, 109) = 11.75$ ,  $R^2 = .08$ ,  $\beta = -.30$ ,  $p < .01$ .

Intrusions about these regrets are a significant predictor for all three measures of the entrepreneur's well being. In terms of depressive symptoms, these were more likely



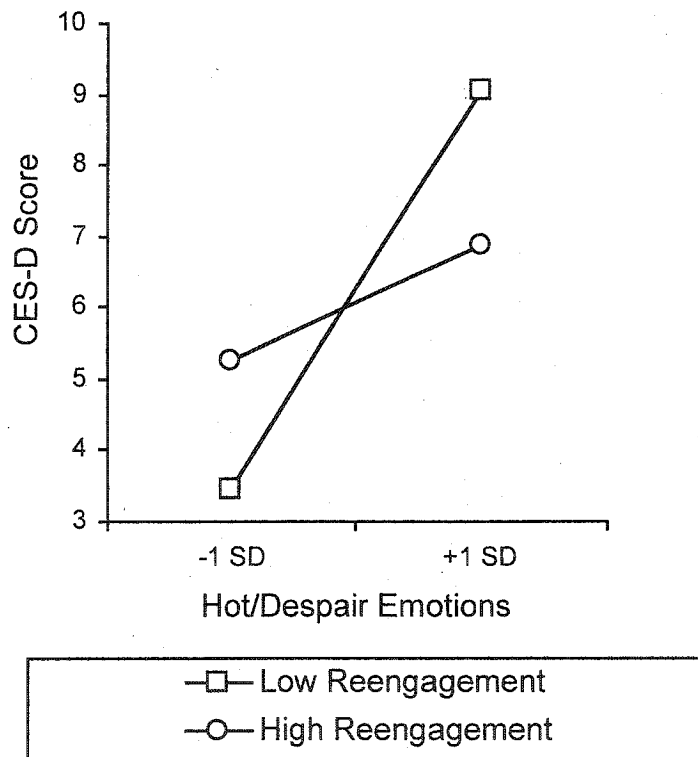
to be reported by entrepreneurs who reported intense intrusions about their business regret,  $F(1, 109) = 22.49, R^2 = .14, \beta = .41, p < .01$ . Also entrepreneurs who reported a high number of intrusions about their regret of omission were more likely to report lower satisfaction with their life,  $F(1, 109) = 12.09, R^2 = .08, \beta = -.31, p < .01$ , as well as a greater number of physical health problems,  $F(1, 109) = 12.49, R^2 = .09, \beta = .34, p < .01$ . These analyses support the hypotheses that negative emotions and intrusions about a business regret will adversely affect an entrepreneur's quality of life.

The next step in this analysis was to examine the interactions between these variables and the moderating effects of goal adjustment. The analyses reveal no interactions involving the presence or absence of omission regrets and no interactions involving the intrusions about the regrets. Only the emotions about the regret yielded significant interaction effects with entrepreneurs' goal adjustment capacities in predicting quality of life among entrepreneurs. Specifically, an interaction was found between regret emotions and goal reengagement predicting depressive symptoms,  $F(12, 108) = 4.21, R^2 = .03, \beta = -.17, p < .05$  (see Figure 5). In this case, only one of the simple slopes was significant, suggesting that the association between regret-specific emotions and CESD was only significant for entrepreneurs who are unable to reengage in new goals, yet non-significant for the entrepreneurs relatively more able to reengage in new goals ( $-1 SD: \beta = .54, p < .01; +1 SD: \beta = .16, p > .10$ ). None of the other three slopes tested were significant.

Two significant interactions were revealed between the two goal adjustment abilities and the hot/despair emotions about a business regret predicting physical health. First, there was a significant interaction between emotions and goal disengagement

Figure 5

Hot/Despair Emotions X Reengagement Predicting Depressive Symptoms (CES-D)



predicting physical health symptoms,  $F(12, 108) = 1.69, R^2 = .04, \beta = -.21, p < .05$  (see Figure 6a). The analyses of the simple slopes suggest that entrepreneurs who were poor at disengaging reported more physical health symptoms when they had more intensity of emotions about their regret, whereas those who are able to disengage do not report this relationship (- 1 *SD*:  $\beta = .36, p < .01$ ; + 1 *SD*:  $\beta = -.08, p > .10$ ). None of the other slopes for this interaction were significant. In addition, a significant interaction was found between emotions and goal reengagement predicting health symptoms,  $F(12, 108) = 1.56, R^2 = .03, \beta = -.19, p < .05$  (see Figure 6b). A review of these simple slopes suggests a similar pattern, entrepreneurs who were poor at reengaging reported physical health symptoms that were related to the intensity of their emotions about their regret, whereas those who are able to reengage in new goals do not report this relationship (- 1 *SD*:  $\beta = .56, p < .05$ ; + 1 *SD*:  $\beta = -.21, p > .10$ ). None of the other slopes in this interaction were significant.

The interactions seen between the hot and despair emotions about a business regret and the entrepreneur's goal flexibility lend partial support to the final section of the third hypothesis. Goal flexibility moderates the impact of emotions about a business regret for the entrepreneur's physical health and depressive symptoms but does not show this moderating effect for life satisfaction or for any of the well being outcomes as they are affected by intrusions about a business regret.

Figure 6a

Hot/Despair Emotions X Disengagement  
Predicting Physical Stress Symptoms

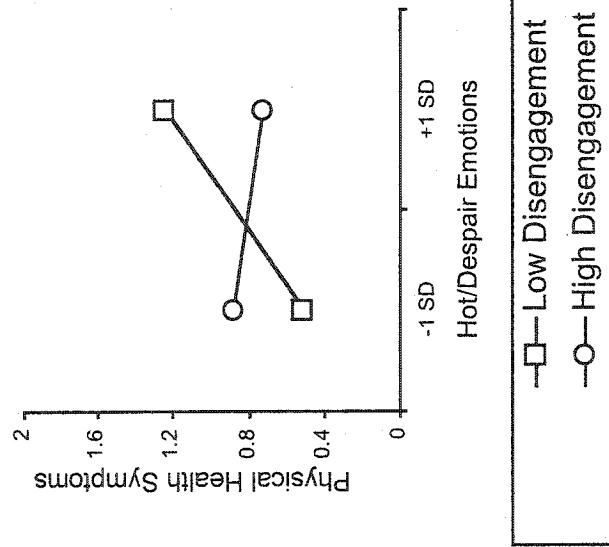
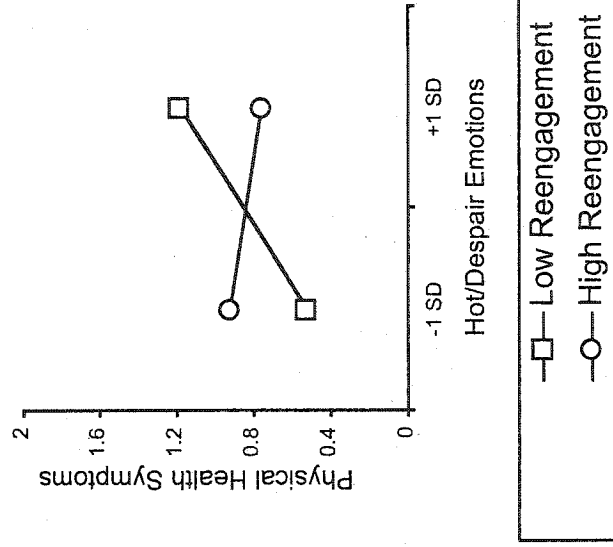


Figure 6b

Hot/Despair Emotions X Reengagement  
Predicting Physical Stress Symptoms



## Discussion

This study was undertaken to further our understanding of factors that may help entrepreneurs cope with the challenges they face in their businesses. As business stress is an inevitable facet of the entrepreneurial experience, and small business owners an integral part of our economy, it is important that researchers begin to examine the interaction between personality characteristics and the stressors of entrepreneurship. Previous studies have shown that an individual's ability to disengage from constrained goals and reengage in new goals can protect their well-being in the face of goal constraints (Wrosch, et al., 2003a). The intent of this study was to extend this research to the population of small business owners to evaluate if these individual differences lead to more or less adaptive outcomes for business owners when they are confronted with the challenges of running a business. In order to answer this question, the relation between business struggles and the entrepreneur's quality of life was examined. Next, the relation between business performance, business regrets and the well-being of the entrepreneur were considered. Finally, the moderating role of goal adjustment abilities in these relations was assessed.

### Goal flexibility and quality of life.

When examining the role of goal flexibility on quality of life outcomes directly, there were two reliable patterns of main effects that were found in this data. First, entrepreneurs who are better at disengaging from unattainable business goals, reported fewer depressive symptoms. Second, the entrepreneurs who were better at reengaging in new goals when faced with unattainable business goals, reported higher overall life satisfaction. A similar pattern of results has been previously seen in other population

samples (Wrosch et al., 2003). Therefore, this study lends support to this earlier research and extends these findings to the management of business goals among entrepreneurs.

Past research on goal adjustment lends credence to the theories that goals give purpose to life, but that repeated goal failures can lead to an increase in depressive symptoms in a person (Heckhausen & Schulz, 1995). An individual who cannot disengage from a futile goal will likely encounter more frequent failure experiences than a person who can disengage. A person who is able to reengage in new goals likely feels that these give some direction to their life. Whereas an ability to disengage can help a person cope with failure experiences, it is also essential that the person not be left without direction and purpose in life, hence the value of an ability to reengage in new, meaningful goals (Wrosch et al., 2003).

These constructs are important in the field of entrepreneurial psychology because successful entrepreneurship typically requires a great deal of goal-oriented behavior, often in a context that yields setbacks and failures. In addition, the very nature of small business makes goal flexibility a critical skill for entrepreneurs. First, entrepreneurs sometimes make maladaptive decisions and have to come to grips with business goals that cannot be attained. Second, a small business typically operates with limited resources so the entrepreneur can ill afford to misallocate those resources in the pursuit of a futile goal. Third, today's business environment is constantly changing, which affords a competitive advantage to those entrepreneurs who are able and willing to let go of projects that do not work out and try new things. Finally, the business' dependence on its owner-operator suggests that if this person suffers from many depressive symptoms or a decrement to their satisfaction with life, this will likely impact the business directly.

### Business performance and quality of life.

It was predicted that business performance would affect an entrepreneur's quality of life. While this may sound obvious, theories of stress and coping propose that objective stressors do not necessarily affect a person's well-being if the person can engage in adaptive self-regulation (Carver & Scheier, 1998; Lazarus & Folkman, 1989). In fact, the data from this study suggested that a direct relationship is true in only the broadest sense measured. Entrepreneurs who are facing business difficulties reported lower overall satisfaction with their life. By contrast, there was no main effect on measures of depressive symptoms or physical health. It is important to note that these effects and absence of effects have to be qualified by the interactions that suggest that the effect of business performance on these indices of well-being in an entrepreneur were significantly moderated by the business owner's goal adjustment abilities.

Goal reengagement moderated the relation between business performance and an entrepreneur's overall life satisfaction. In this case, the data revealed a main effect for both goal reengagement and business performance independently and directly affecting life satisfaction, but the interaction tells us that a struggling business has a greater impact on the life satisfaction of those entrepreneurs who are not easily able to reengage in new business goals. Furthermore, the data suggest that while there may be a main effect of goal reengagement on life satisfaction, this effect is only found in the context of business struggles. An entrepreneur who cannot reengage will evaluate his or her life more negatively only when their business is struggling, not when their business is doing well.

Goal reengagement also moderated the relation between business performance and an entrepreneur's depressive symptoms. The results suggest that among the business

owners whose businesses were struggling, the ones who suffer more depressive symptoms were those who could not readily reengage in new goals. In fact, the effect of this was substantial, as the interaction of business performance and reengagement accounted for 7% of the variance in reported depressive symptoms. This lends support to the theoretical model of the study which hypothesizes that adaptive self-regulation can moderate the effects of business stressors on the well-being of entrepreneurs.

These findings are important for research in entrepreneurial psychology as they suggest that entrepreneurs would suffer fewer depressive symptoms and enjoy better life satisfaction in the face of business struggles if they could commit themselves to new goals when they confront unattainable goals in their business. As a small business owner is likely to regularly come up against goals he or she cannot realize, the ability to reengage in new goals seems to be a particularly valuable mechanism of self-regulation in this population. Also, it is important to point out that entrepreneurs who are poor at reengaging in new goals only report more depressive symptoms and lower life satisfaction when their businesses are struggling, not when they are doing well. This suggests that they are not simply more depressive individuals and highlights the powerful moderating effects of self-regulation in the context of these objective stressors.

This study also found a moderating role for goal disengagement in the relation between business performance and the physical health symptoms of an entrepreneur. Specifically, entrepreneurs whose business was struggling reported fewer physical health symptoms if they are good at disengaging from unattainable business goals. This finding lends support to recent research positing an important role for mechanisms of self-regulation on physical health outcomes (e.g., Wrosch et al., 2003a). The ability to let go



of unattainable business goals may protect an entrepreneur from aversive outcomes to their health when their business is struggling. As the health symptom checklist that was used in these analyses included seven symptoms that are associated with stress and negative mood states (Wrosch, Bauer, & Scheier, 2003), it is possible that goal disengagement influences the stress reaction of the entrepreneur, which in turn affects certain health outcomes.

Given the dependence of small businesses on their owner-managers, risks to the health of an entrepreneur can have repercussions beyond that one individual. Most entrepreneurial ventures cannot survive without their leader, and usually require that this leader be able to work long hours. When a person is suffering from symptoms such as headaches, or stomach or sleeping problems, it is reasonable to assume that they are not working at their peak efficiency. Given the vulnerability of small business, illness in the entrepreneur could have catastrophic results for the business.

These findings about the moderating role for goal flexibility in the relation between business struggles and entrepreneurial well-being suggest that all entrepreneurs are not the same. While there is research that suggests some social-cognitive factors may differentiate entrepreneurs from the general population, this study illustrates that variability within these constructs can also be predictive of important outcomes.

Improving our understanding of these factors may permit us to help entrepreneurs find the most adaptive ways of interacting with the business stressors they are likely to face.

#### Business performance and the entrepreneur's regrets.

The results of this study do not support the hypothesis that recent performance of an entrepreneur's business will directly influence the presence or intensity of important

business regrets in that person. However, when the moderating role of the business owner's goal flexibility is taken into account, one result did emerge: entrepreneurs who have a difficult time reengaging in new goals will report more intrusions about their business regrets when their business is struggling. This suggests that the ability to reengage in new goals may protect entrepreneurs facing business difficulties from more intrusions from their business regrets.

Given the importance of their business to entrepreneurs, it is surprising that the current functioning of the business was not a better predictor of the presence or absence of regrets about the business. In fact, research in the field of regret typically finds that the more an individual feels they had control over a decision, the more likely they are to experience regret (Zeelenberg, van Dijk, & Manstead, 1998). As business owners have control over most of their business decisions, this implies entrepreneurs should be more likely to experience regrets about their business decisions. The apparent contradiction that is highlighted by this study suggests that entrepreneurs may experience regret differently than the general population. In fact, these results lend support to previous studies of entrepreneurs that find they are less likely to experience regret than non-entrepreneurs (Baron, 1999).

One reason this step in the model may not have been supported is the significant difference in time elapsed since the regret, as compared to the business performance. The participants responded to performance measures for their business from the past twelve months whereas they were free to consider their most significant business regret, from any time. As a result, the mean number of months that had passed since the regretted behavior was 70 months ( $SD = 77.47$ ). This may represent too large a difference in time

delay when compared to the performance measures reflecting business performance over the past twelve months. In addition, the standard deviation suggests there was a great deal of variability in the length of time that had passed since the regret, whereas all of the reported performance was based on the past year only. Though the time elapsed since the regrets reported might have been too long to have been clearly influenced by recent business performance, it still stands to reason that the regret reported would be antecedent to performance troubles. In order for this part of the theoretical model to be adequately tested a future study could consider limiting the regret time horizon to the last five years.

Another interesting finding that emerged in the data collected about regrets was that entrepreneurs were twice as likely to report no regret of commission, as they were to report no regret of omission (28% versus 14% of the sample). This pattern lends support to the suggestion that entrepreneurs are action-oriented and more likely to regret what they failed to do, rather than feel regret about actions they have taken. Success in entrepreneurship typically requires action, such as pursuing opportunities as they arise. If entrepreneurs believe that action is a requirement of success, they may be less likely to regret action-related failures. This may further differentiate them from the general population, where it is found that action is usually more regretted in the short term than inaction because individuals may have an easier time imagining counterfactual alternatives after an action (Butler & Highhouse, 2000).

This study's finding that the influence of business performance on intensity of regret intrusions is moderated by goal reengagement suggests another adaptive role of self-regulation for entrepreneurs. This result supports the premise that engaging in a new meaningful activity will lead to an increase in positive, future-oriented thoughts and, as a

result, allow less mental time for failure-related rumination (Wrosch & Scheier, 2003).

As small business owners must frequently attend to all facets of their business, it may be particularly maladaptive for them to suffer intrusions about regrets.

#### Business regrets and the entrepreneur's quality of life.

While the data did not reveal any direct effect from the presence of business regrets influencing the measures of quality of life, the intensity of those regrets did affect well-being in the entrepreneur. The intensity of the regret was measured by the reported negative emotions and intrusions about the regret. What was found was that the more negative emotions the entrepreneur had about their regret, the more depressive symptoms they reported and the lower was their life satisfaction. In the case of intrusions, the results suggest powerful main effects. Small business owners who experienced more intrusions about their regret reported lower life satisfaction (8% of the variance), more depressive symptoms (14% of the variance), as well as more physical health symptoms (9% of the variance).

A moderating effect of goal adjustment abilities was seen only in the case of emotions about a regret predicting quality of life. Specifically, entrepreneurs who are not able to reengage in business goals reported significantly higher levels of depressive symptoms when they also reported intense emotions about their business regret. It could be argued that this also suggests that reengaging in new goals protects a person's well-being by diverting their mental resources to this new, productive task and away from negative thoughts and emotions. In this case, an entrepreneur who is not good at reengaging in new goals will suffer a marked increase in depressive symptoms if they also express strong negative emotions about their business regrets. Had they been able to

reengage in new goals, perhaps they would dwell less on those emotions, as they would have “moved on” more effectively.

The results also provide support for the hypothesis that self-regulation can protect entrepreneurs from depressive symptoms in the face of business regrets. The significant main effect found for “emotion about regret” suggest these negative emotions about their regret predict 11% of the variance of depressive symptoms in entrepreneurs. However, this finding must be qualified by the interaction, which suggests this effect is moderated by an ability to reengage in new goals. Therefore, these results suggest that this self-regulation has a tendency to significantly protect entrepreneurs from depressive symptoms in this situation.

The influence of negative emotions about a regret on the outcome of physical health was moderated by both goal disengagement and goal reengagement. Specifically, entrepreneurs who were poor at disengaging reported more physical health symptoms when they had more intense emotions about their regret. In addition, entrepreneurs who were poor at reengaging reported more physical health symptoms when they also expressed a higher intensity of emotions about their regret. Neither entrepreneurs who were good at disengaging nor those who were good at reengaging reported relationships of this nature. It could be argued that an entrepreneur who reports intensely felt emotions about a business regret is more likely one who takes business experiences and outcomes personally. If that person is also unable to disengage from futile goals, they are left with these intense negative emotions that eventually lead to poor health outcomes. Similarly, if they are unable to reengage in new goals, they are not occupying themselves with constructive ideas and may have more available time to ruminate about their negative

emotions. Finally, these findings that adaptive self-regulation can serve a protective function to health outcomes in the face of psychological stressors lends support to the emerging research that has suggested there is a link between physical health and coping styles (e.g., Scheier, Matthews, Owens, Magovern, Lefebvre, Abbott, & Carver, 1989). The findings of this study support the adaptive role of self-regulation of goals for a population of small business owners.

### General Discussion

Overall, this study offers partial support for the theoretical model proposed. First, it was shown that entrepreneurs may suffer aversive consequences to their quality of life when their business is struggling, but only if they are poor at goal regulation. The results also suggest that the intensity with which an entrepreneur experiences a business regret may predict negative outcomes for the business owner's quality of life if they are not well able to regulate goals. The step in the model that was not supported was the expectation that business struggles would predict regrets and that the presence of these regrets would, in turn, affect well-being measures as moderated by self-regulation. However, the findings that both business performance and intensity of business regrets were variables that yielded an impact on well-being, depending on the goal flexibility of the entrepreneur suggest that the underlying theory behind this model: that goal flexibility is an adaptive response to business stress in entrepreneurs; may be supported. The adjustment to the theoretical construct suggested by these results is that the single model be split into two: each one a pathway between either business performance or business regrets and the quality of life outcome measures for the entrepreneurs, moderated by goal adjustment abilities.

## Limitations & Future Directions

There are many challenges inherent in multidisciplinary research. The sample must adequately represent the population under study on many dimensions. In the case of research that looks to understand psychological processes affecting entrepreneurs, both psychological and business measures must be adequately sampled and controlled in the analyses. As business outcomes are affected by more than just the actions of the company's leader, research must go beyond the traditional measure of annual sales or personality traits in order to accurately capture meaningful data. At the same time, the demographic characteristics of the individuals in the sample must be understood and also controlled in the analyses. The challenges inherent in understanding the relations between personality characteristics and entrepreneurship led many researchers in the field of entrepreneurship to flee the question of individual differences altogether (eg: Baron, 2000; Monaughan, 2000).

In this study, a number of concerns could be raised with the method of recruitment that was used to generate the sample. For one, the recruitment was done through business associations, creating a bias in the sample towards business owners who join such associations (chambers of commerce, business women's association, etc.). In addition, in all cases our initial contact was made via electronic mail, therefore only reaching entrepreneurs who have an electronic address. There could be legitimate concern that recruiting the sample in this non-traditional method could yield a sample with atypical characteristics. While there is undoubtedly a bias towards entrepreneurs who are computer literate, the overall distribution of the sample on the core socio-demographic variables was acceptable (for a summary of statistics on sample, please

refer to Appendix A). In addition, the sample benefits from greater external validity as participants were drawn from eight different provinces across the nation.

Another limitation is that in the absence of agreement on a definition of “entrepreneur,” there is a limit to the comparisons that can be made between the findings reported here and the findings reported in other studies involving entrepreneurs, otherwise defined. The research was based on a sample of actual business owners, using a broad and inclusive definition of entrepreneur: if the individual’s listed work title was “president” (or owner, CEO, etc.) and they had an ownership stake in this business, they were invited to participate in the study. Definitions of this nature have been used before in research (e.g., Parasuraman, et al., 1996). Regrettably, the problems that stem from an ill-specified definition of terms are among the more serious limitations of this field of research, as previously addressed.

An additional limitation of this study was that the sample included only individuals who are currently operating a business. This criterion excludes entrepreneurs whose businesses have failed and as a result, creates a bias in the sample. Other researchers have previously postulated that business owners who make themselves available for study may be those that are successful. In this case, it may be the success bias that leads to findings suggesting certain character traits (like high achievement motivation) that have often been associated with entrepreneurs (Brockhaus, 1982). However, the data reported here suggests that individual differences do predict outcomes, implying that the entrepreneurs who made themselves available for the study were not all the same and that there was meaningful variability in the sample.



Though this study's findings support the theory that goal management can be an important moderator of the effects of business stressors on an entrepreneur, there may be many others that were not explicitly considered in this research. For example, there is research that implies that social support (i.e., a spouse) is a good buffer for aversive outcomes from stressors (Cohen, Miller, & Rabin, 2001; Brisette, Scheier, & Carver, 2002). In this sample there was a relation between the presence of a spouse and the size of the entrepreneur's business. Perhaps a spouse provides a valuable buffer from stressors in an entrepreneur's life, and this in turn, has a bearing on the business' performance.

This study did not set out to measure all possible moderators in these relations but it is important to bear in mind that the results seen here may also be influenced by other variables, and interactions among variables. For example, research suggests that the effect of marriage for an entrepreneur is very different for women than for men. Marriage appears to reduce the likelihood that a younger man will enter into an entrepreneurial venture, while it increases the likelihood of entrepreneurial behavior on the part of women. However, in the case of both sexes, marriage is positively correlated with success for an entrepreneur (Schiller & Crewson, 1994). This line of research lends support to the suggestion that marriage may be one of many other moderators in the relation between business stressors and entrepreneurial well being that merit study.

When considering the benefits of an intimate partnership to an entrepreneur however, a note of caution should be raised, as one of the risks typically faced by entrepreneurs is the risk to their family life given the time commitment required by their work. Some researchers suggest that entrepreneurs are surrounded by a supportive

system, including family that encourages their efforts (Bird, 1989). While this study suggests a positive association between partnership status and business success, there is also a possibility of increased role-stress for an entrepreneur who is also committed to a family life. This was not addressed directly by the study, but is perhaps a question that deserves further attention, in particular through studies that examine the outcome for the business and for the entrepreneur personally.

Though entrepreneurial behavior is still predominantly a male undertaking, the number of women going into business has been increasing. In fact, the rate of growth of women-owned businesses was double that of male-owned businesses between 1979 and 1990 (Monaughan, 2000), yet much of the existing research has not kept pace. For this reason this study explicitly sought out a sample of entrepreneurs that would be balanced on gender, permitting the examination of a few theories about entrepreneurship and gender. On the one hand, this suggests that the sample is not entirely representative of the population of entrepreneurs as they are today, which is a limitation. On the other hand, the population of entrepreneurs is moving towards this balance so it could be argued that these results will continue to have relevance going forward.

Most entrepreneurship research finds that male and female entrepreneurs are more alike than different (Bird, 1989). For example, though it is often found in the general population that women report more depressive symptoms, this was not the case in this sample ( $r = .09; p > .05$ ). When I considered the zero order correlations of gender with the outcome variables used in the analyses, the only one attaining significance was that women appear to suffer from more physical health symptoms than men ( $r = .20, p < .05$ ). Yet, while the bulk of their characteristics are similar, there are some differences by

gender. Women typically work fewer hours per week than men and work in significantly smaller businesses (Ronstadt, 1984 cited in Bird, 1989). These two findings are supported by the results of this sample.

A further criticism that could be made is that this research is based entirely on self-report data, which is by definition, not objective. It has frequently been reported that answers to questions experienced as personally sensitive may fall prey to the influence of social desirability and other biases. It could be argued that the variability that was seen in the answers to the questions in this study suggests that this was not overwhelmingly the case in this sample. In addition, an advantage of self-report data is that it gives some information about the inter-correlations among the feelings and perceptions of the target population (Spector, 1994). Furthermore, as is the case in all research involving participants who volunteer to participate, there is the inevitable exclusion of business owners who are unwilling to participate in studies of this kind. Criticisms of this nature are valid and caution the reader not to interpret these findings beyond a population of active entrepreneurs who are willing to participate in research.

An additional concern could be raised in the assumption built into the model that the business owners who were facing objective difficulties in their business experienced this as stressful. No direct measures of their perception of felt stress were taken and it could be argued that some entrepreneurs may thrive on adversity and not experience business struggles as purely aversive. Future research could include additional measures of the entrepreneur's perceived stress as explicitly related to the recent state of the business' performance.

While the results are consistent with the proposed process model, it is important to underscore that this cross-sectional study does not permit any conclusions on causality. However, this approach does provide an excellent first step in studying phenomena of interest, particularly one such as entrepreneurs, who are already very difficult to study. The natural next step would be to build on the findings in this study by conducting a similar research project with a longitudinal design. For example, following a cohort of entrepreneurs over time, while taking several measurements on business choices, outcomes and regrets and tracking well-being measures in the entrepreneurs would permit an evaluation of the causal processes involved.

Research into the role of personality variables of entrepreneurs predicting their health in the face of business stressors would also be enhanced with the addition of an objective measure of outcome, such as cortisol samples, to assess a person's physical stress reaction. Research of this nature would need to target more explicitly the day to day stressors from the business, asking entrepreneurs to report on the level of perceived stress they experienced over the course of a particular day and comparing these measures with the cortisol samples. A study of this nature would be challenging to undertake, as entrepreneurs are very busy and may balk at a commitment that required their attention (however minor) over several days. However, given the strength of the preliminary findings reported here, it could be worthwhile to pursue a study that included more objective measures of health.

Many researchers in the field of entrepreneurship have asserted that more research is needed on the role of personality factors in entrepreneurs (e.g., Hornaday, 1982). While this study has provided a good first step towards moving beyond static

entrepreneurial trait assessments into a more dynamic evaluation of the interaction between business difficulties and the owner's coping style, more research is needed. Ideally, a longitudinal study, similar to this one, should be undertaken with measures taken each year over the course of three or more years to examine within subject variability on these outcomes in the face of differential business stressors. A research project of this nature should provide some variability in business stressors over time within participants, which would allow us to make stronger assertions about interactions between self-regulation and business stress actually predicting a reliable pattern of outcomes in well-being.

As psychology's understanding of personality processes has become increasingly sophisticated, it is of growing interest to apply these theories to other academic fields that benefit from understanding human behavior. There is almost no limit to the variety of studies that could be imagined that would make a meaningful contribution to this growing field of research. For example, there have not been many studies considering the effects of role stress on entrepreneurs and more research is needed on this topic (Bird, 1989). In addition, as this study has demonstrated some strong results for goal adjustment ability as a useful coping tool for entrepreneurs, it would be interesting to conduct studies that examined other personality characteristics that can affect coping, such as optimism, or a comparison between active and passive coping styles. It could be particularly interesting to consider how small business owners benefit or not from the use of primary control techniques, especially in light of other research cited here that have suggested that entrepreneurs have an orientation towards action.

An interesting contribution of this study, beyond the model discussed, is a demonstration that research of this nature can be undertaken. One of the frequent objections raised in the study of business psychology is that it is insurmountably difficult to get a meaningful sample; and even if a sample can be obtained, they are unwilling to share sensitive information relating to their companies. While it is not easy to obtain samples such as this one, this study demonstrates that a sensitive wording of questions can permit researchers to obtain sufficiently detailed data to allow for an analysis of the effects of objective business situations on the entrepreneur and vice versa. Small business owners usually have a private company and are in the habit of keeping key information about sales, profits, etc. to themselves. In order to limit missing data, rather than ask for specific numbers about sales or numbers of employees, this questionnaire asked for ranges and then asked about performance in relative terms. This approach provided sufficient specificity for the purposes of the study while minimizing the participant's discomfort. As a result of this approach, this study was confronted with very little missing data, in addition to a degree of confidence about the honesty of the responses.

### Conclusion

Taken together, the results of this study provide support for some components of the theoretical model that guided the analysis. When an entrepreneur's business is experiencing objective difficulties, this has a consequence on the business owner's personal well-being. However, individual differences in self-regulation of goal pursuits can mitigate the aversive consequences of business difficulties for the entrepreneur. The second part of the model, addressing business regrets, does not appear to generate as clear

a set of results. The study's findings suggest that business owners may experience regret in a way that is different from the population in general, but the links between business performance, perceived business regrets, and measures of quality of life are less clear. However, the results demonstrate that affect and intrusions about the regrets (for those who have them) can have powerful effects on a business owner's health and well-being. While goal flexibility appears to have a protective function for the negative emotions, more research is needed to determine if other mechanisms of self-regulation could have an effect to mitigate intrusions.

While clearly more research is needed to develop a comprehensive understanding of the processes that drive the interactions between the stressors of running a business and the personality and style the entrepreneur brings to bear in these situations, this study has taken a good first step. This research demonstrated that it is not simply a character trait per se that has a bearing on outcome in entrepreneurship, rather, it is the combination of stressors and coping styles that are likely to influence the outcome for the entrepreneur. As already suggested, it would be of tremendous interest to test the follow-up assumption that a consequence to the entrepreneur, over time, will yield consequences to his or her business. I hope this research will encourage further studies along these lines to explore the issues in greater depth.

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APPENDIX A  
SUMMARY MEANS AND STANDARD DEVIATIONS  
FOR SOCIO-DEMOGRAPHIC VARIABLES  
ENTERED AS CONTROLS IN ANALYSES

Summary Means and Standard Deviations for Socio-Demographic Variables

Entered as Controls in Analyses

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<i>Socio-Demographic Variables</i>	<i>Sample Mean</i>	<i>Std. Deviation</i>
Sex	1.46	.50
Male =	1	
Female =	2	
Age	3.27	1.17
Under 30 =	1	
30 – 40 =	2	
40 – 50 =	3	
50 – 60 =	4	
60 – 70 =	5	
70 + =	6	
Education Level	.67	.47
University or + =	1	
Below university =	0	
Partnership Status	.77	.42
Intimate Partnership =	1	
No Int. Partnership =	2	

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APPENDIX B

SUMMARY MEANS AND STANDARD DEVIATIONS  
FOR SAMPLE BUSINESS-RELATED CHARACTERISTICS

Summary Means and Standard Deviations for Sample Business-Related Characteristics

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<i>Business Characteristic</i>		<i>Sample Mean</i>	<i>Std. Deviation</i>
Annual Revenues of Business		3.36	1.74
Under \$50,000 =	1		
\$50 - \$100,000 =	2		
\$100 - \$500,000 =	3		
\$500,000 - \$1 million =	4		
\$1 - \$5 million =	5		
\$5 million + =	6		
Percentage of Household Income		2.08	1.08
Under 26% =	0		
26 - 50% =	1		
51 - 80% =	2		
81% + =	3		
Number of Years Owned this Business		10.30	8.60
Number of Weekly Hours worked		3.49	.79
Under 16 =	1		
16 - 30 =	2		
31 - 45 =	3		
46 - 80 =	4		
80 + =	5		

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APPENDIX C  
CORRELATIONS OF CONTROL VARIABLES WITH  
OUTCOME MEASURES AND MODERATORS

Correlations of Control Variables with Outcome Measures and Moderators

Variables	Gender	Age	Partnership	University	Hours	Years of	Business	% of
			Status	Education	work	Ownership	Revenues	Income
1. Biz. Performance	-.16	-.23**	.08	.09	.01	-.16 <sup>t</sup>	.05	.07
2. Regret	-.01	-.21*	-.05	.02	.09	-.16 <sup>t</sup>	-.03	-.01
3. Intrusions	.10	-.02	-.12	-.23*	.16 <sup>t</sup>	-.09	-.08	-.08
4. Emotions	.02	.04	-.08	-.23**	.06	.08	.10	.07
5. Life Satisfaction	.09	.03	.03	.15 <sup>t</sup>	-.15 <sup>t</sup>	-.04	.04	.05
6. CES-D	.09	-.09	.04	-.20*	.18*	-.12	-.01	-.09
7. Stress Health	.20*	-.18*	-.06	-.14 <sup>t</sup>	.03	-.18*	-.11	-.04
8. Disengagement	-.09	.09	-.03	.25**	-.17*	.08	.00	.00
9. Reengagement	.03	-.13	-.11	.09	-.14	-.04	-.08	-.03

\*\* p < .01; \* p < .05; <sup>t</sup> p < .10 (trend)

APPENDIX D  
GOAL ADJUSTMENT



## GOAL ADJUSTMENT

Sometimes an entrepreneur realizes that a particular goal cannot be attained and he or she is forced to stop pursuing an important goal they had set. We are interested in understanding how you usually react when this happens to you. Please indicate the extent to which you agree or disagree with each of the following statements, as it usually applies to you.

**If I have to stop pursuing  
an important goal in my business...**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It's easy for me to reduce my effort towards the goal.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
2. I convince myself that I have other meaningful goals to pursue.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
3. I stay committed to the goal for a long time; I can't let it go.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
4. I start working on other new goals.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
5. I think about other new goals to pursue.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
6. I find it difficult to stop trying to achieve the goal.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
7. I seek other meaningful goals.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
8. It's easy for me to stop thinking about the goal and let it go.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
9. I tell myself that I have a number of other new goals to draw upon.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
10. I put effort toward other meaningful goals.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

APPENDIX E  
BUSINESS REGRETS

## BUSINESS REGRETS

Entrepreneurs make a lot of important decisions throughout their working lives and sometimes may think that they should have done something different than they did. A person may believe that she/he would be better off today if they had behaved in a different way in the past. In such situations, a business person might regret their past behaviour. In addition, the entrepreneur often wants the negative consequences of their behaviour to be undone.

Business regrets might result from things an entrepreneur has done (e.g., being rude to an important client) and from things that the entrepreneur has not done (e.g., not having fired a dishonest employee sooner) at any time since the inception of their business.

**There are 2 parts to this section:** the first will ask you some questions about things that you regret having done in your professional life as an entrepreneur; and the second part will ask the same questions about things that you regret not having done in your professional life as an entrepreneur.

### Things that you regret having done/not done

Please think for a moment about your experience as a business owner. Is there anything in your work that you regret having done/not done? Think about your regrets and write down your most severe business regret from this category of regrets.

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People usually experience different emotions when they think about their regrets. To what extent have you experienced the following emotions when and if you think about the regret that you noted. Please check each item, indicating the extent to which you experienced this emotion about the regret **during the past few months** or since the event occurred if it occurred more recently than a few months ago.

- 1 = Not at All
- 2 = A little
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely

\_\_\_\_\_ a) Sorrow

\_\_\_\_\_ d) Helpless

\_\_\_\_\_ g) Desperate

\_\_\_\_\_ b) Angry

\_\_\_\_\_ e) Contemplative

\_\_\_\_\_ h) Nostalgic

\_\_\_\_\_ c) Sentimental

\_\_\_\_\_ f) Embarrassed

\_\_\_\_\_ i) Irritated

Below is a list of comments made by people who have experienced business regrets. Please check each item, indicating how frequently these comments are true for you **during the past few months** or since the event occurred if it occurred more recently than a few months ago.

**1 = Not at All**  
**2 = Rarely**  
**3 = Sometimes**  
**4 = Often**

- \_\_\_\_\_ a) I had trouble falling asleep because I couldn't stop thinking about the regret.
- \_\_\_\_\_ b) I woke up at night thinking about the regret.
- \_\_\_\_\_ c) I had difficulty concentrating on my work or daily activities because thoughts about the regret kept entering my mind.
- \_\_\_\_\_ d) Once I start thinking about the regret I find it hard to think about (focus my attention on) other things.
- \_\_\_\_\_ e) Thoughts about the regret interfered with my ability to enjoy social or leisure activities.

APPENDIX F

QUALITY OF LIFE MEASURES:  
CES-D, SYMPTOM CHECKLIST & LIFE SATISFACTION

## HEALTH & WELL-BEING

1. Below is a list of ways you might have previously felt or behaved. Please indicate how often you have felt this way during the **past week** by using the following scale:

- 1 = Rarely or None of the time (Less than 1 Day)**
- 2 = Some or a Little of the Time (1 - 2 Days)**
- 3 = Occasionally or a Moderate Amount of Time (3 - 4 Days)**
- 4 = Most or All of the Time (5 - 7 Days)**

During the past week:

1. \_\_\_\_\_ I was bothered by things that usually don't bother me.
2. \_\_\_\_\_ I had trouble keeping my mind on what I was doing.
3. \_\_\_\_\_ I felt depressed.
4. \_\_\_\_\_ I felt that everything I did was an effort.
5. \_\_\_\_\_ I felt hopeful about the future.
6. \_\_\_\_\_ I felt fearful.
7. \_\_\_\_\_ My sleep was restless.
8. \_\_\_\_\_ I was happy.
9. \_\_\_\_\_ I felt lonely.
10. \_\_\_\_\_ I could not get "going."

2. Please indicate whether you have experienced or been treated for any of the following health symptoms during the past 12 months:

	Yes	No
Asthma, bronchitis, or emphysema		
Persistent skin trouble (e.g., eczema, psoriasis)		
Thyroid disease		
Recurring stomach trouble, indigestion or diarrhea		
Being constipated all or most of the time		
Migraine headaches		
Chronic sleeping problems		

3. Overall, how satisfied are you with your life?

1-----2-----3-----4-----5  
 not at all  very much

APPENDIX G  
BUSINESS PERFORMANCE DATA

## YOUR COMPANY

1. Below are five statements about your business with which you may agree or disagree. Using the scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item.

**1 = Strongly Disagree**  
**2 = Disagree**  
**3 = Neutral**  
**4 = Agree**  
**5 = Strongly Agree**

1. \_\_\_\_\_ In most ways my business is achieving the success I expected.
2. \_\_\_\_\_ My business is in excellent condition.
3. \_\_\_\_\_ I am satisfied with my business.
4. \_\_\_\_\_ So far the business has progressed as I have wanted.
5. \_\_\_\_\_ If I could start my business over, I would change almost everything.

2. Compared to previous years, the last 12 months may have become better or worse and simpler or more complicated for your business. Please rate the relative performance or situation of your company in each of these 10 business areas for the past year using the scale below (from large decline to a large increase). Try not to let your response to one question influence your response to other questions.

**Over the past 12 months my company has seen (a) \_\_\_ in the following areas:**

	Large Decline	Small Decline	No Change	Small Increase	Large Increase
1. Sales	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
2. Number of Employees	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
3. Debt Level	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
4. Marketing/Sales Campaigns	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
5. Litigation	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
6. Profitability	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
7. Number of Suppliers	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
8. Cash Flow	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
9. Capital Investment	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
10. Number of Customers	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

3. Overall, how satisfied are you with your business' performance in the past 12 months?

1-----2-----3-----4-----5  
 not at all very much



APPENDIX H  
DEMOGRAPHIC QUESTIONNAIRE

## DEMOGRAPHIC DATA

### *Owner's Demographic Information*

<b>Gender</b>	<input type="checkbox"/> Male <input type="checkbox"/> Female
<b>Age (years)</b>	<input type="checkbox"/> < 30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> 61-70 <input type="checkbox"/> 70 +
<b>Primary Language</b>	At Work: <input type="checkbox"/> French <input type="checkbox"/> English <input type="checkbox"/> Other At Home: <input type="checkbox"/> French <input type="checkbox"/> English <input type="checkbox"/> Other
<b>Marital Status</b>	<input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Cohabit <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed
<b>Highest Level of Education Completed</b>	<input type="checkbox"/> Primary School <input type="checkbox"/> Secondary School <input type="checkbox"/> CEGEP <input type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate <input type="checkbox"/> Trade/Professional School
<b>Years of Work Experience</b>	<input type="checkbox"/> 0 - 5 <input type="checkbox"/> 6 - 10 <input type="checkbox"/> 11 - 15 <input type="checkbox"/> 16 - 20 <input type="checkbox"/> 21 +
<b>Average # Hours you spend on this Business per Week</b>	<input type="checkbox"/> 0 - 15 <input type="checkbox"/> 16 - 30 <input type="checkbox"/> 31 - 45 <input type="checkbox"/> 46 - 80 <input type="checkbox"/> 80 +
<b>% of Household Income Derived from this Business</b>	<input type="checkbox"/> 0 - 25% <input type="checkbox"/> 26 - 50% <input type="checkbox"/> 51 - 80% <input type="checkbox"/> 81 - 100%

### *Business Demographic Information*

<b>Age of Business</b>	Year Company was Founded: _____
<b>Is Current Owner also Founder?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No If No, Year acquired: _____
<b>Legal Designation of Business</b>	<input type="checkbox"/> Incorporation <input type="checkbox"/> Partnership <input type="checkbox"/> Registered Company
<b>Number of Full-Time Employees (or FT equivalents)</b>	<input type="checkbox"/> 1 - 3 <input type="checkbox"/> 4 - 10 <input type="checkbox"/> 11 - 25 <input type="checkbox"/> 25 - 50 <input type="checkbox"/> 50 - 100 <input type="checkbox"/> 100 - 500 <input type="checkbox"/> 500 +
<b>Annual Revenues (Gross Sales) of Firm</b>	<input type="checkbox"/> Less than \$50,000 <input type="checkbox"/> \$50 - \$100,000 <input type="checkbox"/> \$100 - \$500,000 <input type="checkbox"/> \$500 - \$1 million <input type="checkbox"/> \$1 - \$5 million <input type="checkbox"/> \$5 million +

APPENDIX I  
CONSENT FORM

## CONSENT FORM TO PARTICIPATE IN RESEARCH

This is to state that I agree to participate in a program of research being conducted by Dr. Carsten Wrosch and Stephanie Brun de Pontet of the Psychology Department of Concordia University.

### A. PURPOSE

I have been informed that the purpose of this research is to study the relationship between an entrepreneur's business goals and regrets and their business' and personal well being and health.

### B. PROCEDURES

The research will involve a questionnaire that I have received by mail (or e-mail or fax). Completing this will take approximately one half-hour. The questionnaire will ask me about my approach to business goals as well as some questions about behaviors I have regretted from my business life. In addition there will be some questions about my health and well being as well as some general demographic questions about myself and my business.

There should be no risks or discomfort involved in answering the questions. Neither the participant's nor the business's name will be attached to the questionnaire, although the signatures and names on the consent forms will be collected and stored separately by the supervising professor. The participant is free to refuse to answer any question that makes him or her uncomfortable answering and is always free to entirely discontinue their participation.

### C. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.
- I understand that my participation in this study is CONFIDENTIAL (i.e., the researcher will know, but will not disclose my identity nor the identity of my business)
- I understand that the data from this study might be published but there would be NO reference to my name or the name of my business.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) \_\_\_\_\_

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

*If at any time you have questions or concerns regarding your rights as a research participant, please feel free to contact Michelle Hoffman, (Office of Research, University Compliance Officer) at (514) 848-7481.*