The Emotional Energy Availability Model of Goal Commitment

Kay Ren Tse

University of South Australia
International Graduate School of Business

A thesis submitted to the University of South Australia,
International Graduate School of Business
in fulfillment of the requirement for the degree of
Doctor of Philosophy

2011

DEDICATION

To God.

ACKNOWLEDGMENTS

Completing this doctoral dissertation has been the most difficult thing I have undertaken, and there have been moments when I doubted that I had it in me. I still do not think I had it in me except for the help I received from my family and my friends. I would like to thank the following people.

My very beloved husband whom God gave to me to be my very own provider, protector and confidante. My beautiful Clara who studied with me and earnestly volunteered to take public transport to save me time. My generous Christopher whose adorable ways gave me joy and enthusiasm that spilled over into my work. My mother-in-law for her wisdom, every ready helpfulness and longsuffering patience with me. My thesis supervisor, Leonie Hallo, who was my pillar of strength and source of inspiration.

DECLARATION OF ORIGINALITY

This thesis contains no material, which has been accepted for the award of any other degree or diploma. To the best of my knowledge this thesis contains no material publish or written by any other person, except where due reference is made in the text of the thesis.

_____

Kay Ren Tse
2011

The Emotional Energy Availability Model of Goal Commitment

TABLE OF CONTENTS

LIST OF TABLES ..... **vii**

LIST OF FIGURES ..... **x**

ABSTRACT ..... **xii**

CHAPTER ONE: DISSERTATION OVERVIEW **14**

Introduction *14*

Some Notable Exceptions to Documented Research *15*

Introducing Study One and Study Two *18*

Contributions to Research and Practice *21*

Organization of Dissertation *23*

CHAPTER 2: LITERATURE REVIEW **24**

Chapter Introduction *24*

Review of Literature on Goal Commitment *25*

Literature Review for Study One: *31*

Self-Regulation of Goal Commitment *31*

Literature Review for Study Two Part 1: *53*

Emotions and Goal Commitment *53*

Literature Review for Study Two Part 2: *76*

Challenge Stressors, Hindrance Stressors and Quality of Coworker Exchange *76*

Chapter Conclusion *85*

CHAPTER 3: METHODOLOGY **87**

Chapter Introduction *87*

Review of Research Paradigms *89*

Reasons for Examining Study One Through Constructivist Lenses *105*

Reasons for Examining Study Two through Positivist Lenses *114*

How Study One's Research Method Complements Study Two's Research Method and Vice Versa *124*

Chapter Conclusion *136*

CHAPTER 4: STUDY ONE'S RESEARCH METHOD **138**

Chapter Introduction *138*

Study One: Research Questions *139*

Sampling Procedure: Choice of Study One's Organization *140*
Sampling and Coding Procedures *154*
Model Validation *175*
Interview Procedure and Strategies *176*
Chapter Conclusion *181*

CHAPTER 5: STUDY ONE'S FINDINGS **183**
Chapter Introduction *183*
The Emotional Energy Theory of Goal Commitment *187*
Mediating Role of Emotional Energy Availability *189*
Forces 1a and 1b – Situational Factors that Deplete/Enhance Emotional Energy Availability *194*
Forces 1b – Situational Factors that Enhance Emotional Energy Availability *226*
Forces 2b – Effective Goal Commitment Self-Regulation Strategies *248*
Forces 2a – Ineffective Goal Commitment Self-Regulation Strategies *265*
Discussion *268*
Chapter Conclusion *272*

CHAPTER SIX: STUDY TWO'S MODEL AND METHOD **274**
Chapter Introduction *274*
Research Question, Key Definitions and Research Contributions *274*
Hypotheses Development *277*
Method *296*
Chapter Conclusion *307*

CHAPTER SEVEN: STUDY TWO ANALYSIS AND RESULTS **309**
Chapter Introduction *309*
Factor Analyses *309*
Structural Equation Model Analysis *320*
Discussion *334*
Chapter Conclusion *342*

CHAPTER EIGHT: DISSERTATION CONCLUSION **343**
The Research Questions and Their Answers *343*
Limitations *344*
Research Contributions *347*
Future Research Directions *353*
Strengths *357*
Practical Contributions *360*

APPENDICES **380**

LIST OF TABLES

Tables in Chapter 1

None

Tables in Chapter 2

Table 2.1a	Empirical studies on goal commitment.	29
Table 2.1b	Lord et al.'s (2010) Unifying Conceptual Framework (p. 548).	49
Table 2.2	Empirical studies on emotion.	65
Table 2.3	Key findings of the seven studies examining emotional activation.	68
Table 2.4	Review of studies on quality of team member relationships and quality of coworker relationships.	82

Tables in Chapter 3

Table 3.1	Summary of differences between the two research paradigms undergirding the two studies in the present dissertation.	88
Table 3.2	The scale development process. (Adapted from Hinkin (2005)).	98
Table 3.3	Summary of Study One's method issues	107
Table 3.4	Types of constructivist approaches	111
Table 3.5	Summary of Study Two's method features	115
Table 3.6	Experimental research method (in the field or in the laboratory) and the correlational field research method (developed from textual content in (Miner, 2005).	120
Table 3.7	The strengths of the constructivist approach and the weaknesses of the positivist approach	126
Table 3.8	The weaknesses of the constructivist approach and the strengths of the positivist approach	133

Tables in Chapter 4

None

Tables in Chapter 5

Table 5.1	An example of theory-data separation	186
Table 5.2	1st order concepts, 2nd concepts and 3rd order dimensions of situational factors.	196
Table 5.3	1st order concepts and illustrative quotes of situational factors which deplete emotional energy availability	208
Table 5.4	1st order concepts and illustrative quotes of situational factors which enhance emotional energy availability	231
Table 5.5	Effective and ineffective goal commitment self-regulation strategies	255
Table 5.6	1st order concepts and illustrative quotes of effective goal commitment self-regulation strategies	257
Table 5.7	1st order concepts and illustrative quotes of ineffective goal commitment self-regulation strategies	264
Table 5.8	Four Encompassing Themes	269

Tables in Chapter 6

Table 6.1	Hindrance stressors from Study One	286
Table 6.2	Challenge stressors from Study One	288
Table 6.3	Quality of coworker relationships from Study One	289
Table 6.4	Demographic profiles of the target population versus the sample collected	299
Table 6.5	The reported cronbach alphas of the measures used	300
Table 6.6	Hindrance stressors survey items and anchors	301
Table 6.7	Challenge stressors items and anchors	302
Table 6.8	Quality of coworker relationships items and anchors	303
Table 6.9	Emotional energy availability items and anchors	304
Table 6.10	Goal commitment items and anchors	305

Table 6.11	Marker variable items and anchors	306
Table 6.12	Demographic items	307
	Tables in Chapter 7	
Table 7.1	Factor loadings for EFA analysis	310
Table 7.2	The CFA model's fit indices and assessment of good fit for each index	319
Table 7.3	CFA factor loadings (all factor loadings are significant)	319
Table 7.4	Means, standard deviations, correlations and cronbach alphas	329
Table 7.5	Fit indices for hypothesized and nested alternative models	330
Table 7.6	Summary of the results for Study Two's hypotheses	332
	Tables in Chapter 8	
Table 8.1	Comparison of items measuring emotional self-regulation and the Study One's goal commitment self-regulation strategies	354

Unless otherwise specified, all Tables are the author's construction.

LIST OF FIGURES

Figures in Chapter 1

None

Figures in Chapter 2

Figure 2.1	The expectancy theory of goal commitment. Reproduced from Hollenbeck and Klein (1987).	28
Figure 2.2	Locke, Latham and Erez (1988).	38
Figure 2.3a	Control Theory of Self-Regulation (Lord et al., 2010p. 546)	49
Figure 2.3b	Positioning emotion and emotional energy availability within the affect literature.	59
Figure 2.4	The emotion circumplex (Huy, 2002).	60
Figure 2.5	Domain of emotions sampled by PANAS (adapted from Cropanzano, Weiss, Hale and Reb (2003)).	62

Figures in Chapter 3

None

Figures in Chapter 4

Figure 4.1	Sampling, coding and literature consultation in Study One.	155
Figure 4.2	Three stages of sampling linked to three stages of coding.	162
Figure 4.3	Slow progression through all the sampling-coding stages in the first pass of coding.	163
Figure 4.4	Second pass of coding and model validation	163

Figures in Chapter 5

Figure 5.1	The emotional energy availability model of goal commitment	188
Figure 5.2	The emotional energy availability model of goal commitment	194

Figures in Chapter 6

Figure 6.1 The conceptual model 294

Figures in Chapter 7

Figure 7.1 Specified confirmatory factor analysis model 313

Figure 7.2 Model 1 (fully mediated). 323

Figure 7.3 Model 2 (direct path from challenge stressors to goal commitment added). 323

Figure 7.4 Model 3 (direct path from hindrance stressors to goal commitment added). 323

Figure 7.5 Model 4 (direct path from quality of coworker relationships added). 324

Figure 7.6 Model 5 (direct path from marker variable to goal commitment added). 324

Figure 7.7 Standardized parameter estimates for Model 2 from LISREL's output. 327

Figure 7.8 Standardized parameter estimates for Model 2 in conventional graphic representation. 328

Unless otherwise specified, all Figures are the author's construction.

ABSTRACT

This dissertation addresses the question: How do people self-regulate their levels of goal commitment? Study One's grounded theory study findings provide an account of (1) what specific goal commitment self-regulation strategies are used in vivo (2) how these specific goal commitment self-regulation strategies influence goal commitment through the mediating effects of emotional energy availability. In Study One, grounded theory methods were used to develop an emotional energy availability model of goal commitment. Emotional energy availability is defined as (a) feelings for work that (b) provide information about the quantity of personal energy the self holds (c) available for work goal attainment. Emotional energy availability refers specifically to the energetic value inherent in the bipolar dimension with high energy pleasant feelings such as enthusiasm on one end; and low energy unpleasant feelings such as lethargy on the other end. Emotional energy availability does not refer to the bipolar dimension with high energy unpleasant feelings such as anger on one end; and low energy pleasant feelings such as peace on the other end. This is because even if the energetic value on this latter bipolar dimension is high, the energy is channelled to rumination and is unavailable for investment in work goal attainment. Such a theoretical framework as the emotional energy availability model of goal commitment (which uses an emotion construct to explain goal commitment), is novel in that traditional theories explaining goal commitment have hitherto employed cognitive explanations for goal commitment, rather than emotional explanations.

Study Two was a positivist study that examined the role of emotional energy availability in mediating the relationship between situational factors (specifically, challenge stressors, hindrance stressors and high quality coworker relationships) and

goal commitment. Study Two found that emotional energy availability fully mediated the relationship between (1) hindrance stressors and goal commitment, (2) quality of coworker relationships and goal commitment. Surprisingly, it found that the relationship between challenge stressors and goal commitment is only partially mediated by emotional energy availability.

Together, the two studies suggest that emotional energy availability is an important construct in the nomological network of goal commitment (previously unaccounted for in goal commitment research). Emotional energy availability is important because the combined findings of Studies One and Two suggest that both situational factors and goal commitment self-regulation strategies go through emotional energy availability to influence goal commitment levels. In turn, the literature documents that goal commitment affects performance. Hence, this exploration of emotional energy availability and goal commitment throws light on how people in organisations can reach high levels of performance at work.

CHAPTER ONE: DISSERTATION OVERVIEW

> *"Should I give up? Tomorrow I tell my boss that's it, I'm done with it. I'm going to move on in life, and now, every time it just come back, just come back for a couple of nights, this kind of feeling when you almost want to give up that time."*
>
> *- Senior Engineer-*

Introduction

This dissertation would not have been possible but for serendipitous access to an organisation where people think that if a goal looks impossible, then it is the right one to set. This unusual goal setting practice presented an opportunity to examine a relatively rare phenomenon – that of how people manage to keep going even when the going gets tough. This dissertation is about the rare person who does not give up even when the going gets so tough that goal achievement looks impossible.

In research terms, the previous sentence may be rephrased as follows. This dissertation is about people who maintain high levels of goal commitment when faced with constraining situational factors. What strategies do such people use to manage their own levels of goal commitment? How do these strategies work to influence goal commitment levels?

To better understand the above questions, it is good to first define goal commitment and constraining situational factors. Situational factors are features of the context that elicit an individual's cognitive response in evaluating how attractive a goal

is and how possible goal attainment may be (Hollenbeck & Klein, 1987). Constraining situational factors are therefore features of the context that elicit an individual's cognitive response in evaluating goal attainment as unattractive and/or not very likely (Klein & Kim, 1998).

Goal commitment is defined as "one's determination to reach a goal" (Locke & Latham, 1990). This definition implies the intention to extend effort toward goal attainment, persistence in pursuing that goal over time, and an unwillingness to lower or abandon that goal (Hollenbeck & Klein, 1987). Ever since Locke (1968)'s seminal work explaining the relationship between conscious goals and task performance, goal setting has become a prevalent feature of the modern workplace (O'Reilly & Pfeffer, 2000). Goal commitment predicts performance (Hollenbeck & Klein, 1987; Hollenbeck, Williams, & Klein, 1989b). The study of goal commitment is therefore essential to informing the relationship between an individual's challenging work goals and his work performance.

Some Notable Exceptions to Documented Research

The research literature reports that constraining situational factors depress goal commitment (Hollenbeck & Klein, 1987; Klein & Kim, 1998). This would mean that in practice, even if people start off very committed to their goals, they should become less committed over time, or even give up, as and when constraining situational factors unfold (Kanfer, Ackerman, Murtha, Dugdale, & Nelson, 1994). Whilst some people do give up, others do not. These exceptional cases give the lie to the predictions documented in the research literature. Indeed, the lay literature contains a

preponderance of enduring stories about heroic goal commitment: for example, Erin Brockovich's commitment to exposing one of the worst cases of corporate pollution in history, (Brockovich & Eliot, 2002), Professor James Brierley Smith's 14 year commitment to finding the coelacanth (Weinberg, 2001), Roger Bannister's determined effort to break the four minute mile record (Bannister, 1955), and the Little Engine that Could (Piper, 1930). There seems to be a some notable exceptions to what has been documented in research.

These stories inspire and/or exhort readers to demonstrate similar goal commitment in the face of constraining situational factors. Implicit in such exhortations or inspiration to high goal commitment, is the notion that people can and do actively manage their goal commitment levels in the course of their goal attainment journeys, else there would be no utility in exhorting another to high goal commitment. This dissertation attempts to clarify how such people manage their goal commitment levels in the course of their goal attainment journeys.

This line of inquiry is of practical importance because the notion of maintaining one's goal commitment in the face of constraining situational factors seems to be one that appeals to some of humanity's highest ideals. The stories detailed above endure through the generations. The Little Engine that Could was first published in 1930 and is still in print today. The story of Roger Bannister's commitment to running the mile in under four minutes, was first published in 1955 and is still in print today. The fact that they endure, and have timeless appeal to generation after generation of human beings, suggest that the notion appeals to humans in a deep and meaningful way. And for this reason, it is practically important to explain the notable exceptions identified herein above, by throwing light on how such people self-regulate their levels of goal

commitment, and what these strategies are. If research shows that people tend to give up when faced with constraining situational factors (Klein & Kim, 1998), how do those who refuse to give up, actually do it? In summary, this dissertation addresses two practical questions left unanswered by existing theory and empirical research: (1) What goal commitment self-regulation strategies do people use? (2) How do these goal commitment self-regulation strategies work to influence goal commitment?

There has been no significant theory development pertaining to goal commitment ever since Hollenbeck and Klein (1987) proposed their influential expectancy theory of goal commitment. In addition, Hollenbeck and Klein's (1987) theoretical framework was developed before the advent and spread of more sophisticated and rigorous grounded theory research techniques (Strauss & Corbin, 1990), and was therefore constructed a priori, before being tested in subsequent survey studies (Chong & Johnson, 2007; Klein & Kim, 1998; Piccolo & Colquitt, 2006) or experimental studies (Ingledew, Wray, Markland, & Hardy, 2005; Sue-Chan & Ong, 2002a). Whilst Hollenbeck and Klein's (1987) expectancy theory of goal commitment has received empirical support and exerted much influence in directing empirical work on goal commitment, its very influence represents a limitation for research on goal commitment. A priori theory development directing the steps of subsequent positivist research means that if the theoretical framework has overlooked a certain class of antecedents, then researchers may fail to examine lines of inquiry relating to such antecedents, that could be practically important but hitherto, theoretically unaccounted for. Specifically, a review of the literature in Chapter Two reveals that Hollenbeck and Klein's (1987) expectancy theory of goal commitment has not been explicit in addressing the role of self-regulation strategies as an important class of determinants of goal commitment. This dissertation builds theory to (1) conceptualise the different

types of goal commitment self-regulation strategies people use and (2) to explain how goal commitment self-regulatory strategies influence goal commitment (i.e., by exerting their influence on emotional energy availability).

Introducing Study One and Study Two

This dissertation is comprised of two separate studies implemented using two different (and thus complementary) research approaches. Study One employs the constructivist approach. Study Two employs the positivist approach. Study One was designed to answer the research questions sketched out in the paragraphs above. Study explored the influence of emotional energy availability (an affective construct, and more specifically, the activated aspect of emotion) on goal commitment (a cognitive construct). Together, these two studies suggest the importance of emotional energy availability as a proximal antecedent of goal commitment.

Grounded theory methods (Corbin & Strauss, 2008) were employed in Study One to develop theory relevant to goal commitment self-regulation strategies. In Study One's grounded theory study, emotional energy availability appeared as a key mediating variable between situational factors and goal commitment self-regulation strategies on one hand, and goal commitment levels on the other. Emotional energy availability is defined as (a) feelings for work that (b) provide information about the quantity of personal energy the self holds (c) available for work goal attainment. The key referent for "emotional energy availability" is work. When people feel enthusiastic, eager and excited about their work, they perceive high levels of emotional energy availability for work. When people feel reluctant, lethargic and unwilling vis-à-vis

their work goals, they perceive low levels of emotional energy availability for work. In other words, emotional energy availability refers solely to the energetic aspect of emotions (and disregards its valence, i.e., pleasantness versus unpleasantness) (Cropanzano et al., 2003) that is available for investment in work goals.

Study Two applies a positivist test to the notion that emotional energy availability mediates the relationships between selected situational factors and goal commitment. The selected situational factors are challenge stressors, hindrance stressors and quality of coworker relationships. These situational factors were selected for positivist testing in Study Two because (1) they were already robust constructs possessing of well-validated and oft-used measures, (2) they had hitherto, not yet been studied alongside goal commitment and (3) the items comprising their measures could be related to specific excerpts from Study One's interviews. Goal commitment self-regulation strategies were not included in Study Two for two reasons.

Firstly, no measures for goal commitment self-regulation strategies currently exist in the literature. Using unvalidated measures would detract from the rigour of Study Two. Secondly, testing the mediating role of emotional energy availability in Study Two (instead of testing the positivist validity of the taxonomy of goal commitment self-regulation strategies) and finding results to support the notion, also has a higher research impact because hitherto, theories explaining goal commitment have focused on cognitive explanations (i.e., expectancy theory of goal commitment (Hollenbeck & Klein, 1987)). A theory that explains goal commitment through emotional states is novel in the domain of goal commitment research.

Study One was conducted using a sample that consists of the executive level employees within a semi-conductor wafer fabrication facility located in Singapore. Using purposeful sampling techniques from interpretive research, this organisation was purposefully chosen because of its unusual propensity to set seemingly impossible goals for its employees; and, its employees routinely meet the seemingly impossible goals set for them. Recall that constraining situational factors are defined as features of the context that elicit an individual's cognitive response in evaluating goal attainment as unattractive and/or not very likely (Klein & Kim, 1998). Study One's organisation was one wherein situational factors were so constraining that the attainment of assigned goals seemed unlikely to employees (i.e., seemingly impossible goals). From within Study One's organisation, the sample comprised full-time employees holding positions as engineers, senior engineers, mid-level managers and senior level managers.

Study Two was conducted with full-time employees holding positions as engineers, senior engineers, mid-level managers and senior level managers from a different high-tech organisation. A different organisation than the one in Study One was chosen because it was necessary to collect data that would allow for greater external validity. This adds to the methodological rigour of the dissertation, enabling its results to be generalizeable to organisations in general, and not just reflective of those idiosyncratic realities of Study One's organisation.

The choice of Study Two's organisation was made for the following reasons. Firstly, consistent with what has been documented about the nature of engineering work (Gregersen & Dyer, 2002; Leonardi, Jackson, & Diwan, 2009), engineers therein work in teams to solve engineering problems. As such, engineers are well-positioned to inform this study about quality of coworker relationships (a key construct in Study

Two). Secondly, the organization practices an annual goal setting exercise. As such, the engineers from the chosen organisation are well-positioned to inform the domain about goal commitment (another key construct in Study Two). Thirdly, as in any modern organization, it is not completely devoid of workplace stressors, and hence its employees would be able to report on their experience of workplace stressors (yet another key construct in Study Two). Fourthly, it is also reasonable to think that the employees in this organization, as in employees elsewhere, would be able to give an account of their personal levels of enthusiasm and excitement for work i.e., emotional energy availability (the single most important construct of this dissertation which appears in both Study One and Study Two).

Contributions to Research and Practice

From a research perspective, this dissertation makes contributions in several ways. First, the thesis is methodologically robust. A naturalistic setting is used to conduct both the studies in the dissertation. By employing grounded theory methods of theory elaboration, the theoretical framework of this thesis is not only grounded in extant literature, it is also grounded in empirical data. This well grounded theoretical framework is then partially tested using quantitative methods from the positivist tradition of inquiry. As such, the thesis combines both qualitative and quantitative methods and thus ensures that the complementary strengths of both the constructivist research approach and the positivist research approach are combined to form a single inquiry.

Second, this dissertation brings into salience the role of self-regulation strategies in managing goal commitment levels. In this manner, it contributes to the

domain of goal commitment which has neither empirically examined, nor theoretically considered them.

Third, this dissertation clarifies the importance of emotional energy availability in determining levels of goal commitment, thus contributing to (1) the literature on goal commitment (Hollenbeck & Klein, 1987; Locke et al., 1988), and (2) the literature on emotion (Gohm & Clore, 2002; Isen, 2004; Schwarz, 2002).

From a practical perspective, this dissertation explains some notable exceptions to what has been documented in research. Research has found that constraining situational factors depress goal commitment. In the face of constraining situational factors which gradually unfold, people should give up. Yet the lay literature is replete with examples of people who do not give up. Reference is made to lay literature because a major part of this dissertation examines phenomenon from the constructivist research paradigm. Traditional positivist research eschews the inclusion of lay literature in the literature review. However, the constructivist paradigm embraces lay knowledge. Whilst positivists see lay knowledge as inferior to scientific knowledge, constructivists argue that ordinary people use lay knowledge to guide them in daily living, therefore, for scientists to discover truths about the real world, they must first grasp lay knowledge (Neuman, 2000; Pratt, 2008; Raelin, 2007).

By specifically studying how people maintain their goal commitment in the field where constraining situational factors unfold over time, the findings reported herein can serve to educate those who tend to give up too easily, on how to maintain their own levels of goal commitment. In addition, the same findings may serve to inform organizations on (1) the importance of helping their employees' manage levels

of emotional energy availability and (2) how to help their employees' manage levels of emotional energy availability.

Organization of Dissertation

The dissertation is organized into eight chapters. Chapter Two is the literature review that frames the contributions of both studies to the research literature. Chapter Three details the key methodological differences between Study One and Study Two, and attempts to show how the research methods chosen for Study One and Study Two complement each other to result in a single dissertation that is methodologically robust. Chapter Four details the research method for Study One. Chapter Five describes the results for Study One. Chapter Six develops the hypotheses and describes the method and measures for Study Two. Chapter Seven details and discusses the results for Study Two. Chapter Eight concludes the dissertation by integrating the results of Study One and Study Two, and proceeds to discuss the findings of the dissertation as a whole.

CHAPTER 2: LITERATURE REVIEW

Chapter Introduction

Chapter 1 presented an overview of this dissertation's structure. This chapter proceeds to review the different streams of literature relevant to this dissertation. As this dissertation is primarily about goal commitment, an in-depth review of the goal commitment literature will be presented first. The review of goal commitment will bring into salience two major gaps in the goal commitment literature: (1) that little is known about the strategies individuals employ to self-regulate goal commitment, and (2) that little is known about the influence of affective constructs (such as emotional energy availability) on goal commitment.

To better clarify the first gap described above (i.e., that little is known about the strategies individuals employ to self-regulate goal commitment), the following reviews will be presented: (1) extant theoretical frameworks explaining goal commitment, (2) specific studies suggesting that goal commitment may be self-regulated and (3) real-life cases suggesting that self-regulation of goal commitment is of great intrinsic value to the human condition. The review thus presented aims to make salient the need to build a grounded theory explaining how self-regulation strategies influence goal commitment.

To better understand the second gap described above (i.e., that little is known about the influence of affective constructs such as emotional energy availability on goal commitment), a review of the literature on emotions will then be presented. Emotion is a specific affective construct. Emotion research is therefore part of the broader domain

of affect research. The review of the emotion literature provides a clear background of key constructs and definitions relevant to the study of emotions at work. Further, it serves to describe the contributions of this dissertation to the research and study of emotions, and thus affect.

Lastly, given that Study Two was designed to test a key theoretical assertion developed in the grounded theory Study One, robust constructs (with existing well validated measures) that could be surfaced from Study One, were selected to be included in Study Two. These selected constructs are challenge stressors, hindrance stressors and quality of coworker exchange. Since these three constructs are an integral part of the positivist test in Study Two, a review of the literature on workplace stressors and quality of coworker exchange will also be presented.

Review of Literature on Goal Commitment

This section details a systematic review of the literature on the antecedents of goal commitment. The accumulated knowledge on the antecedents of goal commitment is relevant because this dissertation's research questions seek to extend the domain's knowledge of goal commitment's antecedent constructs. My review of the literature on goal commitment focuses specifically on studies from 1998 till the present time. There are two related reasons for choosing 1998 as a cut-off date. Firstly, the primary focus of this literature review is on the antecedent constructs of goal commitment. As such, studies that measure goal commitment as an experimental control variable and which neither specifically formulate, nor test, hypotheses relating antecedent constructs to goal commitment are irrelevant to this literature review. It has

been documented that up until 1998, goal commitment was often measured "as a secondary variable. That is, goal commitment [was] measured without specific hypotheses aimed at exploring its nature and role, and statistical relationships [were] not reported between goal commitment and the other variables being studied" (Klein, Wesson, Hollenbeck, & Alge, 1999). As such, studies done prior to 1998 are deemed irrelevant to the present literature review.

This literature review serves as a basis for commenting on what is known about the antecedents of goal commitment, such that conclusions may be drawn as to the contributions of the present dissertation. Table 2.1 summarizes empirical studies on goal commitment in reverse chronological order. The columns present descriptors of extant research on goal commitment relevant to our understanding of the gaps present in the domain.

The first pair of descriptors reflects which of the two major categories of antecedents are present in the study (i.e., situational or personal factors). These two descriptors are drawn from Hollenbeck and Klein's (1987) influential expectancy theory of goal commitment. See Figure 2.1 below. Hollenbeck and Klein's (1987) expectancy model of goal commitment holds that various (1) situational factors and (2) personal factors influence the expectancy or attractiveness of goal attainment. The expectancy and attractiveness of goal attainment, in turn, determine goal commitment. Personal factors "are classified as personal in the sense that variation across individuals on these dimensions stems more from factors within the individual, as opposed to factors within the situation, and deals with constructs such as needs, beliefs, attitudes and personality traits" (Hollenbeck & Klein, 1987: 214). Examples of personal factors that affect expectancy of goal attainment are ability, self-esteem, past success

experienced and locus of control. Situational factors are features of the context that elicit an individual's cognitive response in evaluating how attractive a goal is and how possible goal attainment may be. Examples of situational factors that affect expectancy of goal attainment are supportive supervisor relationship and constraining situational factors on goal attainment (Hollenbeck & Klein, 1987). In short, this pair of descriptors (i.e., personal and situational factors) reflects the two major antecedent categories, which have been previously theorized and documented in the literature.

The column labeled "affect" documents whether the study examined affect alongside goal commitment. What is affect? Affect is an umbrella term that encompasses a wide range of feelings experienced by people. These include feeling states, which are transient affective experiences, and feeling traits, which are more stable tendencies to feel and act in certain ways (Watson & Clark, 1984). For example, when your friends give you a surprise birthday party, you are joyful in that moment. When the moment passes, the feeling of joy also passes. This transient affective experience is termed "state affect" (George, 1991). State affect comprises (1) moods (i.e., affective states that are diffuse and lack focus e.g., "I am grouchy today") and (2) emotions (i.e., affective states that have a specific focus e.g., "I am excited about my job"). On the other hand, stable tendencies to feel and act in certain ways are termed "dispositional affect" (Staw & Bell, 1986) and refers to the extent to which an individual is generally a happy person or an anxious person etc...

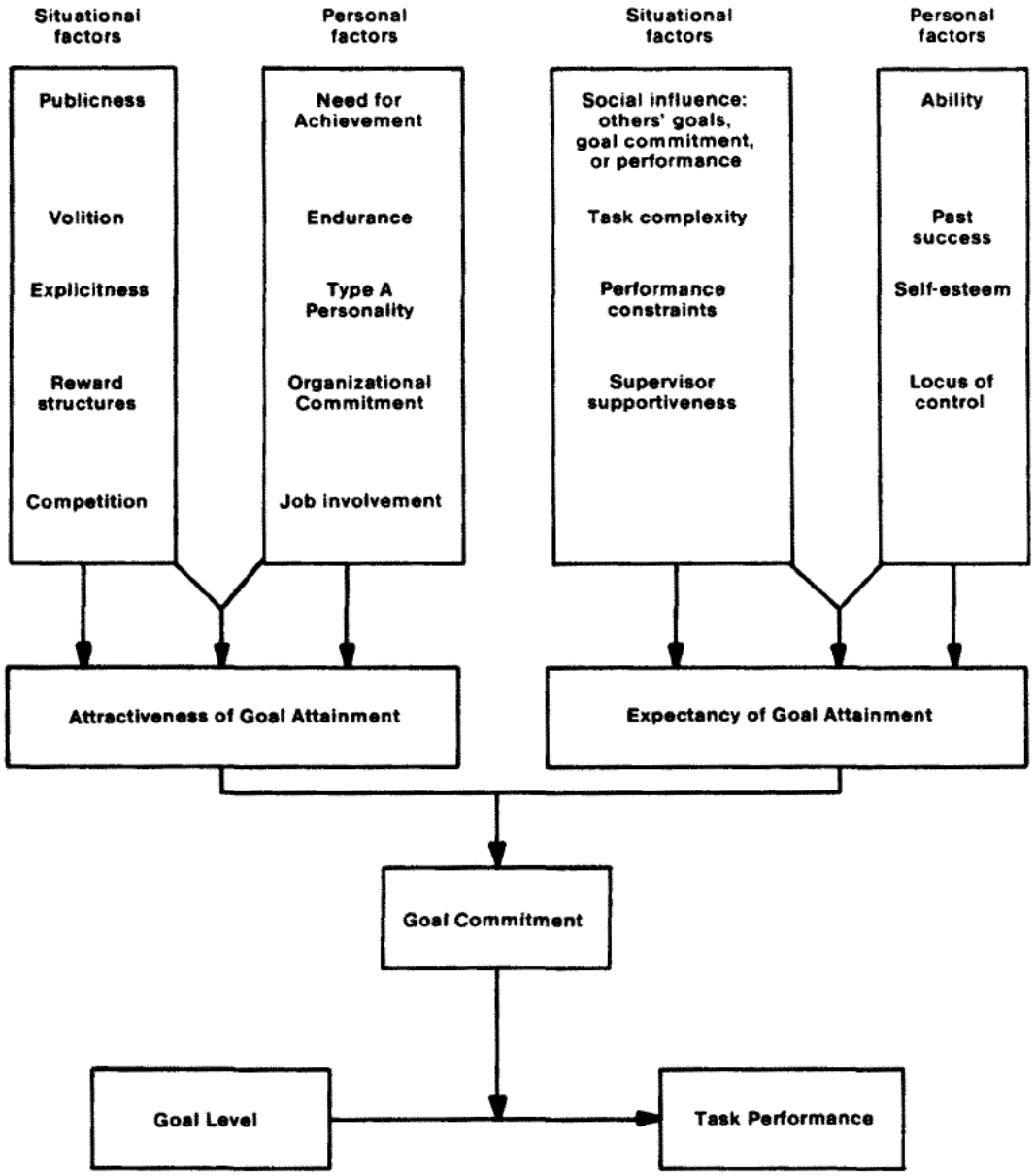


Figure 2.1. The Expectancy Theory of Goal Commitment. Reproduced from Hollenbeck and Klein (1987)

The literature review presented in Table 2.1 below points to two issues that appear as gaps in the domain.

- Firstly, the literature on goal commitment has overlooked the role of self-regulatory strategies as a class of determinants. This is addressed by the section below entitled Literature Review for Study One.

- Secondly, it has overlooked the role of affect in the explanation of goal commitment. This is addressed by the section below entitled Literature Review for Study Two.

Table 2.1a
Empirical Studies on Goal Commitment

Reference and Journal	Affect	S	P	Unclassifiable Under Extant Theoretical Antecedents (Situational And Personal Factors)
(Chong & Johnson, 2007) Accounting and Business Research	No	X		
(Piccolo & Colquitt, 2006) Academy of Management Journal	No	X		
(Klein & Lee, 2006) Human Performance	No		X	
(Houser-Marko & Sheldon, 2006) Personality and Social Psychology Bulletin	No		X	
(Cole, Bruch, & Vogel, 2005) Academy of Management Proceedings	No	X		
(Ingledew et al., 2005) Journal of Health Psychology	No	X		
(Hinsz & Jundt, 2005) Journal of Applied Social Psychology	No		X	
(Webb, 2004) Contemporary Accounting Research	No	X		
(Hinsz & Nickell, 2004) Group Dynamics: Theory, Research and Practice	No	X		
(Li & Butler, 2004) Journal of Business and Psychology	No	X		
(Guthrie & Hollensbe, 2004)	No	X		

Journal of Management				
(Wentzel, 2002) Behavioral Research in Accounting	No	X		
(Chong & Chong, 2002) Behavioral Research in Accounting	No	X		
(Langan-Fox, Code, & Gray, 2002) Group Processes and Intergroup Relations	No	X		
(Hecht, Allen, Klammer, & Kelly, 2002) Group Dynamics: Theory, Research and Practice	No	X		
(Sue-Chan & Ong, 2002b) Organizational Behavior and Human Decision Processes	No	X		
(Seijts & Latham, 2000) Canadian Journal of Behavioral Science	No	X		
(Kalnbach & Hinsz, 1999) Journal of Applied Social Psychology	No	X	X	
(Klein & Kim, 1998) Academy of Management Journal	No	X		
(Diefendorff & Lord, 2003) Human Performance	No			X
(Langens & Schmalt, 2002) Personality and Social Psychology Bulletin	No			X
(Oettingen, Pak, & Schnetter, 2001) Journal of Personality and Social Psychology	No			X
(Oettingen, Mayer, Sevincer, Stephens, Pak, & Hagenah, 2009) Personality and Social Psychology Bulletin	No			X

Notes.
Affect =Whether affect was explored in the study
S =Situational factors
P =Personal factors

Literature Review for Study One:
Self-Regulation of Goal Commitment

Self-Regulation and Goal Commitment: Extant Theories

Extant theoretical frameworks on goal commitment categorize antecedents of goal commitment

- into either personal factors or situational factors (Hollenbeck & Klein, 1987) or
- into external or internal factors (Locke et al., 1988).

For most of the studies listed in Table 2.1, antecedents to goal commitment could be easily categorized into either situational factors or personal factors, as proposed by Hollenbeck and Klein's (1987) expectancy theory of goal commitment. However, three particular studies explored antecedents that could not be classified into either of the two extant theoretical categories. In Table 2.1, these studies are categorised in the column entitled Unclassifiable Under Extant Theoretical Categories of Antecedents (Situational and Personal Factors). What follows is a brief review each of the three studies in order to ascertain that the variables studied can neither be classified into situational factors nor personal factors. These three studies will also be examined for their implications relating to goal commitment self-regulation strategies.

Review of Three Studies (Diefendorff & Lord, 2003; Langens & Schmalt, 2002; Oettingen et al., 2001)

Diefendorff and Lord (2003)'s experimental study explored whether implemental mindset and implemental intention related positively to goal commitment. The implemental mindset refers to "the frame of mind one is in when actively planning" (Diefendorff & Lord, 2003, p. 367). Only individuals who engage in thoughtful, focused planning have a strong implemental mind-set. The implementation intention refers to "the commitment to perform a particular action under specific circumstances" (Diefendorff & Lord, 2003, p. 367). Forming an implementation intention specifies the where, when, and how of goal-directed activities. The researchers found that neither implemental mindset nor implemental intention related to goal commitment.

Firstly, neither implemental mindset nor implemental intention can be easily classified as personal factors (with personal factors defined as "needs, beliefs, attitudes and personality traits" (Hollenbeck & Klein, 1987: 214)). Indeed, one might classify both these variables as goal commitment self-regulation strategies because in order to increase the self's goal commitment levels, one might choose to engage in thoughtful, focused planning (i.e., adopt an implementation mindset), or to commit to performing a specific action in specific circumstances (i.e., have an implementation intention).

Langens and Schmalt (2002) investigated how fear of failure interacted with positive daydreaming to determine levels of goal commitment. "Individuals high in fear of failure typically have low expectations of being able to successfully attain goals that are related to achievement and competence and generally strive to avoid failure when facing a standard of excellence" (Langens & Schmalt, 2002, p. 1726). Positive

daydreaming refers to "self-generated imagery that enacts the successful attainment of personal goals" (Langens & Schmalt, 2002, p. 1726). The authors reported results for three studies. Study 1 (a concurrent correlational field study i.e., a study done using quantitative survey measures capturing all variables all together at a single point in time) found that individuals high (relative to low) in fear of failure who had recurrent positive daydreams about attaining goals reported increased levels of depression and confusion. In Study 2 (an experimental study) fear of failure predicted reductions in goal commitment after participants imagined the successful attainment of a goal. Study 3 (a longitudinal correlational field study i.e., a study where quantitative survey measures are used to capture study variables over a period of time) found that participants high in fear of failure, and demonstrating strong goal commitment also reported fewer positive daydreams about attaining a personal goal.

Whilst Hollenbeck and Klein (1987) classify fear of failure as a personal factor, positive daydreaming does not fit neatly into the category of personal factors (defined as "needs, beliefs, attitudes and personality traits" (Hollenbeck & Klein, 1987: 214)). It also does not fit neatly into the category of situational factors. Indeed, it could well be described as a strategy for regulating goal commitment because those high in fear of failure can choose to daydream less so as to maintain goal commitment. In contrast to Diefendorff and Lord (2003)'s experimental study described above, Langens and Schmalt's (2002) study described in this section, did find that a certain self-regulatory strategy related to goal commitment. This suggests that there are goal commitment self-regulation strategies which work.

Positive daydreaming is similar to the notion of positive fantasy examined by Oettingen et al.'s (2001) study. Fantasy realization theory postulates that there are three

forms of self-regulatory thought (1) mentally contrasting positive fantasies of the future with aspects of current reality, (2) indulging in positive fantasy and (3) reflecting on negative reality. Fantasy realization theory posits that when people mentally contrast positive fantasies of the future with aspects of current reality, they are driven to form expectations of whether they are able to change current reality into the desired future. When expectations of success are high, strong goal commitment arises in light of favorable expectations. When expectations of success are high, weak goal commitment arises (Oettingen et al., 2001). However, when people only indulge in positive fantasy or pondered on negative current reality, moderate goal commitment emerges, which is not linked to any expectation of success nor failure.

The study found that respondents placed in the (1) contrast condition (i.e., where they were made to contrast present reality with positive fantasies of the future) had higher goal commitment as expectations of success went up. For participants placed in the (2) positive fantasy condition (i.e., where they indulged in positive fantasy only) and (3) negative reality condition (i.e., where they though about the negative aspects of current reality, expectations of success had no relationship to goal commitment. Oettingen et al. (2001) explicitly described the above three thought processes as self-regulatory thought processes.

These three studies bring into salience some effective goal commitment self-regulation strategies. What other effective goal commitment self-regulation strategies might also exist? This dissertation's results will shed some light on this question.

In an extension of Oettingen et al.'s (2001) study, Oettingen et al. (2009) examined whether energization mediated the relationship between mentally contrasting a desired future with present reality (a self-regulation strategy) and goal commitment. Their results imply that when expectations of success at goal achievement are high, mental contrasting (defined as a self-regulation strategy wherein an individual contrasts a desired future with obstacles present in the current reality) provides enough energy (measured using physiological indicators in Study One and self-report, in Study Two) to enhance levels of goal commitment. Again, the same question arises. What other self-regulatory strategies exist that also influence goal commitment? Further, how do these other goal commitment self-regulation strategies work to influence goal commitment?

Locke et al. (1988)

Presently, another theoretical framework is examined to ascertain if a competing theoretical framework to that of Hollenbeck and Klein's (1987) goal commitment expectancy theory of goal commitment described earlier in this chapter might have articulated categories of goal commitment antecedents which would include goal commitment self-regulation strategies. This alternative theoretical framework for explaining goal commitment was developed by Locke et al. (1988). This model postulates the existence of three categories of determinants. These are (1) external influences (2) interactive influences and (3) internal factors. External influences are similar to the situational factors conceptualized by Hollenbeck and Klein (1987). Interactive influences comprise the instances where the self interacts with the

environment e.g., participative goal setting wherein the individual interacts with an external influence to set goals; or another example is competition wherein the self competes with external influences to attain goals. Locke et al.'s (1988) interactive influences could be similar to the person-environment influences depicted in the transactional dynamics model of personality development (Bem, 1988), wherein it is posited that there are three transactional modes through which the person-environment interaction can develop personality: proactive (people select environments consistent with their personality; reactive (people react to their environment in trait consistent ways); and evocative (people stimulate trait consistent responses in others (Caspi & Bem, 1990). Whilst Locke et al.'s (1988) work does not focus on personality development, the transactional dynamics model is reviewed here to illustrate some possible interactions depicted in Locke et al. 's (1988) model of goal commitment. Internal factors, as conceptualized by Locke et al. (1988) comprised constructs such as expectancy of success, self-efficacy and internal rewards. Expectancy of success refers to the extent to which one expects to successfully attain a goal. Self-efficacy refers to how well one believes one can execute courses of action required to deal with prospective situations (Bandura, 1986). Internal rewards refer to self-administered rewards a person promises to give himself/herself for attaining the goal (Locke et al., 1988). External influences and interactive influences are cognitively processed with internal factors to predict goal commitment, which in turn predicts performance.

At first glance, it would seem that goal commitment self-regulation strategies could well fit nicely in the category labeled "internal factors" (Locke et al., 1988: 32). See Figure 2.2 below. On closer examination however of the three constructs put forth by Locke et al. (1988), two are not self-regulatory in nature. These are expectancy of

success and self-efficacy. Therefore, the said category is an insufficient classification because it is a broad category that includes also constructs which are not self-regulatory in nature. Therefore, the literature seems to suggest that extant theoretical models on goal commitment either do not explicitly include self-regulatory strategies (as in Hollenbeck & Klein, 1987), or do not provide enough sharpness of definition of what these are, and how they work to influence goal commitment (as in Locke et al., 1988). It is therefore timely and useful to build theory that can explain how goal commitment self-regulation strategies work, and what these are in specific.

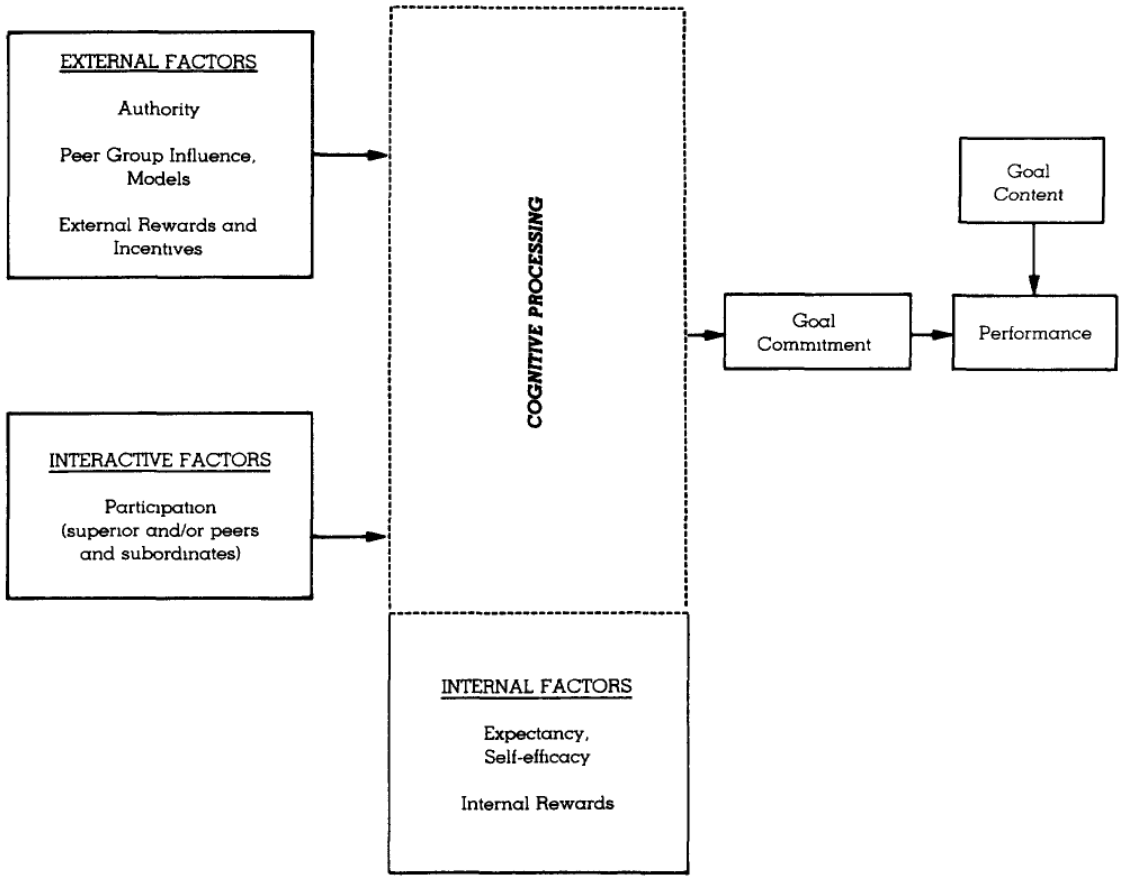


Figure 2.2 Locke et al.'s (1988) theoretical model of the antecedents of goal commitment.

Self-Regulation of Goal Commitment: The Lay Literature

Traditional positivist research eschews the inclusion of lay literature in the literature review. The positivist view of scientific inquiry holds that scientific knowledge is superior to that produced from values, feelings, or untested experience such as that in the cases enumerated above because of science's adherence to rigorously objective and unbiased methods. In consequence, theory, which offers hypotheses, is best considered differentiated from practice (Raelin, 2007). According to the positivist researcher, lay knowledge, if referred to in scientific research, is not quality research (Whitley, 2002). The positivist research paradigm rejects lay

knowledge. Positivist researchers working in a positivist tradition often create new words to represent sets of scientific ideas and associated terms. He or she strives to work with notions that have greater logical consistency and are more refined than those found in everyday common usage (Neuman, 2000). The positivist researcher rejects lay knowledge as a worthwhile source of knowledge. Traditionally therefore, a research dissertation such as the present one would not normally make reference to lay knowledge.

Note however, that this single dissertation is composed of two studies, and adopts two different paradigms in its exploration. Study One adopts a constructivist paradigm whilst Study Two adopts a positivist paradigm. The constructivist paradigm does not reject lay knowledge. Indeed, the constructivist paradigm embraces lay knowledge. In the constructivist paradigm, the world "is what people perceive it to be… life exists as people experience it and give it meaning" (Neuman, 2000, p. 72). Whilst positivists see lay knowledge as inferior to scientific knowledge, constructivists argue that ordinary people use lay knowledge to guide them in daily living, therefore, for scientists to discover truths about the real world, they must first grasp lay knowledge (Neuman, 2000). Given that Study One adopts the constructivist research paradigm, it is entirely appropriate to review the lay literature as a means of situating the research contributions of Study One within the gaps of what researchers know of goal commitment.

Indeed, Pratt (2008) writes that qualitative researchers often need to argue the contributions of problem-centred research i.e., research that stems from an occurring phenomenon or real-life issue rather than strictly from gaps in one or two theories. Pratt (2008) recommends that having first identified the real-life issue, one should next

delineate the boundaries of what has been written, and bring into salience a space where the research literature is silent. This is what will be done in this literature review for Study One in two steps, albeit in the reverse order compared to the steps suggested by Pratt (2008) above.

- In the first step, a purely theoretical motivation was presented (see the preceding paragraphs and Table 2.1), by demonstrating that extant theoretical models on goal commitment either do not explicitly include such goal commitment self-regulation strategies (as in Hollenbeck & Klein, 1987), nor do they provide enough sharpness of definition of what these are, and how they work to influence goal commitment (as in Locke et al., 1988).

- In the second step, the ensuing paragraphs will review real-life cases demonstrating that self-regulation of goal commitment is a real-life issue that holds deep meaning for humanity. This second step is extremely important for Study One because a study of its nature (i.e., qualitative) must be first justified by emphasizing the importance of the phenomenon being explored. Pratt (2008) writes that "problem-centered research stems from an occurring phenomenon or real-life issue rather than from the gaps in one or two theories". As such, it is very important to show that "the study's focus question [is] considered important and problematic given the social unit" (Hansen, 2005, p. 268). To paraphrase Hansen (2005), one must be able to demonstrate that the qualitative study's focus question is of importance and holds deep meaning for a group of

people as they move about their daily lives. The following paragraphs aim to do this.

A review of some lay literature will be included in my scholarly work because of burgeoning support for this from reputable researchers publishing in the best journals (such as the Academy of Management Journal (Siggelkow, 2007), the Academy of Management Learning and Education (Raelin, 2007) and Organizational Research Methods (Pratt, 2008)) and also reputable qualitative researchers writing in methodology textbooks (Hansen, 2005). These researchers begin to articulate the notion that whilst research can inform lay practice, lay practice can also inform academic work (Raelin, 2007), and that real-life cases documented in the lay literature "are often a great way to motivate a research question… One can offer a purely theoretical motivation, but one that is grounded in a real-life situation is usually much more appealing" (Siggelkow, 2007, p. 21). Accordingly, this literature review proceeds next to argue the importance of examining the twin questions (1) What goal commitment self-regulation strategies do people use? (2) How do these goal commitment self-regulation strategies work to influence goal commitment?, by presenting real-life cases documented in the lay literature. These cases from lay literature were chosen according to a few criteria. Firstly, they all illustrate unwavering goal commitment in the face of daunting difficulties. Secondly, they are stories that have been reprinted over a period of at least one decade, indicating that they possess a timeless appeal. There are only four cases and are certainly non-exhaustive. The review of lay literature is not meant to be non-exhaustive for the following reason. In the Academy of Management Journal, Siggelkow (2007) wrote "although it is true that individual cases cannot prove a theory ("A always leads to B"), individual cases can sometimes suffice to falsify theories, as a single counterexample is enough" (p. 21). Since the aim here is to falsify extant theory,

the four counterexamples below more than suffice. It is unnecessary to review the entirety of such existing narratives in the lay literature.

There are enduring books in the popular press about unwavering goal commitment. This suggests that there is something about unwavering goal commitment that speaks to humanity's highest ideals. "Everyone [thought] that a four minute mile would be a barrier that no human would be capable of breaking…. However, a young Oxford medical student, Roger Bannister, was not deterred from his goal [emphasis mine] to be the first to break the barrier" (MacKay, 2001). His story, "The Four-Minute Mile" (Bannister, 1955) was first published in 1955 and is still in print today.

Next, Professor James Leonard Brierley Smith's 14 year dedication to the goal of finding a living specimen of the fossilized coelacanth, is told in yet another book (Weinberg, 2001). More recently, there is the story of how Erin Brockovich a struggling single mother of three children with no graduate degree, spear headed and won a legal battle which culminated in a quarter of a billion dollar settlement (Brockovich & Eliot, 2002). Brockovich and Eliot (2002) wrote "The notion of 'pressing on', no matter what, made so much sense to me, and it still does" (Brockovich & Eliot, 2002: 12).

Finally, one of the most enduring books in children's literature is "The Little Engine That Could" (Piper, 1930). As the Little Engine's goal attainment process unfolded, the constraining situational factors unfolding over time made goal abandonment mid-way through the goal attainment process for the runt of all trains, seem a reasonable proposition. Yet, the Little Engine did not give up and eventually achieved his goal. This inspiring story was first published in 1930. That it is still

reprinted today shows the extent to which it appeals to a deep sense of moral ideals within every generation for the past 80 years.

When situational factors evolve to depress goal commitment levels, these books from the lay literature exhort readers to maintain goal commitment. Implicit in these exhortations is an important idea. It is that individuals can and do exert some degree of self-regulation over their levels of goal commitment in such situations, else the exhortation to individual action can change nothing. Indeed, Brockovich and Eliot (2002) has this to say about how the individual can enact self-regulation strategies to maintain goal commitment: "The key to winning any battle has less to do with those things that happen around me [i.e., situational factors] than those changes that take place on the inside [i.e., self-regulation strategies]" (Brockovich & Eliot, 2002: 7). Despite the ample exhortations to self-regulation of goal commitment by real-life inspirational stories (Bannister, 1955; Brockovich & Eliot, 2002; Weinberg, 2001) and children's stories (Piper, 1930), researchers know very little about how people self-regulate goal commitment levels. Firstly, as shown above, extant theories do not explain the role of self-regulation in determining goal commitment. Secondly, since extant theory drives extant research, Table 2.1 shows that only three studies attempt to explore the role of what might be construed as goal commitment self-regulation strategies, without explicitly terming them as such.

Situating the Self-Regulation of Goal Commitment within the Broader Domain of Self-Regulation at Work

The domain of pure psychology examines human mental processes and behaviour. It documents a plethora of disparate cognitive strategies, each studied for its own sake, most of which have the effect of helping an individual regulate the self's behaviour. To review the plethora of disparate cognitive strategies with the potential

for being used to self-regulate behavior, is to review the quasi-entire domain of pure psychology since almost every mental process studied, for its own sake, by psychologists, can be used to regulate the self's behaviour in some way. Indeed, as has been noted above, some of these cognitive strategies, whilst being effectively self-regulatory, are not so described in the research reports, e.g. Langens and Schmalt (2002) and Diefendorff and Lord (2003), indicating that they were not studied within any coherent framework of self-regulation.

For this research the domain of self-regulation at work is relevant and much work has been done that has been unified under established theories of self-regulation ranging from (1) Higgins' self-regulatory focus theory (Higgins, 1998), (2) Elliot and Dweck's goal orientation theory (Elliot & Dweck, 1988) (3) Bandura's social cognitive theory (Bandura, 1997) and (4) Carver and Scheier's control theory (Carver, Johnson, & Joormann, 2008; Carver & Scheier, 2000). In order to locate the contributions of this dissertation within the domain of self-regulation, each of the four theories listed above is reviewed in turn.

Higgins' (1998) regulatory focus theory proposed two cognitive constructs that regulated behaviour – promotion focus and prevention focus. Promotion focus describes individuals who are concerned with the presence or absence of positive outcomes, i.e., gains versus non-gains outcomes. Prevention focus describes individuals who are concerned with the presence or absence of negative outcomes, i.e., loss versus non-loss outcomes. A cognitive self-regulation strategy, such as imagining a desirable outcome, was a better regulatory fit for individuals with a promotion focus. A cognitive self-regulation strategy, such as imagining an undesirable outcome, was a better regulatory fit for individuals with a prevention focus. Higgins' (2000) suggested

that when there was fit between an individual's regulatory focus and his/her regulatory means, (1) motivation was higher, (2) performance was better and (3) people felt better about what they were doing (Crowe & Higgins, 1997; Idson, Liberman, & Higgins, 2000; Shah, Higgins, & Friedman, 1998).

Elliot and Dweck's goal orientation theory (Elliot & Dweck, 1988) proposed two self-regulation strategies – learning goal orientation and performance goal orientation. Later scholars found that what was thought to be performance goal orientation separated itself into a further two factors – proving goal orientation and avoiding goal orientation (Elliot & Harakiewicz, 1996; VandeWalle, 1997). In this manner, goal orientation theory posits three types of goal orientations that will regulate behavior: learning goal orientation, proving goal orientation and avoiding goal orientation. People with learning goal orientation are concerned with developing their competence and expanding their abilities through mastering challenging situations. Those with proving goal orientation are concerned with demonstrating and validating their competence by seeking favourable judgments. Those with avoiding goal orientation seek to avoid the negation of their competence and to avoid negative judgment. The results of Vandewalle, Cron and Slocum (2001) suggest that individuals with learning goal orientation put in greater effort, have higher self-efficacy and set higher goals for themselves, after receiving performance feedback, than those with proving and avoiding goal orientations. Individuals with learning goal orientation therefore perform better in a subsequent assessment than those with proving and avoiding goal orientations, a cumulative effect of setting higher goal levels, having higher self-efficacy and putting in greater effort. These results suggest that a cognitive self-regulation strategy such as mentally adopting a learning goal orientation is helpful to performance because it positively impacts effort, goal level and self-efficacy.

Bandura's social cognitive theory (Bandura, 1997) proposes the construct termed "self-efficacy". Almost three decades of extensive research has examined how self-efficacy influences the manner in which individuals set or revise goals and strive for the achievement of these goals (Bandura, 1991; Bandura & Locke, 2003; Locke & Latham, 1990; Vancouver, 2000). Much of this research, and even meta-analytical studies (Stajkovic & Luthans, 1998), document that self-efficacy leads to higher goals being set, greater effort, greater persistence and greater direction of effort. Thus, it would seem that a person's belief in his/her capacity to perform positively or negatively influences behavioural self-regulation positively.

Carver and Scheier's control theory belongs to the cybernetic systems paradigm (Vancouver, 2005). Cybernetics systems theories are characterized by the following features. Firstly, they seek to depict how stability comes about in open systems embedded in environments that are unstable (Richardson, 1991). Secondly, these open systems are seen as being composed of subsystems that interact each with the other, and also with the external environment over time. Hence, Carver and Scheier's control theory (Carver & Scheier, 2000) depicts the self as an open system, comprised of various subsystems (e.g., cognitive systems and affective systems) which interact with the environment through feedback. Self-regulation happens when the individual regulates his/her cognitive and affective responses to feedback from the environment.

Control theorists of self-regulation in the Carver and Scheier tradition have recently entered into vigorous debate with socio-cognitive theorists, who work in the Bandura tradition. Socio-cognitive theory suggests that self-efficacy beliefs enhance motivation by increasing effort and persistence (Bandura, 1997). An overwhelmingly large body of research has supported the theoretical assertion that self-efficacy is positively related to

motivation and performance, through its positive effects on intensity of effort and persistence of effort. However, in a series of four experimental studies, control theorists have found that self-efficacy can have both a negative and a positive relationship on performance (Vancouver, Thompson, & Williams, 2001; Vancouver, Tischner, & Putka, 2002). A vigorous debate followed until a possible resolution for the conflicting findings was proposed by Seo and Ilies (2009). Seo and Ilies (2009) argued that (1) on the one hand, high self-efficacy from having experienced earlier success affects the goal choice process by leading to the setting of higher goals, which motivate greater effort and persistence, but (2) on the other hand, high self-efficacy from having experienced earlier success also affects the goal striving process by causing less effort and resources to be channelled into goal achievement (because the individual is confident of his/her ability). As such, the conflicting views between control theorists and socio-cognitive theorists can be resolved by considering situational moderators such as dynamic versus static task environments. In a dynamic task environment where subjects are kept on their toes anticipating changes and reacting to them, they have not the luxury to channel less effort and resources to goal achievement (thereby negatively influencing performance), leaving thus the effects of higher goal levels to positively influence performance (Bandura & Locke, 2003; Seo & Ilies, 2009).

The above review on the theories of self-regulation shows that three of the four theories have arisen around specific cognitive strategies – promotion/prevention focus, learning/proving/avoiding goal orientation, self-efficacy. Only Carver and Scheier's (2000) control theory models a process - the process of how individuals interact with the environment through feedback, thought and action, to self-regulate.

Lord, Diefendorff, Schmidt and Hall (2010) published a review of the domain of self-regulation at work. This article forms an important backdrop to this dissertation, undertaken in the context of business research, and not research in pure psychology. Lord et al. (2010) effectively summarized the field of self-regulation at work around the framework of Carver and Scheier's (2000) control theory (see Figure 2.3a below), but went one step beyond the summary to propose a unifying conceptual framework for the field of self-regulation at work. This conceptual framework is reproduced below in Table 2.1b.

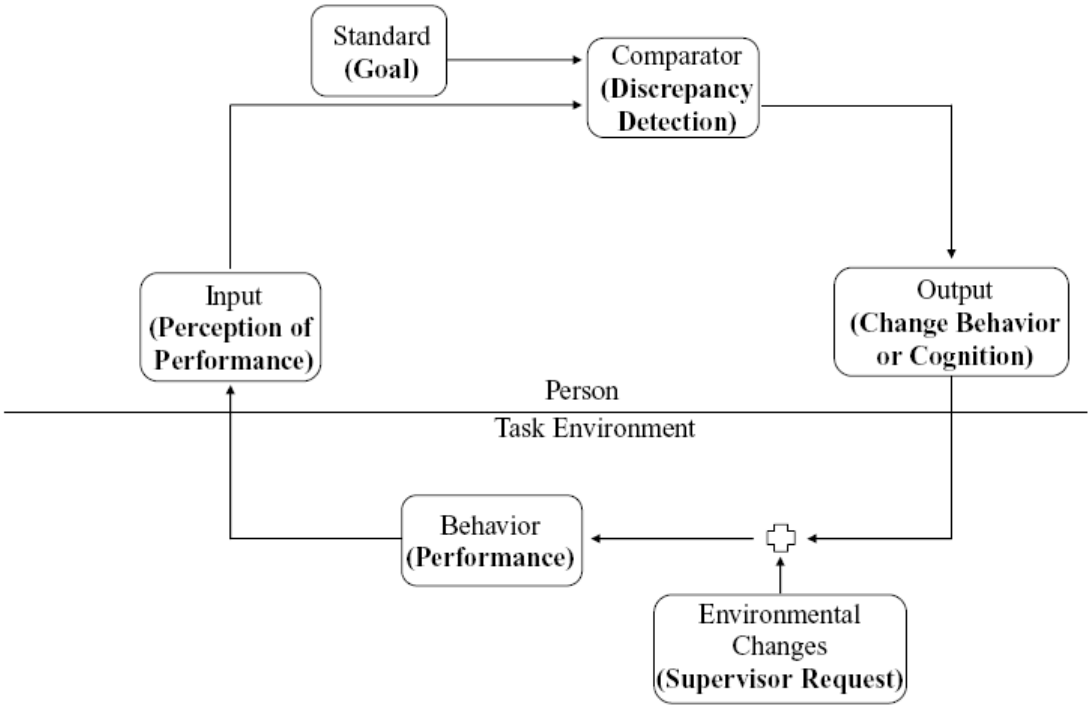


Figure 2.3a. Control Theory of Self-Regulation (Lord et al., 2010, p. 546)

Table 2.1b

Lord et al.'s (2010) Unifying Conceptual Framework (p. 548).

	CYCLE LEVEL			
	High	***Intermediate***	***Low***	***Micro***
Focus	Possible selves	Achievement task	Integrated task behaviors	Behavioral components
Time	Months/years	Minutes/hours/days	Several seconds	Tens of milliseconds
	Major components of dynamic self-regulatory processes			
Referent establishment	Culture, social, value constraints	Conscious choice or automatic priming	Conscious choice, habit, unconscious goal emergence	Spreading activation from goals, working memory, and environment
Planning, goal maintenance	Provisional self is developed	Goal commitment	Goal shielding	Priming and inhibition-gated neurotransmitters
Action	Working self-concept is activated	New actions composed and executed	Driven by appropriate scripts or schemas	
Evaluation and feedback	Interpreted relevant to self	Interpreted relevant to task	Learning in neural networks updates expectancies	Neurotransmitter release and uptake

Lord et al. (2010) structured their framework into four levels of feedback loops from high to low. These levels refer to the different levels of cognition. At the highest level of cognition (and also the most abstract and requiring the longest cycle time, i.e., years, to complete a single feedback loop), the self is concerned with modifying their various provisional identities as they adapt themselves to new work roles, and work aspirations. At the intermediate level of cognition, the self is concerned with regulating commitment to work goals, for which a single feedback loop cycles through months, days or even minutes depending on how soon task feedback is provided vis-à-vis work goal achievement. At the low level of cognition, the self is concerned with regulating immediate behaviours such as typing a word wherein feedback can be obtained from the computer screen within milliseconds of pressing the key. At the micro-level of cognition, the self is concerned with regulating still lower levels of cognitive activity involving muscle co-ordination, information recall and experienced affect.

What is of particular interest in this dissertation is the section on the intermediate cycle of cognitive processing (Lord et al., 2010, pp. 551-555). Note that in Table 2.1b., the words "goal commitment" in the column depicting the workings of intermediate level cognitive self-regulation are highlighted. This section is relevantbecause this level of cognition aims at regulating goal commitment. Reading further into this particular section of Lord et al.'s (2010) review, it can be seen that the specific cognitive self-regulation strategies listed are (1) goal setting, (2) goal selection, and (3) goal striving, all of which are summarized within Table 2.1b. under the umbrella term goal commitment. However, there is no mention of cognitive strategies that determine goal commitment. Elsewhere in the literature reviewed above, it is documented that cognitive constructs such as promotion/prevention focus, learning/proving/avoiding goal orientation and self-efficacy influence goal selection,

goal setting and goal striving. What other self-regulation strategies exist, and how do they work to determine goal commitment? Lord et al.'s (2010) review of the literature on self-regulation at work is very recent, but there is a dearth of answers about the cognitive processes which individuals use to regulate their own levels of goal commitment. Hence, Study One in this research fills a gap in our understanding of how individuals can regulate their own levels of goal commitment.

Summary of Literature Review for Study One

In sum, theoretical thinking on the antecedents of goal commitment has neglected to include self-regulatory strategies as a category of determinants of goal commitment, even whilst empirical research arising from other theoretical traditions e.g., fantasy realization theory (Oettingen et al., 2001) point to the notion of how goal commitment can be influenced through self-regulation. In line with the recommendations by both Pratt (2008) and Siggelkow (2007) detailed above, the argument for examining the question, "How do people self-regulate goal commitment?" will be presented in two steps. Through these two steps, it has been shown that there is an important real-life phenomenon that people value deeply (i.e., self-regulation of goal commitment) which extant theories fail to model, and researchers fail thus to explicitly examine.

Siggelkow (2007) acknowledged in the Academy of Management Journal cases cannot prove theory. However, since a single counter example suffices to falsify theory, individual cases amply suffice to point out where theory is not quite accurate, or at least that there might be something missing from it. In this way, it stimulates further research or makes a case for more refined theoretical thinking. More than a single case example has been offered above (indeed, four real-life cases have been described

(Bannister, 1955; Brockovich & Eliot, 2002; Piper, 1930; Weinberg, 2001)) to point to the fact that extant theories of goal commitment need more refined conceptualization. Researchers know little about the self-regulation strategies which might affect goal commitment. What are they? How do they operate?

To fill the theoretical gap identified above, Study One is specifically constructed to develop a grounded theory explaining how self-regulation strategies influence goal commitment. To develop such a grounded model, this study employs grounded theory research methods, and focuses on building process theory with narrative. Because narratives contain descriptions of processes, embody sequence and time, they are naturally suited to the development of process theories and explanations (Pentland, 1999) unlike survey or experimental methods that capture static snapshots of goal commitment. This approach is in line with Dimaggio's (1995) "theory as narrative" view, which describes theory as an explanation describing the process, or sequence of events connecting cause and effect. It allows the researcher to clearly map (1) the patterns of change in goal commitment levels as situational factors change over time (Pentland, 1999) and (2) the dynamic responses of the individual acting to regulate his goal commitment in the face of these changes in situational factors.

By using narratives to build a grounded theory model of goal commitment, this research contributes to the study of goal commitment by identifying a set of self-regulatory strategies hitherto neglected by extant theories on goal commitment, and describing how these operate to affect goal commitment.

Literature Review for Study Two Part 1: Emotions and Goal Commitment

The following paragraphs endeavour to identify the gaps in the literature that Study Two aims to fill. None of the studies depicted in Table 2.1 above examine the

effects of affective constructs (i.e., human feelings) on goal commitment. This represents a gap in the literature.

One might better understand why this gap exists by considering that the expectancy theory of goal commitment (Hollenbeck & Klein, 1987) was inspired by the traditional expectancy theories of motivation. The similarities between the expectancy theory of goal commitment and classic expectancy theory are striking, and researchers have openly stated that classic expectancy theory inspired the development of the expectancy theory of goal commitment (Hollenbeck & Klein, 1987). According to classic expectancy theory (Vroom, 1964), people are more apt to exert effort when they have (1) high effort-to-performance expectancy (i.e., they think that effort exerted will result in successful performance), (2) high performance-to-outcome expectancy (i.e., they think that successful performance will lead to a desired outcome) (Kanfer, 1990) and (3) the outcome is highly attractive (i.e., a bigger salary or a promotion). On its part, the expectancy theory of goal commitment postulates that the attractiveness of a goal and the expectation of reaching it are positively related to levels of goal commitment (Hollenbeck et al., 1989b). Clearly, the expectancy theory of goal commitment draws inspiration from the traditional expectancy theories of motivation (Lawler & Porter, 1967; Vroom, 1964).

Both the expectancy theory of goal commitment, and classic expectancy theory are cognitive explanations for work motivation developed from the rationalist perspective. "Developed within the rationalist perspective, traditional theories of work motivation consist of cognitive explanations of action… The cognitive nature of these theories has made the integration of affect into motivation theory difficult, which explains the relative paucity of theory and research examining the influence of affective

constructs on motivational processes“ (Ilies & Judge, 2005: 453) such as goal commitment. This is true even today because even very recent publications persist in taking the perspective that “feeling an emotion interfered with thinking” (Gino & Schweitzer, 2008; Isen, 2004: 264; Scott, Colquitt, & Paddock, 2009). In other words, research quite often depicts cognition and affect as competing processes rather than as processes that can serve to explain each other. This might explain why none of the studies depicted in Table 2.1 explore the influence of affect on goal commitment.

Nothwithstanding this, there are, however some studies done within the context of business research, which examine the impact of affect on other aspects of cognition than goal commitment. One such study examining the influence of affect on cognition is that of Ilies & Judge (2005). Ilies & Judge (2005) argued for and tested the notion that affect mediates the relationship between feedback (both positive and negative) and subsequent goal setting. Results showed that following negative feedback, participants experienced negative affect, which lead them to adjust their goals downwards. Following positive feedback, participants experienced positive affect, which lead them to raise their goals. Ilies and Judge’s (2005) results show that it is possible for affective constructs to influence people’s cognitive choices, demonstrating that affect can influence cognition. Such encouraging results inspire further exploration of how affect can influence cognition. Specifically, they inspire the present dissertation’s Study Two, examining the influence of an affective construct on goal commitment in particular.

Another study that also examined and found the influence of affect on cognitive constructs was that of Erez and Isen (2002). Erez and Isen (2002) induced positive moods in subjects, and documented that positive high energy moods (such as

excitement or enthusiasm), predicts all three components of expectancy motivation, i.e., valence, instrumentality and expectancy (Vroom, 1964). Considering that some of the major components of goal commitment theory such as the attractiveness of goal attainment and the expectancy of goal attainment (see Hollenbeck & Klein, 1987) are very similar to components of expectancy theory, Erez and Isen (2002) suggested that goal commitment could well be influenced by positive high energy feelings. This lead Erez and Isen (2002) to call for future research to specifically examine the influence of affective constructs on goal commitment. However, to date, this has not yet been done. This dissertation seeks to fill this exact gap previously identified by eminent affect researchers such as Erez and Isen (2002).

Further, outside of research on goal motivation processes, there is a large body of research documenting the effects of affect on cognition. This body of research will be briefly reviewed here. Some evidence suggests that positive affect positively influences intrinsic motivation (Isen & Reeve, 2005). The documented evidence also supports the notion that positive affect supports thinking, problem-solving, decision-making and judgment (Ashby, Isen, & Turken, 1998; Isen, 2004; Isen & Labroo, 2003). Positive affect can benefit the retrieval of positive material from memory (Isen, Shalker, Clark, & Karp, 1978) and facilitates memory by contributing to effective organization of material in memory (Lee & Sternthal, 1999). Positive affect has been found to facilitate decision-making. Estrada, Isen and Young (1997) induced positive affect in doctors and found that whilst these doctors considered the same number of diagnoses as those in the control group, they came to the correct diagnosis significantly faster. Negative affect has also been found to affect decision-making, in that it influences individuals' decisions to spend money to buy goods (Cryder, Lerner, Gross, & Ronald, 2008). Studies have also found that negative affect gives rise to more detailed analytic

processing (Schwarz, Bless, & Bohner, 1991) whilst positive affect has the opposite effects (Melton, 1995). The evidence also suggests that positive affect aids creative problem-solving (Isen, 1999, 2000). Indeed, Amabile, Barsade, Mueller and Staw (2005) found a strong positive linear relationship between greater positive mood and creativity in organizations. Barsade et al. (2005) also found that the influence of positive mood can last up to two days after the experience of positive affect. The above review on the effects of affect on cognition show that the body of research examining the effects of affect on cognition, focuses almost exclusively positive and negative affect (i.e., affective valence), ignoring the study of how affective energy (i.e., affective activation) affects cognitive processes. In addition, these studies examine the effects of mood, and not emotion. This is a gap that this dissertation aims to fill. The section that follows will elucidate the distinction between affective valence and affective activation. As noted above, goal commitment as a goal-relevant motivational process has traditionally been explained using rationalist perspectives focusing on cognitive explanations. The volume of research documenting the effects of affect on cognition serves to render more salient the gap that exists within the field of goal commitment research because it gives reason to expect that affect has effects on goal commitment. From here on, to gain an even clearer understanding of how this dissertation contributes to our understanding of how affect influences cognition, it is good to review the specific body of literature on emotions.

Definitions of Key Terms Relevant to the Literature on Emotions

As was mentioned above, the term "affect" and "affective" is an umbrella term that encompasses (1) dispositional affect (i.e., the extent to which an individual is generally a happy person or an anxious person etc...) (2) moods (i.e., a transient

affective experience that is diffuse, lacks focus and is of longer duration) and (3) emotions (i.e., a transient affective experience that has a focus). To better understand the contributions of this dissertation, it is necessary to be specific as to which affective construct is being examined.

What is emotional energy availability? What is affect? What is mood? What is emotion? Researchers have identified the lack of clear and consistent definitions as a factor that hampers progress in the domain of affect research (Ashkanasy, 2003; Briner, 2005). Indeed, very recently, Gooty, Gavin and Ashkanasy (2009) wrote that "definitions often fail to include basic distinctions between emotion, cognition, affect and mood" (p. 833). To better understand the specific focus and the specific contributions of the present dissertation to the literatures of both goal commitment and affect, it is necessary to (1) clarify the differences between the various terms "affect", "emotion", "mood" and "dispositional affect" and (2) review the literature on emotions.

The term "affect literature" refers to the entire body of literature that documents knowledge about human affectivity e.g., (1) moods (i.e., diffuse and less intense feelings about nothing in particular which are longer in duration), (2) emotions (i.e., more intense feelings about something in particular, such as work) or (3) dispositional affect (i.e., personality differences describing personal stable tendencies to be generally happy or sad) (Cropanzano et al., 2003). Each of these three constructs is an extensive domain of study on its own. Figure 2.3 below situates the study of emotions within the broader domain of the affect literature and distinguishes it from mood and dispositional affect research. The domain of study most relevant to this dissertation is that of emotions. Accordingly, what follows is a review of the literature on emotions.

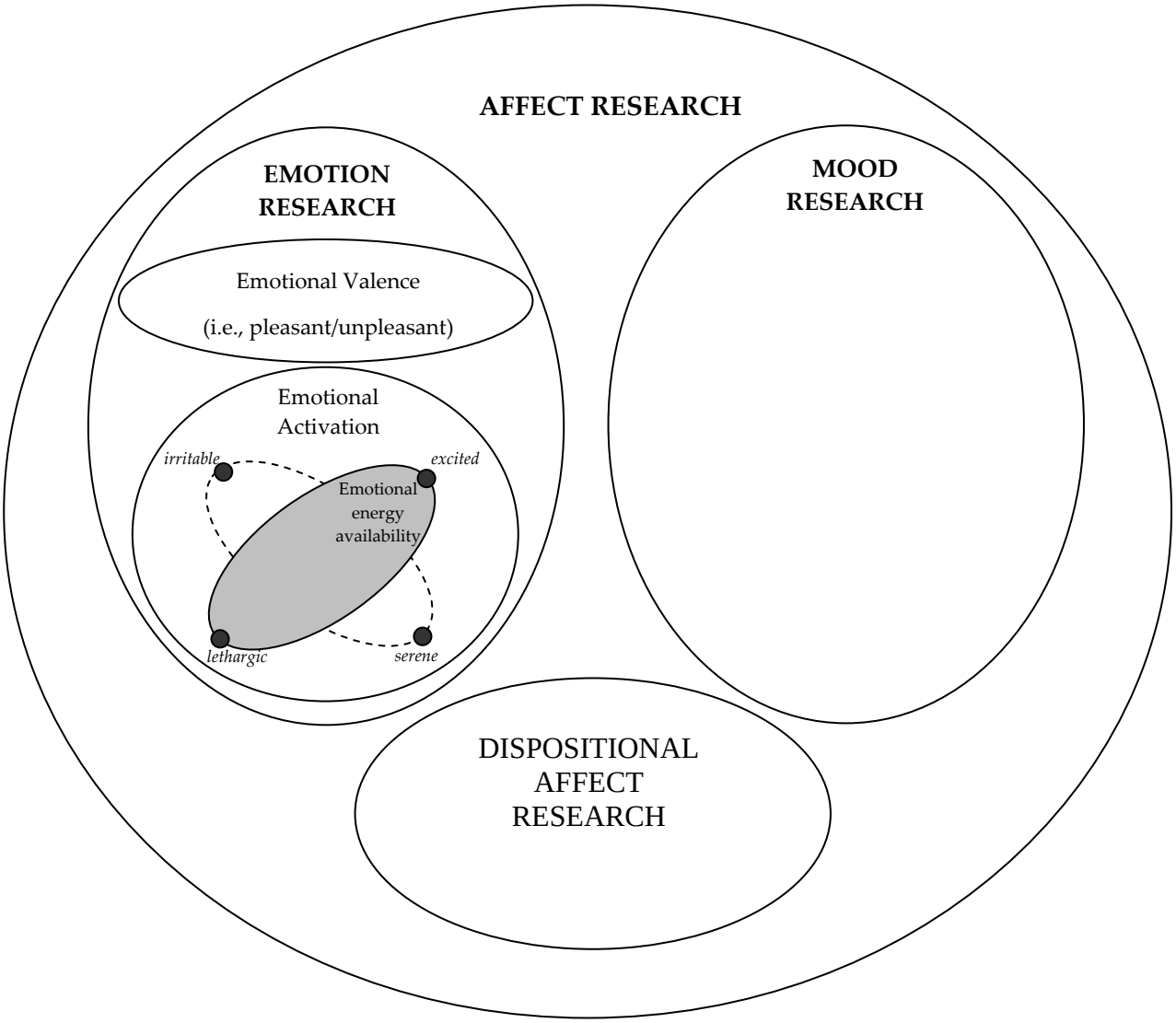


Figure 2.3b. Positioning emotion and emotional energy availability within the affect literature

Emotional Valence and Emotional Activation

Emotion researchers organise emotions around an emotion circumplex with two dimensions each perpendicular to the other. See Figure 2.4 below. These are (1) emotional valence and (2) emotional activation. Emotional valence refers to the pleasantness or unpleasantness of the emotion. Emotional activation refers to the amount of energy inherent in the emotion (Huy, 2002; Larsen & Diener, 1992). Figure 2.4 below is taken from Huy (2002). It depicts these two axes. However, human emotional experience is more often than not, a mix of both emotional valence and

emotional activation. Note from the emotion circumplex in Figure 2.4 taken from Huy (2002), that the range of human emotions which simultaneously comprise (1) emotional valence and (2) emotional activation is more extensive than the range of human emotions which are of (1) pure emotional valence, or (2) pure emotional activation. Disappointed, shameful, dejected, fatigued, enthousiastic, excited, happy, angry, fearful, anxious, distressed, calm, comforted and relaxed all comprise both emotional valence and emotional activation. The literature (Huy, 2002) documents , as shown in Figure 2.4, only emotions such as gloomy, pleased, stimulated, surprised, quiet and tranquil as reflecting pure emotional valence or emotional activation.

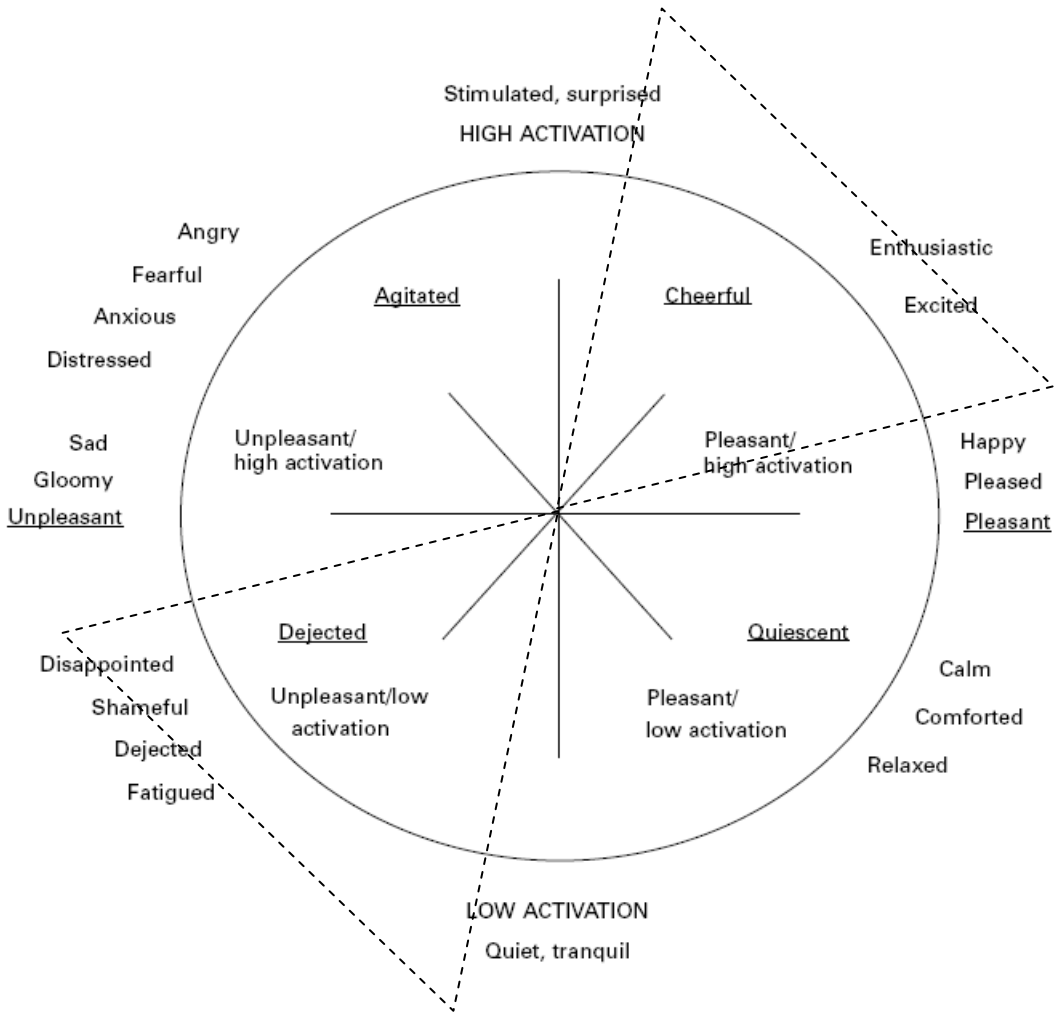


Figure 2.4. The Emotion Circumplex (Huy, 2002)

That the human emotional experience is more often than not, simultaneously defined by emotional valence and emotional activation, is an important point to note because it has lead to an odd but usual practice in emotion/mood/dispositional affect research. What is this odd but usual practice? It has been usual for researchers to focus their study on only one dimension of affect (i.e., emotional valence) whilst employing measures of emotions/moods/dispositional affect that are tinged with emotional activation. In other words, even though researchers routinely measure emotions that have simultaneously both emotional valence and emotional activation, they only focus their explorations on emotional valence alone. In the following paragraphs, this assertion will be clarified in more detail.

Influential affect researchers such as Watson and colleagues (Watson, Clark, & Tellegen, 1988; Watson, Wiese, Vaidya, & Tellegen, 1999) developed the widely used Positive Affect – Negative Affect Scales (PANAS) (Watson et al., 1988) which have been widely adapted to variously measure emotion, mood and dispositional affect depending on the study. The PANAS scales capture only the domain of affect represented by the white spaces in Figure 2.5 below.

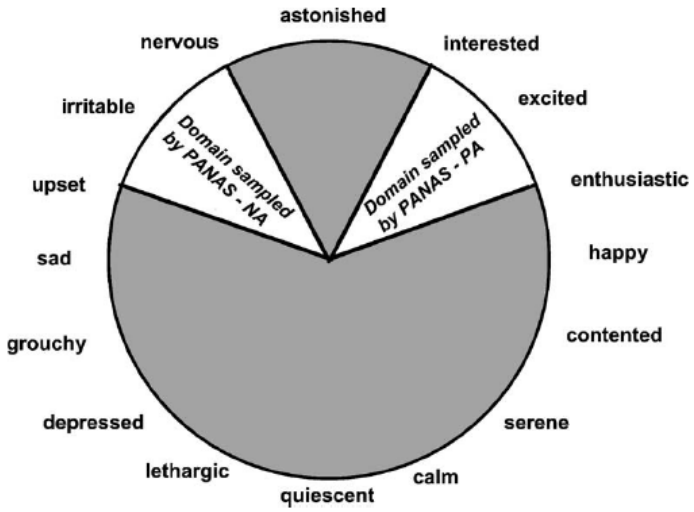


Figure 2.5. Domain of emotions sampled by PANAS (adapted from Cropanzano et al. (2003))

It is clear from Figure 2.5, that the PANAS scales sample emotions that each comprise (1) emotional activation and (2) emotional valence. For example, irritability and nervousness are (1) high activation (2) unpleasantly valenced emotions; further, enthousiasm and excitement are (1) high activation (2) pleasantly valenced emotions. However, even though each emotion sampled by the PANAS scales comprises both emotional activation and emotional valence, the focus of the PANAS scales is really only emotional valence (i.e., the pleasantness and unpleasantness of human emotional experience). Such is obvious for two reasons.

Firstly, the PANAS scales fail to capture the full range of emotional activation because they do not at all sample emotions from the low emotional activation parts of the emotion circumplex. In this part of the emotion circumplex, Figure 2.5 depicts emotions such as grouchy, depressed, lethargic, quiescent, calm, serene and contented. In the same bottom half of the emotion circumplex, Figure 2.5 depicts emotions such as

disappointed, ashamed, dejected, fatigued, quiet, tranquil, relaxed, comforted and calm. None of these are captured by the PANAS scales.

Secondly, the very terms "positive affect" and "negative affect" themselves make specific reference to the pleasantness/unpleasantness of emotions, relegating the emotional activation dimension (or the energetic value) of the emotions studied to the background where it is not acknowledged and thus left unexamined. Indeed, Watson, Wiese, Vaidya and Tellegen (1999) argue that it is unnecessary to measure the low energy emotions when studying positive and negative affect.

Since the PANAS scales do not capture low energy emotions (Cropanzano et al., 2003; Watson et al., 1988; Watson et al., 1999), they may be sufficient for the study and measurement of emotional valence, but they clearly lack content validity if the focus of the study were emotional activation (or the energetic value of emotions). Table 2.2 below lists studies on emotion from 2000 till the present time. Studies prior to year 2003 are not included because they appear after Cropanzano et al.'s (2003) literature review on the structure and organization of affect.

Research in Emotional Activation is Lacking

Cropanzano et al.'s (2003) paper is of key relevance to this dissertation. Their paper makes it clear that research on emotional activation was sparse in 2003. Table 2.2 below reveals that since 2003, not much has been done to study emotional activation. Cropanzano et al. (2003) argued that the field of emotion research had failed to consider affective intensity (a synonymous term for 'affective activation') and thus this

could explain some inconsistent findings. Cropanzano et al. (2003) further commented that since there are insufficient low activation adjectives, a large portion of the affective circumplex structure is excluded from researchers' study of emotions. Finally, Cropanzano et al. (2003) concluded that the role of affective activation in organizations has beeen too rarely examined; and that this state of affairs may have evolved because the popular PA/NA [PANAS scales] structure does not explicitly conceptualize a role for affective activation.

Indeed, the PANAS scales have been so widely used, and Watson et al.'s (1999) refusal to measure low energy affect so influential, that they have together created a research tradition wherein little attention has been given to the energetic value of affect (i.e., affective activation). Since the term "affect" covers "emotion", this also means that little attention has been given to the energetic value of emotion (i.e., emotional activation). This is so despite the fact that the domain has been aware of the existence of the energetic value of affect/emotion for years (Cropanzano et al., 2003; Feldman Barrett, 1998; Larsen & Diener, 1992; Larsen, Diener, & Emmons, 1986; Thayer, 1967, 1987, 1989; Wundt, 1897). The influence of Watson, Wiese, Vaidya and Tellegen's (1999) PANAS, and their thinking about affect, is such that even recent emotion literature pays scant attention to the energetic value of emotion. Indeed, too often, recent studies simply neither conceptualize nor measure emotional activation at all (Barclay & Skarlicki, 2009; Davis, 2009; Ilies & Judge, 2005; Ilies, Scott, & Judge, 2006; Seo & Ilies, In Press) focusing exclusively on the distinction between positive and negative emotions i.e., emotional valence. This may be seen from Table 2.2 which shows whether or not low activation emotions were measured in the study listed on the left. Note that of 31 studies, only seven measure low activation emotions (Gino & Schweitzer, 2008; Scott & Judge, 2006; Seo, Bartunek, & Barrett, 2009; Sonnentag,

Binnewies, & Mojza, 2008; Totterdell, Wall, Holman, Diamond, & Epitropaki, 2004; Zohar, Tzischinski, & Epstein, 2003). Whilst much of the table is organized in reverse chronological order, these seven studies are clustered at the end of Table 2.2.

Table 2.2
Empirical Studies on Emotion

	Reference and Journal	Measures Low Activation Emotions?
1	(Barclay & Skarlicki, 2009) Journal of Applied Psychology	No
2	(Foo, Uy, & Baron, 2009) Journal of Applied Psychology	No
3	(Scott et al., 2009) Journal of Applied Psychology	No
4	(Rodell & Judge, 2009) Journal of Applied Psychology	No
5	(Spencer & Rupp, 2009) Journal of Applied Psychology	No
6	(Tse & Dasborough, 2008) Group and Organization Management	No
7	(Cole, Walter, & Bruch, 2008) Journal of Applied Psychology	No
8	(Erez, Misangyi, Johnson, & Lepine, 2008) Journal of Applied Psychology	No
9	(Livingstone & Judge, 2008) Journal of Applied Psychology	No
10	(Bono, Foldes, Vinson, & Muros, 2007) Journal of Applied Psychology	No

	Reference and Journal	Measures Low Activation Emotions?
11	(Ilies, Wagner, & Morgeson, 2007) Journal of Applied Psychology	No
12	(Brett, Olekalns, Friedman, Goates, Anderson, & Lisco, 2007) Academy of Management Journal	No
13	(Beal, Trougakos, Weiss, & Green, 2006) Journal of Applied Psychology	No
14	(Judge, Scott, & Ilies, 2006) Journal of Applied Psychology	No
15	(Rupp & Spencer, 2006) Journal of Applied Psychology	No
16	(Wong, Yik, & Kwong, 2006) Journal of Applied Psychology	No
17	(Fong, 2006) Academy of Management Journal	No
18	(Ilies et al., 2006) Academy of Management Journal	No
19	(Barclay, Skarlicki, & Pugh, 2005) Journal of Applied Psychology	No
20	(Ilies & Judge, 2005) Journal of Applied Psychology	No
21	(Maitlis & Ozcelik, 2004) Organization Science	No
22	(Kiefer, 2005) Journal of Organizational Behavior	No
23	(Frank & Heike, 2008) Journal of Organizational Behavior	No
24	(Cole, Bruch, & Vogel, 2006) Journal of Organizational Behavior	No

	Reference and Journal	Measures Low Activation Emotions?
25	(Seo et al., 2009) Journal of Organizational Behavior	Yes
26	(Gino & Schweitzer, 2008) Journal of Applied Psychology	Yes
27	(Sonnentag et al., 2008) Journal of Applied Psychology	Yes
28	(Seo & Barrett, 2007) Academy of Management Journal	Yes
29	(Scott & Judge, 2006) Journal of Management	Yes
30	(Totterdell et al., 2004) Journal of Applied Psychology	Yes
31	(Zohar et al., 2003) Journal of Applied Psychology	Yes

Table 2.2 above shows that only seven studies since Cropanzano et al. (2003) have measured low activation emotions. It is good to now review each of these seven studies in sequence in order (1) to ascertain if work that this dissertation's Study Two purposes to do, has already been done and (2) to better situate the contributions of this dissertation's Study Two. Table 2.3 summarizes the key findings of each of these seven studies.

Table 2.3
Key Findings of the Seven Studies Examining Emotional Activation

	Study	Key Findings
1	(Seo et al., 2009) Journal of Organizational Behavior	Emotional activation related positively to effort expended. Emotional pleasantness related positively to direction of effort, effort and persistence.
2	(Sonnentag et al., 2008) Journal of Applied Psychology	Low psychological detachment from work in the evening before predicted early morning negative activation and fatigue. Mastery experiences (i.e., off work experiences that give one a feeling of success) the evening before predicted early morning positive activation. Relaxation predicted serenity.
3	(Gino & Schweitzer, 2008) Journal of Applied Psychology	Incidental anger (i.e., anger focused on something else other than the concern at hand) made people less receptive to advice. Incidental gratitude (i.e., gratitude focused on something else other than the concern at hand) made people more receptive to advice.
4	(Seo & Barrett, 2007) Academy of Management Journal	(1) Affective reactivity (defined as individuals' tendency to experience intense feelings), (2) affective influence (defined as the degree to which individuals regulate the bias-generating influences of their current feelings), and (3) emotion differentiation (defined as the degree to which an individual can identify, distinguish, and describe specific feeling states), all related positively to decision-making effectiveness.
5	(Scott & Judge, 2006) Journal of Management	Insomnia was associated with increased feelings of hostility and fatigue and decreased feelings of joviality and attentiveness.
6	(Totterdell et al., 2004) Journal of Applied Psychology	Work ties (i.e., work relationships linking 2 persons) and structural equivalence (i.e., the extent to which individuals work with the same people) related to similarity of affect. The size and network density (i.e., the extent to which the people with whom he or she works also work with each other) of individuals' networks related to their job-related affect.

	Study	Key Findings
7	(Zohar et al., 2003) Journal of Applied Psychology	Goal-disruptive events stimulated negative emotions (e.g., anger and anxiety) and lead to fatigue. Fatigue in this study was not conceptualized as an affective construct, but as a depletion of c ognitive energy. Goal-enhancing events stimulated positive emotions but did not lead to fatigue. Fatigue in this study was not conceptualized as an affective construct, construct, but as a depletion of c ognitive energy.

Seo et al. (2009) is the only study with any specific theoretical focus on emotional activation (albeit only partial since the study also focuses on emotional valence). The authors found that emotional activation related positively to the amount of effort individuals expended. Effort was measured by the amount of time spent investing. Seo et al. (2009) conceptualized effort as the length of time one spends on a task. This suggests goal commitment. Therefore, Seo et al.'s (2009) findings offer tangential support for the assertion that emotional activation relates to goal commitment.

Sonnentag et al.'s (2008) study examines both dispositional and state affect. However, it is unclear which aspect of state affect is being studied, whether mood or emotion. Hence, it has been chosen for inclusion in this review even though all other studies exploring mood and dispositional affect have been excluded. The researchers aimed to discover how various strategies of recovering from a long work day, influenced next morning affect. The study did not examine how affect plays a mediating role between various antecedent situational factors and a consequent such as goal commitment, which is what Study Two of this dissertation purposes to do.

Even though Gino and Schweitzer (2008) measured low and high activation, they made no specific hypotheses about emotional activation. Specifically, the study reported that incidental anger (i.e., anger focused on something else other than the concern at hand) made people less receptive to advice. The study also reported that incidental gratitude (i.e., gratitude focused on something else other than the concern at hand) made people more receptive to advice. Clearly, this study does not explore emotional activation.

Seo and Barrett (2007) examined (1) affective reactivity (defined as individuals' tendency to experience intense feelings), (2) affective influence regulation (defined as the degree to which individuals regulate the bias-generating influences of their current feelings), and (3) emotion differentiation (defined as the degree to which an individual can identify, distinguish, and describe specific feeling states); and how these three constructs influence performance in decision-making. Though the authors measured emotions sampled from every part of the emotion circumplex, they examined constructs that were neither emotional valence nor activation.

Scott and Judge (2006) made specific hypotheses about and measured specific emotions sampled from each quadrant of the circumplex: hostility (i.e., negatively valenced high activation), fatigue (i.e., negatively valenced low activation), joviality (i.e., positively valenced high activation and attentiveness (i.e., positively valenced low activation). However, close examination of their study reveals that their theoretical focus was valence and not activation.

Totterdell et al. (2004) examined how positive and negative emotions spread through social networks and are shaped by them. Again, closer examination reveals that the theoretical focus is on valence, not activation.

Zohar et al. (2003) is yet another study that focuses its attention on emotional valence. This study is encouraging in that it seems to suggest that the energy associated with emotions can be conceptualized as a resource, even if it is unclear whether the study meant it to be a cognitive resource or an emotional resource. The notion that energy is a resource is important to this dissertation because emotional energy resources available for work, is an important focus of this dissertation. This dissertation's Study Two extends the work of Zohar et al. (2003) by examining the notion of energy as a resource. It does so by specifically examining a construct termed "emotional energy availability".

In summary, the above literature review shows that studies which measure low activation emotions either still focus on the examination of valence, or they do not conceptualize emotional activation as an energy resource.

Why Focus Specifically on Emotional Activation and Goal Commitment?

This literature review has thus far demonstrated that emotional activation is rarely the focus of emotion research. However, it is as yet unclear whether emotional activation is a worthwhile focus. The following paragraphs aim to show that this dissertation's Study Two's focus on emotional activation is not only important, it is long overdue.

Affect/emotion researchers use the terms energy, arousal and activation interchangeably (Cropanzano et al., 2003; Thayer, 1989; Weiss & Cropanzano, 1996). As such, the notion of energy surfaces under the term "activation" in the emotion

circumplex (Cropanzano et al., 2003; Huy, 2002; Larsen & Diener, 1992). See Figure 2.4. Study Two of the present dissertation focuses on emotional energy availability as a key explanatory variable of goal commitment.

Before the term emotional activation was coined, the well-known affect researcher, Thayer (1989) was already using the term "energetic arousal" in his own research and theoretical argumentation on affect.

It was Thayer (1989) who pointed out that there may be interactions between cognition and energetic arousal. Thayer (1989) writes "Although the evidence is limited, there is little doubt that cognitive stimuli affect energetic arousal… News that one has won a lottery prize, for example, would likely result in feelings of energy and vigor… I believe however that there is a much more basic way in which energetic arousal and cognitive factors interact. This has to do with ongoing judgments about one's immediate capability to accomplish various tasks. Thousands of times a day we are confronted with tasks that require resources to accomplish them, and in each case there is a momentary evaluation of the requirements of the task in relation to one's resources to meet it. This rapid evaluation involves an instantaneous assessment of current [affective] states. Although the assessment occurs so quickly the person scarcely realizes it is occurring, nevertheless, an individual generally obtains information about the basic question. 'Do I [feel that I] have the energy to accomplish the task?'" (p. 98). If I feel that I have not enough energy to accomplish my task, I may either not begin it (i.e., have no goal commitment at all), or having begun, I may give up (i.e., lower my goal commitment to the point of abandoning the goal). Thayer's (1989) argumentation above suggests that this dissertation is on the right track in (1)

conceptualizing emotional activation as a resource for use in attaining goals, and (2) in exploring the effects of emotional activation on goal commitment.

It is thus important to study energetic arousal (or emotional energy availability) because Thayer's (1989) argumentation point to levels of energetic arousal as an important determinant of whether people persist at and complete their tasks. Therefore, after three decades, it is timely to begin not only to test Thayer's (1989) twin assertions (1) that cognition and affect influence each other, but also that (2) it is specifically the aspect energetic arousal (the excited-fatigued bipolar dimension or emotional energy availability) that influences goal commitment.

Summary of Literature Review for Study Two

In summary, the above literature review shows a few things. Firstly, studies tend to measure emotions such as enthusiasm, excitement, anger and anxiety, which are emotions possessing of emotional valence and emotional activation. This may be because the larger part of human emotional experience comprises both simultaneously. However, an overwhelming number of 29 out of 31 studies from 2003 till now make emotional valence their sole theoretical focus and neglect emotional activation. As for studies prior to 2003, which have not been reviewed here, Cropanzano et al.'s (2003) review had already noted that there was not enough research on emotional activation. This is despite the fact that researchers have been aware of emotional activation since the time of Wundt (1897) and Thayer (1967).

Secondly, Zohar et al.'s (2003) findings indicate that it may be worthwhile to examine emotion as a resource to be invested in goal commitment. Thirdly, the single study that has focused on emotional activation is that of Seo et al. (2009), and its results offer tangential support for specifically testing the hypothesis that emotional energy availability relates positively to goal commitment.

Contributions of Study Two

Hence, this dissertation's Study Two aims to extend the literature in three ways. Firstly, it adds to what little is known of emotional activation by conceptualizing it as a resource to be invested in goal commitment. Secondly, following up on Thayer's (1989) writings and in response to Erez and Isen's (2002) call for future research , this

dissertation's Study Two adds to what little is known of how affect can influence cognitive processes.

Thirdly, in so doing, this dissertation's Study Two further develops the affect-as-information model. Researchers who have approached the difficult interface between affect and cognition (Foo et al., 2009; Seo et al., 2009), often do so from the theoretical perspective that affect provides information that may be cognitively processed. This theory was pioneered by Schwarz and Clore (1983) and is called the affect-as-information model (Gohm & Clore, 2002; Schwarz, 2006). However, very often, the affect-as-information model is used to explain emotional valence, instead of emotional activation. In other words, researchers frequently explain that how pleasantly or unpleasantly people feel gives them information about how good or bad a particular situation is. This information is then cognitively processed by individuals to evaluate next action steps. For example, Seo et al. (2009) argued that people experiencing more pleasant feelings will more likely conclude that particular outcomes are more attractive than those experiencing less pleasant feelings. As another example, Foo et al. (2009) argued that "negative affect signals that things are not going well … and positive affect signals that all is going well" (Foo et al., 2009, p. 1086).

By conceptualizing emotions as a resource, and focusing this dissertation's Study Two on emotional energy availability, it is envisaged that affect can provide information other than the desirability or undesirability of a particular situation, or its attractiveness. Affect can now provide information about the quantity of resources still available for investment in attaining work goals. Hence, this dissertation's Study Two expands the meaning of "information" in the affect-as-information model.

Literature Review for Study Two Part 2:
Challenge Stressors, Hindrance Stressors and Quality of Coworker Exchange

Study Two examines the mediating effects of emotional energy availability between (1) challenge stressors (2) hindrance stressors and (3) quality of co-worker exchange on one hand and goal commitment on the other. The following sections of this chapter will focus on reviewing the literature pertaining to these three constructs in turn.

Challenge Stressors and Hindrance Stressors

Factor-analytic evidence suggests that there are two types of stress: challenge stress arises from challenge stressors, and hindrance stress arises from hindrance stressors (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Challenge stressors are defined as those that are perceived surmountable, and therefore, stimulate hope for personal growth or gain. Examples of challenge stressors are high workload, time pressures and heavy responsibility. These stressors are often perceived as stressful, but manageable. In organizations, coping well with these stressors, may lead to organizational rewards such as higher bonuses, valuable learning and promotions (Wallace, Edwards, Arnold, & Frazier, 2009). Hindrance stressors are defined as those perceived as insurmountable, and therefore do not stimulate any hope for personal growth or gain. Examples of hindrance stressors are organizational politics, role ambiguity and red tape. These stressors are often perceived as stressful and also

insurmountable and a hindrance to an individual's efforts to achieve personal growth and gain (Wallace et al., 2009).

The notion of bad stress and good stress has existed for a long while, starting with Selye's (1976) conceptualization of eustress and distress. Often, good stress has been defined as stress that is not too high, and bad stress has been defined as stress overload (Quick, Quick, Nelson, & Hurell, 1997). The effects of good and bad stress are thus very succinctly summarized by the Yerkes-Dodson Law of Arousal (Yerkes & Dodson, 1908) which holds forth that there is an inverted U-shaped relationship between stress and performance. In other words, stress is thought to relate positively to performance up until a certain level, after which stress is thought to relate negatively to performance. Unfortunately, research has found inconsistent support for the Yerkes-Dodson Law of Arousal (Teigen, 1994; Westman & Eden, 1996).

More recently, researchers have begun to explore the distinction between good stress and bad stress as a difference arising from demand type (or type of stressor) instead of the traditional demand level. Challenge stressors cause good stress. Hindrance stressors cause bad stress. Interestingly, this newer conceptualization of good and bad stress is consistent with the well-known Selye's (1976) original conceptualization of eustress and distress which suggested that the distinction between eustress and distress arose from the type of demand i.e., stressor type. However, unlike Selye's work which focused on health outcomes (Selye, 1976, 1982), recent research has examined challenge stressors' and hindrance stressors' effects on organizational outcomes such as performance (Lepine, Podsakoff, & Lepine, 2005), motivation (Lepine, Lepine, & Jackson, 2004), OCB (Wallace et al., 2009), job attitudes, intention to turnover, turnover and withdrawal behaviors (Podsakoff, Lepine, & Lepine, 2007).

Key to understanding challenge and hindrance stressors, their differences and their different effects, is appraisal theory (Folkman & Lazarus, 1985). This theory holds that stress only occurs when the cognitive appraisal of the situation concludes that the individual is unable to cope with the demands of the situation. Appraisal theory also posits that the same stimulus may be appraised differently by different individuals. Nonetheless researchers have argued and demonstrated that employees tend to appraise certain stressors consistently because of a shared general understanding of the work context (Brief & George, 1995; Lepine et al., 2005). Accordingly, Cavanaugh et al. (2000) posited that challenge stressors differed from hindrance stressors because they were consistently appraised differently, each from the other. Cavanaugh et al. (2000) reported factor-analytic evidence showing that employees consistently appraised stimuli such as heavy workload, time pressures, and heavy responsibilities similarly as one cluster of stressors; and that employees consistently appraised stimuli such as role ambiguity, bureaucratic red tape and organizational politics as another cluster of stressors.

Much of the research on challenge and hindrance stressors has focused on how differently they affect outcomes. A body of research has accumulated to show that challenge stressors relate positively to motivation (Lepine et al., 2004), performance (Lepine et al., 2005) and job attitudes (Podsakoff et al., 2007). Challenge stressors also relate negatively to intention to turnover, turnover and other withdrawal behaviors. On the other hand, hindrance stressors have been shown to relate positively to intention to turnover, actual turnover and other withdrawal behaviors: and to relate negatively to motivation, performance, and job attitudes (Lepine et al., 2004; Lepine et al., 2005; Podsakoff et al., 2007).

To date, no study has been done examining how these stressors affect goal commitment. To date, it is unclear whether challenge and hindrance stressors affect goal commitment differently. It is important to fill this gap for two reasons. Firstly, goal commitment predicts performance and therefore, understanding how different types of stressors influence goal commitment, throws some light on how organizations might manage stressors in the work environment so as to enhance performance in organizations. Next, the estimated costs of stress in organizations have risen from $150 billion dollars a year in 1996 to $300 billion dollars a year in 2007 (Cynkar, 2007). Wallace et al. (2009) further argue that going along this "trajectory, these costs are likely to grow even more in the coming years" (p. 254). It is good therefore to further clarify the impact of stressors on outcomes.

Whilst the above figures quantifying the costs of stress in organizations may suggest that stress is always deleterious, the recent literature summarized herein above suggests that stressors are not always deleterious and that research may benefit from investigating both the positive and negative aspects of stressors (Cavanaugh et al., 2000; Lepine et al., 2005; Podsakoff et al., 2007). It is thus timely to empirically test the notion that different types of stressors may or may not have different effects on goal commitment.

Furthermore, much of what is known about the different effects of challenge and hindrance stressors on important consequents, is documented in two meta-analyses (Lepine et al., 2005; Podsakoff et al., 2007). Together, these 2 meta-analyses inform the domain of the effects of challenge and hindrance stressors on performance, attitudes, turnover and intent to turnover. A meta-analysis is a secondary analysis of a body of primary studies and therefore does not itself measure the key variables it

studies. This in itself would be a methodological feature rather than a limitation if not for the following. Both meta-analyses relied on primary studies that did not themselves explicitly measure hindrance and challenge stressors either. Indeed, few of the primary studies used in either meta-analyses, measured both stressor types in the same sample. As such, the unique variance of each type of stressor could not be assessed in these analyses. In short, the limitations in the primary studies limit the conclusions drawn from the meta-analyses.

Relatively fewer studies report primary research on challenge and hindrance stressors. As such, Study Two of this dissertation aims to add to the literature which documents the effects of challenge and hindrance stressors on important outcomes in general, and on goal commitment in specific.

Quality of Coworker Relationships

Quality of coworker relationships may be defined as a relationship "between coworkers, who report to the same supervisor, that is characterized by mutual respect, trust, and obligation" (Sherony & Green, 2002, p. 543). This construct is quite under-studied. There was only one study which examined this – Sherony and Green (2002). More research exists on team member exchange quality, which is a construct that is similar to quality of coworker relationships. Team member exchange quality is defined as "the relationship quality between an individual and her or his team members" (Tse, Dasborough, & Ashkanasy, 2008). Both constructs are similar in that they refer to the quality of relationships between people who work closely together. As such, it is useful to also review the literature on team member exchange quality. Literature on team

member exchange quality was first published with Seers' (1989) paper proposing quality of team member relationships as "a new construct for role-making research" (p. 118). From then till now, there have only been 14 articles published on team member exchange. Table 2.7 below summarizes the findings of the 14 papers on team member exchange quality and the one paper on quality of coworker relationships.

Table 2.4

Review of Studies on Quality of Team Member Relationships and Quality of Coworker Relationships

	Study	Key Findings
14 Papers on Team Member Exchange Quality		
1	(Wech, Kennedy, & Deeter-Schmelz, 2009) Journal of Services Marketing	Team member exchange quality (measured at the group level) predicted individual performance levels and individual organizational citizenship behaviors, over and above leader member exchange quality (measured at the individual level).
2	(Tse & Dasborough, 2008) Group and Organization Management	Team member exchange quality relates to positive emotions, but not to negative emotions.
3	(Tse et al., 2008) The Leadership Quarterly	Workplace friendship relates positively to team member exchange quality, and mediates the relationship between leader member exchange quality and team member exchange quality.
4	(Magni & Pennarola, 2008) International Journal of Information Management	Ease of use of new technology, and perceived usefulness of new technology related positively to team member exchange quality.
5	(Love & Forret, 2008) Journal of Leadership and Organizational Studies	Team member exchange quality relates positively to organizational citizenship behaviors.
6	(Kamdar & Van Dyne, 2007) Journal of Applied Psychology	Team member exchange quality moderates the relationship between personality and performance such that the relationship is stronger when team member exchange quality is low.
7	(Golden, 2006) Journal of Organizational Behavior	Team member exchange quality partially mediated the relationship between extent of telecommuting and job satisfaction.
8	(Ford & Seers, 2006) The Leadership Quarterly	Team member exchange quality predicted within-group agreement on organizational climate measures.

	Study	Key Findings
9	(Alge, Wiethoff, & Klein, 2003) Organizational Behavior and Human Decision Processes	Team member exchange quality was positively associated with decision-making effectiveness when task interdependence is high.
10	(Liden, Wayne, & Sparrowe, 2000) Journal of Applied Psychology	Team member exchange quality relates to organizational commitment.
11	(Seers, Petty, & Cashman, 1995) Group and Organization Management	Team member exchange quality correlated strongly (0.90) and significantly with company archival measures of departmental efficiency.
12	(Dose, 1999) Group Dynamics: Theory, Research and Practice	Demographic and values similarity predicted team member exchange quality.
13	(Major, Kozlowski, Chao, & Gardner, 1995) Journal of Applied Psychology	Team member exchange quality predicted organizational commitment, turnover, intent to turnover and job satisfaction. Team member exchange quality moderated the relationship between (1) expectations of role clarity and organizational commitment, and (2) expectations of role clarity and turnover intentions.
14	(Seers, 1989) Organizational Behavior and Human Decision Processes	Team member exchange quality explains variance in (1) work satisfaction, (2) satisfaction with coworkers and (3) general satisfaction, over and beyond the variance explained by leader-member exchange quality.
	One Paper on Quality of Coworker Relationships	
15	(Sherony & Green, 2002) Journal of Applied Psychology	The interaction between two workers' leader member exchange quality scores predicted the dyads' quality of coworker relationships scores.

From Table 2.7, it is clear that till now, the relationship between and goal commitment has yet to be examined. Of interest to this dissertation is the work of Tse

and Dasborough (2008) who reported that team member exchange quality related to positive emotions (i.e., high activation pleasantly valenced emotions). However, like other studies on emotion Tse and Dasborough's (2008) study focused on emotional valence instead of emotional activation. The results of this dissertation's Study Two will extend the findings of Tse and Dasborough's (2008) by specifically examining the effect of quality of coworker relationships on emotional activation.

At present, let me also note that the concept of social influence on goal commitment has traditionally been viewed "with respect to (a) others' performance, (b) others' goals and (c) others' goal commitment" (Hollenbeck & Klein, 1987: 216; Klein et al., 1999; Klein & Wright, 1994). In other words, social influence affects goal commitment by creating interpersonal competition or comparisons. Inherent in the literature's rather narrow definition of social influence, is the notion that if comparative others are committed to a goal, so too should and can oneself be committed.

However, in view of the results of Study One, the influence of the social context on goal commitment may reach beyond this traditionally narrow view of social influence as a competitive or comparative influence. Social influence may also be viewed with respect to "the energy-producing element of social activity" (Marks, 1977), wherein supportive and encouraging interpersonal relationships "create energy" for use in goal pursuits (Marks, 1977:926). This essay contributes to the literature on goal commitment by broadening the notion of social influence (traditionally defined in the literature "with respect to (a) others' performance, (b) others' goals and (c) others' goal commitment" (Hollenbeck & Klein, 1987: 216; Klein et al., 1999; Klein & Wright, 1994)) to include the quality of social relationships at work, which produce energy that may be channeled into goal pursuits.

Hence, in view of the specific antecedent constructs chosen for Study Two, this dissertation aims to extend the literature in three more ways (beyond those detailed herein above). Firstly, it extends the work of Tse and Dasborough (2008). Tse and Dasborough (2008) found that the quality of relationships between people at work influenced their emotional valence. Study Two extends Tse and Dasborough's (2008) findings by exploring the effects of quality of relationships on emotional emotional energy availability, instead of emotional valence. Secondly, it extends the literature on challenge and hindrance stressors by specifically measuring and examining whether these have differential or similar relationships with goal commitment. Thirdly, it broadens the notion of social influence on goal commitment. Social influence has been traditionally defined as interpersonal competitive influences. Study Two broadens this narrow definition to include the quality of social relationships at work, which produce energy that may be channelled into goal pursuits.

Chapter Conclusion

Firstly, researchers know little about how people self-regulate goal commitment, even though this is an important phenomenon that holds deep meaning for human beings. There is little theory pertaining to the self-regulation of goal commitment and sparse empirical research. Therefore, it is timely and useful to construct Study One to develop theory about goal commitment self-regulation. As such, the research question for Study One may be framed as "How do people self-regulate levels of goal commitment?"

Secondly, researchers know little about how emotions affect goal commitment because emotions have traditionally been seen as interfering with the cognitive processes (Ilies & Judge, 2005; Isen, 2004) underlying the expectancy theory of goal commitment (Klein et al., 1999). Therefore, it is timely and useful to construct a correlational study examining the role that emotional energy availability plays in goal commitment's nomological network. As such, the research question for Study Two may be framed "What role does emotional energy availability play in the goal commitment nomological network?"

Thirdly, little is known about whether challenge stressors and hindrance stressors affect goal commitment differently and thus it is timely to examine this question in this dissertation's Study Two.

Fourthly, Study Two examines how quality of coworker relationships affects goal commitment through emotional energy availability. In so doing, Study Two extends the work of Tse and Dasborough (2008), who explored the effects of quality of coworker relationships on emotional valence only. In addition, by conceptualizing the effects of quality of coworker relationships on goal commitment, Study Two broadens the definition of social influence (long seen as only comprising interpersonal competitive influences (Klein et al., 1999)).

CHAPTER 3: METHODOLOGY

Chapter Introduction

This chapter begins by reviewing the ontological, epistemological and methodological foundations of the two different but complementary research studies in this dissertation. These are the constructivist (for Study One) and the positivist (for Study Two) research paradigms. Table 3.1 below summarizes the key differences between the research paradigms undergirding the respective studies. Subsequently, this chapter proceeds to clarify the following:

- Why Study One's research question is best examined through the lenses of the constructivist research.

- Why Study Two's research question is best examined through the lenses of the positivist research paradigm.

In the third step, this chapter also explains why the specific research methods chosen for Study One (i.e., the grounded theory research method) and Study Two (i.e., the correlational field research method) are appropriate choices from the panoply of research methods available from within each of the respective research paradigms. In its last part, this chapter ends by explaining how in this single dissertation's, two contrasting studies each arising from polar opposite research paradigms, complement each other to effectively bring important knowledge to the domain of goal commitment research. Table 3.1 below summarizes the key differences between the 2 research paradigms. The sections that follow will clarify the points in Table 3.1 in more detail.

Table 3.1

Summary of Differences Between the Two Research Paradigms Undergirding the Two Studies in the Present Dissertation.

	Study One Constructivism	Study Two Positivism
Ontology *"What is the Form and Nature of Reality?" (Guba & Lincoln, 1994, p. 108)*	Reality is what a group of competent people think and agree it is.	Reality is the objective truth that exists independently of how people think.
Epistemology *"What is the nature of the relationship between the knower or would-be knower and what can be known?" (Guba & Lincoln, 1994, p. 108)*	The knower or would-be knower is intricately involved in the creation of knowledge.	The knower or would-be knower tries to discover knowledge that pre-exists his search.
Methodology *"How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?" (Guba & Lincoln, 1994, p. 108)*	(1) small scale purposeful sampling rather than large scale probability sampling, (2) contextual interview and/or observational data collection rather than context-free survey data collection, (3) methods of qualitative data analysis rather than methods of quantitative data analysis.	(1) large scale probability sampling rather than small scale purposeful sampling, (2) context-free survey data collection rather than contextual interview and/or observational data collection, (3) methods of quantitative data analysis rather than methods of qualitative data analysis.

Review of Research Paradigms

The Ontological Question

> *"What is the Form and Nature of Reality?" (Guba & Lincoln, 1994, p. 108)*

Constructivism: Constructivists believe that reality is a mental construction. For example, to study reality, psychologists examine what is termed as "constructs". Constructs are thought objects that attempt to apprehend phenomena in the real world e.g., challenge stressors, hindrance stressors, emotional energy availability. These constructs defined and developed "in order to grasp reality, have to be founded upon the thought objects constructed by the common-sense thinking of men, living their daily life within their social world" (Schutz (1967, p. 59) as cited in (Schwandt, 1994, p. 121)). Reality is therefore what a group of people agree it is, based on their individual or shared experience. Indeed, a pair of author-contributors to "The Handbook of Qualitative Research" (Denzin & Lincoln, 1994) explained that in the constructivist paradigm therefore, reality is an inter-related collection of "intangible mental constructions" (Guba & Lincoln, 1994, p. 110), which people share. Though published almost two decades ago, "The Handbook of Qualitative Research" (Denzin & Lincoln, 1994) has been described as a seminal text by seasoned qualitative researchers (Easterby-Smith, 2008).

Given that reality is a social construction, reality is also contextual in that different contexts will give rise to different truths. For example, in high power distance cultures, participative goal setting results in enhanced performance as compared to goal assignation. However, in low power distance cultures, participative goal setting does not enhance performance considerably when compared to goal assignation (Sue-Chan & Ong, 2002b).

Positivism. Positivism is the more prevalent paradigm in psychological research. Often, people have never heard of the other paradigms. For the majority of people, science ***IS*** positivism. In the positivist paradigm, there is an existence of an objective reality or truth which scientists strive to discover. This reality is governed by "immutable natural laws and mechanisms" (Guba & Lincoln, 1994). In this paradigm, the "basic, observational laws of science are considered to be true, primary and certain, because they are built into the fabric of the natural world. Discovering a law is like discovering America, in the sense that both are already waiting to be revealed" (Mulkay (1979, p. 21) as cited in (Neuman, 2000, p. 67)). Hence, unlike in the constructivist paradigm, reality and truth is not a group of competent persons' consensual interpretation. Reality and truth has an objective existence independent of what people think.

The Epistemological Question

> *"What is the nature of the relationship between the knower or would-be knower and what can be known?" (Guba & Lincoln, 1994, p. 108)*

Constructivist epistemology. Here, the epistemological question asks "What is the nature of the relationship between the constructivist researcher and knowledge?" One of the contributing authors of "The Handbook of Qualitative Research", Schwandt (1994) writes that on an everyday basis, people are all constructivists. People are actively involved in the construction of knowledge because knowing is not a passive endeavour (i.e., a mere imprinting of data on people's minds). It is an active endeavour because the mind does something with these data imprints. The mind forms concepts and develops abstractions from these data imprints. Knowledge is therefore created by

the human mind, and "consists of those constructions about which there is relative consensus (or at least some movement towards consensus) among those competent to interpret the substance of the construction" (Guba & Lincoln, 1994, p. 113). Multiple 'knowledges', each as true as the other, can therefore co-exist when equally competent interpreters disagree because of their social, political, cultural, economic, ethnic and gender experiences (Guba & Lincoln, 1994). Competent interpreters could as well be laymen subject matter experts as researchers. In the constructivist paradigm, the scientist (the would-be knower) is personally involved in knowledge creation, and that knowledge results from the dialectic between himself and the other human beings involved in the phenomenon being studied.

The constructivist researcher takes the position that knowledge is not the "abstract and logical theories that may not relate to the feelings and experiences of people" (Neuman, 2000, p. 72). As such, the constructivist researcher honours the layman's common sense and experience as an important source of knowledge. Ordinary people would not be able to function in daily life if they had to base their actions on science alone (Guba & Lincoln, 1994). For example, in order to understand others' facial expressions, people use unsystematic experiences, habits and guesswork. A strict application of science would involve understanding the biological musculature of the human face and the way each muscle responds to felt emotions. Human beings do not have to be scientists to read facial expressions. However, robots (wherein every scientific principle needs to be specified) may not adequately learn to read human expression. This example illustrates the value of common sense and layman knowledge to the constructivist researcher.

Positivist epistemology. Here, the epistemological question asks "What is the nature of the relationship between the positivist researcher and knowledge?" For the positivist researcher, knowledge is an accurate description of an objective reality, free of bias. In the positivist paradigm, knowledge is a body of context-free generalizations i.e., laws or principles that hold true across every real-life situation. The scientist's job is to discover these immutable natural laws. As discovery builds upon discovery, a body of unequivocal knowledge about the real world is accumulated. Positivist researchers believe that when psychological science is fully developed, these laws and theories may be expressed in "formal symbolic systems, with axioms, corollaries, postulates, and theorems" (Neuman, 2000, p. 68). These formal symbolic systems are the logical and abstract theories people tend to identify with science. As such, unlike the constructivist researcher, the positivist researcher stands apart from the knowledge he discovers. He does not create knowledge, his job as a positivist researcher, is to discover knowledge that already pre-exists his search.

As such, the positivist researcher makes a clear distinction between science and non-science. "Science borrows some ideas from common sense, but it replaces the parts of common sense that are sloppy, logically inconsistent, unsystematic, and full of bias… A researcher working in a positivist tradition often creates a whole new vocabulary – a set of scientific ideas and associated terms. He or she wants to use ideas that are more logically consistent and carefully thought out and refined than the ideas found in everyday common sense" (Neuman, 2000, p. 68). The positivist researcher rejects lay knowledge or common sense because it is vague, imprecise and full of bias. For this reason, positivist researchers frown upon the notion of situating the contributions of research against the backdrop of lay literature.

The Methodological Question

> *"How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?" (Guba & Lincoln, 1994, p. 108)*

Constructivist methodology. Here, the methodological question asks "How does the constructivist researcher go about finding knowledge?" Since constructivists view knowledge as a social construction, they hold that knowledge can be surfaced and refined only through interactions between the researcher and his subjects. These interactions are documented using methods of consensus mapping and confirmation between subjects and even between researchers (if there are more than one). The constructivist researcher thus strives to build a "thick" description of a phenomenon, wherein descriptions are detailed and rich. The researcher attempts to present the meanings, the values and the perspectives used by people in their daily lives. The aim of the constructivist researcher is thus very different from the positivists' aim of documenting deductive axioms and interconnected causal laws called theories.

As such, constructivist researchers do not collect data via objective and non-context specific survey questions with Likert scale items. Each person's answer to a survey question has to be situated within a specific context (e.g., profession, company, culture etc…) and an in-depth portrayal of this context is important in order for others to understand the data that has been gathered and presented. For this reason, constructivist researchers engage in…

(1) small scale purposeful sampling rather than large scale probability sampling,

(2) contextual interview and/or observational data collection rather than context-free survey data collection,

(3) methods of qualitative data analysis rather than methods of quantitative data analysis.

The following will explain in greater detail the above-mentioned methodological features of the constructivist approach. Firstly, purposeful sampling is the deliberate selection of sample cases with specific criteria in mind. "Qualitative inquiry typically focuses in depth on relatively small samples, even single cases (N = 1), selected purposefully" (Patton, 2002, p. 230). The logic and power of purposeful sampling stand in direct contrast to the logic of random sampling, which derives from probability theory. "A random and statistically representative sample permits confident generalization from a sample to a larger population" (Patton, 2002, p. 230). The logic and power of purposeful sampling, however, derives from the reasoned selection of information rich cases that the researcher can study in-depth. Secondly, unlike survey research which may be administered electronically (or by unskilled clerical help) once skilled researchers have done with the development and validation of the items, interview research requires skilled interviewers. These interviewers need to be able to respond to the moment-by-moment exigencies, dynamics and direction of the conversation with the interviewee, whilst still maintaining the presence of mind to enact the skills required to direct the conversation in such ways that high quality data is collected in a time-efficient manner. In other words, whether interviewees cry or dissimulate or ramble, the interviewer needs to have a clear idea of the type of data he/she wants to collect from the interviewee and have the skills to elicit the required data without wasting time and without being abrasive. Rubin & Rubin (2005)

prescribes the use of main questions, follow-up questions and probing questions. It is however, one thing to know of these three types of questions, and quite another to know how and when to use each type of question in real-time whilst talking to an interviewee. Collecting data using observations also requires trained observers who know what to look for and how to be open to data so as not to miss the unremarkable, but still interesting and unexpected.

Thirdly, unlike quantitative data analysis (which relies on numerical data, statistical operations and large sample sizes to deductively test hypotheses), "qualitative data analysis is a process that entails (1) sensing themes (2) constant comparison (3) recursiveness (4) inductive and deductive thinking and (5) interpretation to generate meaning" (Ruona, 2005, p. 236). Constructivist researchers also adopt a general inductive approach wherein they build abstractions, concepts and hypotheses from the data collected.

In summary, the "validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size" (Patton, 2002, p. 245).

Positivist methodology. Here, the methodological question asks "How does the positivist researcher go about finding knowledge?" Since positivists view knowledge as a body of context-free generalizations, they hold that the truths of our world exist independently of the researcher and are waiting to be discovered. Therefore, unlike constructivists, the positivist researcher does not interact with his subjects to construct a contextualized description of reality. The researcher and his subjects are construed as

independent each of the other, and thus the researcher strives to study subjects without influencing and without being influenced by them (Guba & Lincoln, 1994). As such, unlike the constructivist researcher, the positivist researcher stands apart from the knowledge he discovers. He does not create knowledge, his job as a positivist researcher, is to discover knowledge that already pre-exists his search. Positivist researchers thus strive to accumulate causal laws that may be expressed in "formal symbolic systems, with axioms, corollaries, postulates, and theorems" (Neuman, 2000, p. 68) and depict the truths of our world regardless of context. These formal symbolic systems are the logical and abstract theories people tend to identify with science. Positivist researchers use deductive logic to test cause and effect relationships before including them in formal symbolic systems. To do so, positivist researchers prefer to use

(1) large scale probability sampling rather than small scale purposeful sampling,

(2) context-free survey data collection rather than contextual interview and/or observational data collection,

(3) methods of quantitative data analysis rather than methods of qualitative data analysis.

Probability sampling arises from an area of mathematics termed as probability theory. This area of mathematics relies on random processes which select elements from the population in a truly random manner, thus ensuring that every person in a given population has an equal chance of being picked as part of the study sample. This random selection of elements from a target population ensures sample

representativeness across individuals within the population (who may individually evolve in different contexts). In this way, when the causal relationships being investigated achieve statistical significance (Patton, 2002), researchers can be sure that these causal relationships are generally true of a myriad different contexts. This ensures that the supported relationships are not context specific, and therefore depict reality regardless of context, and can be safely included into "formal symbolic systems, with axioms, corollaries, postulates, and theorems" (Neuman, 2000, p. 68).

In positivist research the sample size must be large enough. The large size of the sample affords the researcher greater statistical power. Statistical power is the ability to reject a null hypothesis (i.e., that there is no causal relationship between two variables) when it is truly false. "Power is maximized and Type II error is minimized directly by increasing the size of the sample selected" (Passmore & Baker, 2005, p. 54). In other words, when sample sizes are large enough, scientists will not mistakenly conclude that there is no causal relationship when there actually is one. The sample size for Study Two is 466, in contrast to the sample size of 50 for Study One.

Secondly, unlike interview research wherein questions and probes are refined and further developed in an iterative process as data collection progresses, the survey items (or scales) in survey research need to be properly validated before data collection begins. The scale development process is summarized in Table 3.2 below (Hinkin, 2005, p. 163). All but one of the scales used in Study Two (the quantitative study) of the present dissertation have already been validated and their validation results reported in published studies. Only the measures for emotional energy availability were developed according to the steps listed in Table 3.2 below. Accordingly, later chapters will describe (1) the previously validated scales and (2) the detailed steps undertaken

to develop the survey measures for emotional energy availability. Validation results for both types of scales used in Study Two will also be reported. What follows is an examination of each of the steps depicted in Table 3.2 in more detail.

Table 3.2
The Scale Development Process. (Adapted from Hinkin (2005)).

	Stage 1: Item Development
Step 1:	Item generation
Step 2:	Item wording
Step 3:	Number of items
Step 4:	Item scaling
Step 5:	Content validity assessment
	Stage 2: Testing the New Measures
Step 1:	Selecting a sample
Step 2:	Preliminary factor analysis
Step 3:	Confirmatory factor analysis
Step 4:	Internal consistency assessment
Step 5:	Convergent and discriminant validity
Step 6:	Criterion-related validity
Step 7:	Replication

- Item generation: "At this point, the researcher's goal is to develop items that will result in measures that adequately sample the domain of interest" (Hinkin, 2005, p. 164). Deductive scale development requires an a priori theoretical classification. For example, when Allen and Meyer (1996) developed and validated the scales for organizational commitment, they had three theoretical categories for which they wrote items. Inductive scale development involves generating measures from data, often qualitative data. The emotional energy availability measures were developed using

inductive scale development from the interview data captured in Study One.

- Item wording: This refers to how items are worded. There are accepted prescriptions for wording items in a scale. "Statements should be simple and as short as possible, and the language used should be familiar to target respondents. It is also important to keep all items consistent in terms of perspective, being sure not to mix items that assess behaviors with those that assess affective responses"(Hinkin, 2005, p. 165).

- Number of items: This refers to the number of items used to measure a construct. Internal consistency reliabilities can be calculated with three items per scale. However, researchers recommend that a quality scale comprising four to six items is sufficient for most constructs (Hinkin, 2005). The number of items for a scale needs to be optimal. Scales with too long items will result in over long surveys that are prone to response biases caused by fatigue and boredom.

- Item scaling: This is also called response format and it refers to the format in which the researcher intends the respondent to give his responses. There are various types of response formats and it is beyond the scope of this chapter and this dissertation to describe them in detail. Hence, some of these will be listed and only the most relevant response format will be explained in more detail. The

various types of response formats include comparative rating scales, itemized rating scales, graphic rating scales, numerical rating scales and multi-item scales. "A multi-item scale comprises two or more items in rating scale format. A respondent's scores on the items are combined – usually by summing or averaging" (Whitley, 2002, p. 360). The various multi-item scales are Likert scales, Guttman scales, Thurstone scales and the semantic differential. Likert-type scales are the most prevalent in survey research. "Coefficient alpha reliability with Likert scales has been shown to increase up to the use of five points" (Hinkin, 2005) before leveling off. All the measures in Study Two employ Likert scales.

- Content validity assessment: Once the items have been developed and the rating scales determined, it is necessary to assess whether the items adequately represent the construct and also whether the items offer any stumbling blocks to respondents (e.g., vocabulary that is difficult to understand etc…). This is usually done by piloting the scale with a small group of respondents.

- Selecting a sample: The sample used to test the items should not possess known idiosyncracies. For example, in validating scales that measure goal commitment, one should refrain from choosing a sample of only women, or only men. For this reason, in Study Two, to generate the validation results of the scales of emotional energy availability, an alternative organization was picked (that did not possess the same idiosyncratic feature of the organization in Study

One). Unlike in Study One's organization, people in Study Two's organization did not believe that seemingly impossible goals were the right ones to set. Next, the sample used to test the items should also be apt to provide enough response variance, otherwise the statistical tests used to generate validation results would not give statistically significant results. Hence, in Study Two, an organization, where it was reasonable to expect that people would have differing levels of emotional energy availability, was chosen. Lastly, the sample must be capable of informing the researcher about the construct being measured, e.g., to study leadership in the minds of followers (Meindl, 1990; Meindl & Erhlich, 1988), it will be necessary to survey followers and not leaders. Similarly, to validate the emotional energy availability scale developed for this dissertation, it was considered that the people in Study Two's organization could reasonably be expected to share information about their own emotional energy availability.

- Preliminary factor analysis: This statistical operation, also called exploratory factor analysis, can be easily performed using SPSS to confirm the a priori prediction of item factor loadings. Items that do not load at all, or do not load well on the right factors are eliminated because they do not possess adequate convergent validity with the rest of the items in the scale.

- Confirmatory factor analysis: This is done using LISREL (Jöreskog & Sörbom, 1996). In the earlier step, items may load clearly in an

exploratory factor analysis, but the overall measurement model may possess poor goodness-of-fit indices. LISREL allows a more stringent test of items because it quantifies the goodness-of-fit of the a priori factor structure, thereby confirming the strength of the whole measurement model.

- Internal consistency assessment: This refers to the extent to which responses to the items within a scale are consistent. A person who strongly agrees to a statement such as "I am happy" should also strongly agree to the statement, "I am glad" i.e., his responses to both statements should be consistent. If there is low internal consistency, it means that respondents interpret the items differently from the researcher (i.e., respondents do not see the different items as consistently capturing the same mental reality), or that different respondents interpret the items differently from each other (i.e., the items are ambiguous). Internal consistency may be calculated by generating a Cronbach's alpha (or coefficient alpha). A large coefficient alpha of at least 0.7 suggests that there is strong inter-item covariance and therefore, that the sampling domain has been adequately captured (Whitley, 2002). A too large coefficient alpha of 0.9 indicates that the items are synonymous each with the other. This may not be good because it means the survey can be shorter since items are so alike.

- Convergent and discriminant validity: Convergent validity refers to the extent to which the scales correlate with other scales that

measure similar constructs (Whitley, 2002). Discriminant validity refers to the extent to which the scales do not correlate with other scales measuring different constructs (Whitley, 2002). For example, scales measuring IQ and those measuring EQ should not correlate, whilst scales measuring IQ should correlate highly with other scales that also measure IQ.

- Criterion-related validity: This refers to the extent to which the scale is related to other scales measuring either theoretical antecedents or theoretical consequents of the construct measured (i.e., the nomological network of the theoretical construct). If a scale is valid (i.e., it measures what it is meant to measure) then it should predict what researchers think a priori that it should predict. It should also be predicted by what researchers think a priori should predict it. For example, goal commitment theoretically predicts performance and goal commitment scales have been found to predict performance (Klein, Wesson, Hollenbeck, Wright, & Deshon, 2001). Similarly, goal commitment is theoretically predicted by transformational leadership and the literature documents support for this relationship (Bono & Judge, 2003). As such, the goal commitment scales used in Study Two have criterion validity.

Thirdly, positivist researchers tend to use quantitative methods of analysis rather than qualitative methods of analysis. The positivist's dataset comprises numerical data that can be analyzed using statistical operations such as (1) multiple

regression, and (2) structural equation modeling. Unlike qualitative analysis, the dataset must be complete before analysis begins.

- Multiple regression: Research questions in organizational research rarely involve two variables only. More often than not, the study of human behavior in organizations involves a "plethora of potentially important variables" (Bates, 2005, p. 116). Multiple regression allows researchers to see how a basket of independent variables together explain a dependent variable.

- Structural equation modeling: SEM is another technique that allows researchers to model the effects of multiple variables. One of the most popular uses of SEM is to perform confirmatory factor analyses all whilst estimating a prediction model. Unlike multiple regression, SEM "simultaneously considers questions of both measurement [i.e., latent variable models] and prediction… [providing] a flexible and powerful means of simultaneously assessing the quality of the measurement and examining predictive relationships among constructs" (Kelloway, 1998, p. 2). In addition, before the development of SEM, Baron and Kenny's (1986) method of testing mediation models using multiple regression was popularly used. However, researchers have reported that Baron and Kenny's (1986) method was most likely to miss true effects (i.e., commit Type II error) as compared to other techniques such as SEM. Given that Study Two tests a mediation model, SEM is an appropriate method of analysis to use.

In summary, in quantitative inquiry, the researcher strives (1) to choose an unbiased sample in which to examine his research question, (2) to develop an unbiased and statistically valid instrument to collect data and (3) to use objective statistical operations to analyze the data.

Reasons for Examining Study One Through Constructivist Lenses

Grounded Theory Study: A Constructivist Research Method

Specifically, in Study One, the grounded theory method pioneered by Glaser & Strauss (1967) was employed. Before beginning to argue why the constructivist approach is most appropriate for Study One, it is appropriate to ascertain that the grounded theory approach (and thus Study One) arises from the constructivist paradigm. Kindly refer to Table 3.3 for a summary of how the method features of Study One's grounded theory method are consistent with the features of the constructivist approach.

"The grounded theory approach is a qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon" (Strauss & Corbin, 1990, p. 24). The grounded theory approach is a constructivist approach because it is faithful to every feature in the constructivist paradigm. See Table 3.3 and the details in the following paragraphs.

Table 3.3
Summary of Study One's Method Features

	Constructivism	Study One
Ontology *"What is the Form and Nature of Reality?" (Guba & Lincoln, 1994, p. 108)*	Reality is what a group of competent people think and agree it is.	Competent informants: A group of interviewees, who work in an organization that believes seemingly impossible goals are the right ones to set, were the informants. This effort to draw on the common sense of competent informants is a feature of the constructivist approach.
Epistemology *"What is the nature of the relationship between the knower or would-be knower and what can be known?" (Guba & Lincoln, 1994, p. 108)*	The knower or would-be knower is intricately involved in the creation of knowledge.	Involved in knowledge creation: In analyzing data, this dissertation's author played an important interpretative role, bridging the gap between raw data and the eventual creation of the mediation model.
Methodology *"How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?" (Guba & Lincoln, 1994, p. 108)*	(1) small scale purposeful sampling rather than large scale probability sampling, (2) contextual interview and/or observational data collection rather than context-free survey data collection, (3) methods of qualitative data analysis rather than methods of quantitative data analysis.	(1) 50 purposefully sampled interviewees were picked. (2) Interview data was collected. (3) Grounded theory analytical procedures (a method of qualitative analysis) were followed.

Thirdly, in the constructivist paradigm, researchers prefer:

(1) Small scale purposeful sampling rather than large scale probability sampling – For Study One, 50 interviewees were picked from within the specific context of a particular organization (i.e., extreme case sampling) which routinely set seemingly impossible goals for its staff. These interviewees were asked to relate stories of goal commitment, the theoretical construct of interest, in challenging situations. In this manner, theoretical sampling of stories from the interviewees' life experience was done. Further, to the extent that people in every organization would occasionally experience having to achieve goals that look impossible in the light of constraining situational factors, it was possible to make logical generalizations from these 50 interviews (i.e., these 50 interviews are thus critical cases). After the key theme of emotional energy availability had emerged from the analysis of the first 10 interviews, confirming/disconfirming data was collected by asking questions about energy availability. After the mediation model was developed, confirming/disconfirming data was collected by asking about how energy availability waxed and waned over time. In this way, four different types of purposeful sampling were employed in Study One.

(2) Contextual interview and/or observational data collection rather than context-free survey data collection – Interview data was collected and fully transcribed into textual form before analysis.

(3) Methods of qualitative data analysis rather than methods of quantitative data analysis – "Qualitative data analysis is a process that entails (1) sensing themes (2) constant comparison (3) recursiveness (4) inductive and deductive thinking and (5) interpretation to generate meaning" (Ruona, 2005, p. 236). The analysis for Study One involved (a) coding for themes, (b) constant comparison with other themes, (c) once emotional energy availability had emerged as a key determinant of goal commitment from the first 10 interviews, a recursive to and fro between the literature, the data and the analysis, (d) both inductive thinking (when attempting to see patterns in the interview data) and deductive thinking (when attempting to collect more data to confirm/disconfirm the patterns and themes emerging from the analysis of the interview data, and (e) all themes and patterns were developed through the act of interpreting the data.

In the above paragraphs, it has been shown that Study One is a constructivist study because it is consistent with all the ontological, epistemological and methodological features of the constructivist paradigm.

Understanding the Various Constructivist Approaches

Table 3.4 summarizes the key features of the different types of constructivist approaches, their intended purpose and their disciplinary roots. "No consensus exists about how to classify the varieties" (Patton, 2002, p. 132). Creswell (1998) documented five classifications – biography, phenomenology, grounded theory, ethnography and case study. Schwandt (2000) describes three. Miles & Huberman (1984) concluded that such taxonomies are mind boggling in the way the different approaches are defined

and the different criteria used to distinguish one approach from another. Table 3.4 is adapted from Patton (2002) and contains 16 different categories.

Table 3.4
Types of Constructivist Approaches

Constructivist Approach	Disciplinary Roots	Central Questions
1. Ethnography	Anthropology	What is the culture of this group of people?
2. Autoethnography	Literary Arts	How does my own experience of this culture offer insights about this way of life?
3. Case Study	Social sciences	What are plausible explanations for verifiable patterns in social phenomenon?
4. Phenomenology	Philosophy	What is the meaning, structure, and essence of the lived experience of this phenomenon for this person, or group of people?
5. Heuristic inquiry	Humanistic psychology	What is my experience of this phenomenon and the experience of others who also experience this phenomenon intensely?
6. Ethnomethodology	Sociology	How do people make sense of their everyday activities so as to behave in socially acceptable ways?
7. Symbolic interaction	Social psychology	What common set of symbols and understandings has emerged to give meaning to people's interactions?
8. Semiotics	Linguistics	How do words and symbols carry and convey meaning in particular contexts?
9. Hermeneutics	Linguistics, philosophy, literary criticism, theology	What are the conditions under which a human act took place that makes it possible to interpret its meaning?
10. Narratology / narrative analysis	Literary criticism, literary non-fiction	How can this narrative be interpreted to understand and illuminate the life and culture that created it?
11. Ecological psychology	Ecology, psychology	How do individuals attempt to accomplish their goals through specific behaviors in specific environments?
12. Systems theory	Interdisciplinary	How and why does this system as a whole function as it does?
13. Chaos theory: Nonlinear dynamics	Theoretical physics, natural sciences	What is the underlying order, if any, of disorderly phenomenon?
14. Grounded theory	Social sciences methodology	What theory emerges from systematic comparative analysis and is grounded in fieldwork so as to explain what has been and is observed?
15. Orientational: Feminist inquiry, critical theory…	Ideologies: Political, cultural, and economic.	How is X perspective manifest in this phenomenon?

This dissertation is a business school dissertation resting on the foundation of industrial and organizational psychology. Only five of the disciplinary roots listed in Table 3.6, can be construed as related to the topic of this dissertation. Disciplinary roots such as literary criticism (see number 10 in Table 3.4) are far removed from the topic of this dissertation, and thus the methods of inquiry that arise there from are also irrelevant. The five disciplinary roots that might be construed as applicable to this dissertation are (5) humanistic psychology (research approach: heuristic inquiry), (7) social psychology (research approach: symbolic interaction), and (11) ecology and psychology (research approach: ecological psychology) and (14) social sciences methodology (research approach: grounded theory). Of these four, only one answers a central question (see column 3 of Table 3.4) that is of interest to this dissertation. The question is, "What theory emerges from systematic comparative analysis and is grounded in fieldwork so as to explain what has been and is observed?" Only "grounded theory focuses on the process of generating theory rather than particular theoretical content. It emphasizes steps and procedures for connecting induction and deduction through the constant comparative method, comparing research sites, doing theoretical sampling, and testing emergent concepts with additional fieldwork" (Patton, 2002, p. 125). This is a key reason why grounded theory was chosen for Study One. The prescriptive steps are clear and well-documented (Strauss & Corbin, 1990). The next section will proceed to clarify why grounded theory is the method most suited to answer the specific research question in Study One.

Having demonstrated that Study One is consistent with the constructivist paradigm and also having examined the various different constructivist approaches, let me now proceed to clarify why the grounded theory research method in particular is the most appropriate for answering the research question for Study One.

Study One's research question is "How do people self-regulate goal commitment?" This single research question summarises two sub-questions: twin questions (1) What goal commitment self-regulation strategies do people use? (2) How do these goal commitment self-regulation strategies work to influence goal commitment? The literature review in Chapter Two argued that extant theories (Klein et al., 1999; Locke et al., 1988) do not include self-regulation strategies as a class of determinants of goal commitment; even though real-life cases (1) suggesting that human beings can and do exert some degree of self-regulation over their levels of goal commitment, (2) suggesting that self-regulation of goal commitment in the face of constraining situational factors appeals to a deep sense of moral ideals in people. In so doing, it was shown in Chapter Two's literature review that there is an important real-life phenomenon that people value deeply (i.e., self-regulation of goal commitment) which extant theories fail to model, and researchers fail thus to examine.

Since extant theories of goal commitment overlook the role of goal commitment self-regulation, there is clearly a need to build theory. As such, it makes sense to choose a method of study that builds theory. Corbin and Strauss (2008), the pioneers of the grounded theory method, wrote that "the primary purpose of doing qualitative research is discovery, not hypothesis testing" (p. 317). Where there is little theory to

test, it is necessary to first discover. For this reason, the grounded theory research method is appropriate for Study One.

Reasons for Examining Study Two through Positivist Lenses

The Correlational Field Study Method: A Positivist Research Method

Specifically, in Study Two, the correlational field study method (Whitley, 2002) was employed to gather numerical data for Study Two. Before beginning to argue why the correlational field study method is appropriate for Study Two, let me first show how Study Two's research design is consistent with the features of the positivist approach. Table 3.5 below provides a summary of how the research design features of Study Two's correlational field study are consistent with the features of the positivist approach.

Table 3.5
Summary of Study Two's Method Features

	Positivism	Study Two
Ontology *"What is the Form and Nature of Reality?" (Guba & Lincoln, 1994, p. 108)*	Reality is the ***objective truth*** that exists independently of how people think.	***Objective truth***: Most of the survey measures used in Study Two are established pre-validated measures known to objectively capture the intended psychological content without bias from the general population. This effort to be non-biased is a feature of the positivist approach.
Epistemology *"What is the nature of the relationship between the knower or would-be knower and what can be known?" (Guba & Lincoln, 1994, p. 108)*	The knower or would-be knower tries to discover ***knowledge that pre-exists*** his search.	This dissertation's author maintained an impersonal distance from the survey data collection process so as not to influence the responses of the participating individuals. The surveys were sent out in sealed envelopes. Survey responses were anonymous. In this way, one hoped to capture without researcher bias, the ***objective mental realities that pre-exist the survey.***
Methodology *"How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?" (Guba & Lincoln, 1994, p. 108)*	(1) large scale probability sampling rather than small scale purposeful sampling, (2) context-free survey data collection rather than contextual interview and/or observational data collection, (3) methods of quantitative data analysis rather than methods of qualitative data analysis.	(1) The entire study population of 608 people was sampled. (2) Context-free survey data was collected. (3) Structural equation modeling, a quantitative data analysis method, was used to analyse the data.

Firstly, in the positivist paradigm, reality is the objective truth that exists independently of how people think. Except for the scale measures of emotional energy availability, the survey measures used in Study Two are all established pre-validated measures shown to, without bias, capture the intended psychological content across different populations. The exact measures will be described in later chapters together with the relevant validity and reliability statistics documented in previous work by other researchers. The scale measures of emotional energy availability were piloted with 10 people from Study Two's organization to ascertain if they were biased or difficult for respondents to understand. This effort to be non-biased is a feature of the positivist approach.

Secondly, in the positivist paradigm, the knower or would-be knower tries to discover knowledge that pre-exists his search. In several ways, this dissertation's author strove to refrain from influencing the respondents' choices. The surveys were sent out in sealed envelopes and thus direct interaction between this dissertation's author and respondent (that might have influenced the answers) was minimised. Every sealed envelope contained the exact same information, instructions and survey so that no one group of respondents were differently instructed nor informed. Survey responses were anonymous, thus minimizing any social desirability effects on respondent answers. In all these efforts, the aim was to capture what respondents truly thought before they even filled out the research instrument. These efforts reflect the assumption that there are thought realities that pre-exist in the minds of the respondents, even before the survey is administered, and that my job as a researcher is to uncover these thoughts.

Thirdly, in the positivist paradigm researchers prefer to use:

(1) Large scale probability sampling rather than small scale purposeful sampling - Firstly, compared to Study One's sample of 50 cases, Study Two's sample comprising 466 useable cases from a total population of 608 cases is much larger in scale, and was done in order to achieve adequate statistical power. Small samples are more prone to sampling error, are less reliable and have little statistical power. The notion of statistical power is important in positivist research. "Briefly reviewed, power is the probability that the results of a significance test will lead to rejection of the null hypothesis when there is a true effect in the population" (Kline, 1998, p. 308). Therefore, with higher statistical power, one minimizes the chances of wrongly concluding that two variables are not related, when the actually are. Secondly, in "probability sampling, every member of the study population has a known probability of being selected for the research sample" (Whitley, 2002, p. 391). Random sampling is the most common form of probability sampling, because in random sampling every individual in the population has an equal and known probability of being selected to participate in the survey. However, in Study Two, this dissertation's author did not do random sampling. Instead, surveys were sent to all 608 individuals, thereby giving each person an equal 100% chance of being picked. This still qualifies as probability sampling as each individual has an equal and known probability of being selected to participate in the survey. In summary, Study Two employed large scale probability sampling.

(2) Context-free survey data collection rather than contextual interview and/or observational data collection – To ensure that a survey remains context-free, care must be taken to validate the survey's measures with a large probability sample or multiple large probability samples. The validation results from such samples, if robust, demonstrate that the particular measures used, do effectively measure an objective mental reality such as goal commitment (Hollenbeck, Klein, O'Leary, & Wright, 1989a) or challenge stressors and hindrance stressors (Cavanaugh et al., 2000) regardless of the different individuals' specific contexts necessarily present in the sample. In other words, whilst as different individual contexts exist as there are individuals in a sample, the measures used are designed to capture only the objective reality that exists regardless of context. In Study Two, all the measures (except that of emotional energy availability) used in the survey have been reported in the literature as unbiased, reliable and valid measures of the constructs being studied. These measures will be described in detail in later chapters. As for the development of the emotional energy availability scales, care was taken to follow prescriptive advice of more experienced researchers (Alreck & Settle, 1995; Bartlett, 2005; Neuman, 2000; Whitley, 2002) in the development of the scale and in the subsequent assessment of its psychometric properties. In this way, effort was made to ensure that even the measures developed specifically for Study Two are also context-free and objective measures of emotional energy availability. In summary, in Study Two, context-free survey data was collected.

(3) Methods of quantitative data analysis rather than methods of qualitative data analysis – Structural equation modeling (SEM) was used to analyze the data in Study Two. SEM is a popular method of quantitative data analysis.

In the above paragraphs, it has been shown that Study Two is a positivist study because it is consistent with all the ontological, epistemological and methodological features of the positivist paradigm.

Understanding the Various Positivist Approaches

Experimental research methods. These can be conducted in the field (i.e., within a real organization) or in a laboratory (Whitley, 2002). Some variables are manipulated e.g., some people would be made to experience large amounts of challenge and hindrance stressors and others would be made to experience low levels of challenge and hindrance stressors. There are comparison and experimental groups. Comparison (also called control) groups do not undergo any manipulation at all. Experimental groups receive manipulation. Experimental subjects are randomly assigned to either the control or the experimental groups.

Correlational research method. Correlational research is never done in the laboratory. One does not attempt to control the context of the study in any way (i.e., no manipulation of variables and no control versus experimental group). Variables that may influence results are measured along with variables of interest. Statistical techniques such as those recommended by Anderson and Gerbing (1988) or Williams and Anderson (1994) for SEM, are then used to partial out confounding variables present in the study.

Table 3.6

Experimental Research Method (in the Field and the Laboratory) and the Correlational Field Research Method (developed from textual content in (Miner, 2005))

Key Features of an Experimental Research Method

- Some variables are manipulated e.g., some people would be made to experience large amounts of challenge and hindrance stressors and others would be made to experience low levels of challenge and hindrance stressors.
- There are comparison and experimental groups. Comparison (also called control) groups do not undergo any manipulation at all. Experimental groups do receive manipulation.
- Assignment of subjects to either condition (control or experimental) is random.
- Experimental research can be done in the field (i.e., in an actual organization) or in the laboratory.

Strengths	Weaknesses
• Greater degree of control over the variables being studied. • Easier to demonstrate causal effects.	• Conducting experimental research in the field poses highly challenging logistical and practical problems. • Conducting experimental research in a laboratory means the context is highly artificial. The context does not replicate the context of a real organization. Results may therefore not be generalizable to a real organization. • It is sometimes unethical to manipulate variables especially in cases where knowingly manipulating variables will cause human suffering e.g., in Study One of this dissertation, artificially manipulating individuals' experience of stressors within the context of their real jobs can cause human suffering.

Key Features of a Correlational Research Method

- Does not attempt to control the context of the study in any way (i.e., no manipulation of variables and no control versus experimental group).
- Uses control variables and special statistical techniques (such as hierarchical regression) to partial out confounding variables mixed into the study (due to lack of control over the study context.
- Never done in a laboratory.

Strengths	Weaknesses
• Results are more easily generalizable to a real organization because they possess ecological validity.	• Harder to demonstrate causal effects. • Cannot control the context to ensure that it is free of confounds. • Difficult to account for all possible confounding variables with statistical techniques.

The Correlational Field Study: An Appropriate Method for Study Two

Having demonstrated that Study Two's research method is consistent with the positivist paradigm, let me now proceed to clarify why, of the various positivist research methods (i.e., laboratory experiment, experimental field study and correlational field study) detailed above, the correlational field study is the most appropriate for Study Two's research question.

Study Two's research question is "What role does emotional energy availability play in the goal commitment nomological network?" The literature review in Chapter Two identified important gaps in empirical research which further underlined the importance of such a study (examining emotional energy availability's role in goal commitment's nomological network). What follows is a brief recapitulation of these previously stated gaps in empirical research.

The literature review in Chapter Two noted that Thayer's (1989) writings suggest that emotional energy availability (referring specifically to the emotional activation inherent in the excited-fatigue bipolar dimension of the affective circumplex) has an effect on goal commitment. In view of these writings, the documented literature on affect/emotions possesses a curious lacuna. Researchers studying emotion rarely examine the emotional activation component of the affective circumplex in despite of Thayer's (1989) theoretical musings. More specifically, researchers fail to examine the emotional activation component of the affective circumplex in relation to goal commitment. This may be because emotions and affect have often been seen as interfering with those very cognitive processes (Ilies & Judge, 2005; Isen, 2004) underlying the influential expectancy theory of goal commitment (Klein et al., 1999). As such, goal commitment researchers overlook the relevance of emotional constructs. It is important to fill this lacuna (1) in order that Thayer's (1989) early writings might

finally find empirical research support, and also (2) in order to inform practitioner circles that the active management of emotional energy availability may have desirable effects on goal commitment, which has itself been known to positively influence job performance (Klein et al., 1999). Thus Study Two's results, when applied to real world organizations, might help improve real organizations' effectiveness by pointing to a way of improving individual job performance via the management of emotional energy availability.

In view of the key practical contribution stated herein above, it was important that Study Two possess ecological validity i.e., "the degree to which the conditions under which research is carried out mimic the conditions found in a natural setting to which they are applied" (Whitley, 2002, p. 453). In other words, if the findings of Study Two were to be clearly valid for application to real organizational settings, it made sense to carry out Study Two itself within a real organizational setting. Therefore, despite knowing that "from the logical positivist point of view, the experiment is the best way to conduct research because only experimentation can determine cause and effect relationships" (Whitley, 2002, p. 35), the choice was made, for reasons of ecological validity, to conduct positivist research in the field setting of a real organization, instead of in the artificial setting of a laboratory experiment.

This section will presently address the reason why a correlational field study, instead of an experimental field study, was chosen. Presently, a very important motivation for Study Two was also the necessity to specifically test a key finding that had emerged from the grounded theory Study One. Study One found that emotional energy availability is an important mediating variable between situational factors plus self-regulatory strategies on one hand, and goal commitment on the other hand. Of the

myriad situational factors documented in Study One, quality of co-worker relationships, challenge stressors and hindrance stressors were chosen for closer examination in Study Two because (1) these were already well validated constructs with robust measures documented elsewhere in organizational behavior research (Cavanaugh et al., 2000; Graen & Uhl-Bien, 1995; Klein & Kim, 1998; Lepine et al., 2004; Sherony & Green, 2002; Wallace et al., 2009), and (2) they had not yet been specifically examined in relation to goal commitment.

When (1) challenge stressors and (2) hindrance stressors appear in the Study One interviews, interviewees often were distraught at the mere recall of their painful experience with these stressors. Having personally witnessed the interviewees' pain upon recall, it was noted that there could be ethical objections to artificially manipulating respondents' experiences of challenge and hindrance stressors in Study Two. There were concerns that an experimental field study manipulating individuals' experience of challenge and hindrance stressors, would intentionally cause distress to participants and thus be violate important ethical guidelines in Australia. Considerations of research ethics therefore dictated my choice of a correlational field study design in Study Two, over that of an experimental field study design; even though, "from the logical positivist point of view, the experiment is the best way to conduct research because only experimentation can determine cause and effect relationships" (Whitley, 2002, p. 35).

How Study One's Research Method Complements Study Two's Research Method and Vice Versa

The constructivist and the positivist paradigms are vastly different approaches to scientific inquiry. Indeed, an "issue arose at the winter meeting of the Council of representatives for the American Psychological Association (APA). The council was considering a proposal to add a new division to APA: Qualitative Inquiry. The proposal would have passed had it not been pointed out that several petitioners were also authors of articles describing traditional methods [of positivist inquiry] as worse than useless" (Cortina, 2010, p. 396). This illustrates the uncomfortable tension that exists between constructivist researchers and positivist researchers. However, in my opinion, this is akin to night and day fighting to determine the superior. Night and day are both necessary to the circle of life. They exist in perfect complementarity. Constructivist approaches to research (in particular, the grounded theory research method in this dissertation) and positivist approaches to research (in particular, the correlational field research method in this dissertation) are so different that what the one can accomplish, the other was not designed to… and what the other can achieve, the one was not designed to. The paragraphs that follow will describe how Study One, using the grounded theory research method accomplishes research aims that Study Two does not, and how Study Two, using the correlational field research method, accomplishes aims that Study One does not. This leads then to the conclusion that both studies together make for a methodologically robust dissertation.

Table 3.7, below, summarizes the strengths of the grounded theory research method against the weaknesses of the correlational field study method. Table 3.8, below, summarizes the weaknesses of the grounded theory research method against

the strengths of the correlational field study method. Then paragraphs that follow explain Tables 3.7 and 3.8 in more detail.

Table 3.7

The Strengths of the Constructivist Approach and the Weaknesses of the Positivist Approach

Method Features of Study One's Constructivist Approach	Strengths of Study One's Constructivist Approach	Weaknesses of Study Two's Positivist Approach	Method Features of Study Two's Positivist Approach
Competent informants: A group of interviewees, who work in an organization that ***believes seemingly impossible goals*** are the right ones to set, were the informants. This effort to draw on the common sense of competent informants is a feature of the constructivist approach.	When existing theory and quantitative research show that A causes B, and a real life case appears where A does not cause B, it indicates some gap in existing theory and quantitative research (Siggelkow, 2007). When competent informants in real organizations tell vivid stories of heroic goal commitment despite constraining situational factors, e.g., the story of the Little Engine that Could (Piper, 1930), and extant research indicates that constraining situational factors makes people give up, then this indicates that there is a gap in existing theory and quantitative research.	***Established pre-validated measures*** will only examine what existing theory and quantitative research is aware of. This method makes researchers blind to important practical realities not documented in the literature.	Objective truth: Most of the survey measures used in Study Two are ***established pre-validated measures*** known to objectively capture the intended psychological content without bias from the general population. This effort to be non-biased is a feature of the positivist approach.

Method Features of Study One's Constructivist Approach	Strengths of Study One's Constructivist Approach	Weaknesses of Study Two's Positivist Approach	Method Features of Study Two's Positivist Approach
Involved in ***knowledge creation***: In analyzing data, this dissertation's author played an important ***interpretative*** role, bridging the gap between raw data and the eventual ***creation of a theoretical model***.	When there are no theoretical models in existence to explain a phenomenon, ***interpretative work resulting in knowledge creation*** allows researchers to develop theory using an inductive approach. In this way, ***theory is not merely thought up using logic, but is also grounded in empirical observations*** (Corbin & Strauss, 2008). This reduces the chances of developing an invalid theory. There is little extant theory to explain how people self-regulate goal commitment.	In order to ***capture objective mental realities,*** one must have some idea of what these objective mental realities are (i.e., one must already have a clear idea of the construct to measure, and the hypotheses to test). This method is not suitable when researchers are unclear of what objective mental realities could exist, and what hypotheses to test.	This dissertation's author maintained an impersonal distance from the survey data collection process so as not to influence the responses of the participating individuals. The surveys were sent out in sealed envelopes. Survey responses were anonymous. In this way, one hoped to capture and test, without researcher bias, ***the objective mental realities that pre-exist the survey***.

Method Features of Study One's Constructivist Approach	Strengths of Study One's Constructivist Approach	Weaknesses of Study Two's Positivist Approach	Method Features of Study Two's Positivist Approach
(1) 50 ***purposefully sampled interviewees*** were picked. (2) Interview data was collected. (3) Grounded theory analytical procedures (a method of qualitative analysis) were followed.	There are phenomena in the real world that occur only very rarely, but hold deep meaning for the humanity (Siggelkow, 2007). ***It is not often that one comes across an organization where everybody is expected to attain goals that look impossible, given constraining situational factors.*** The only way to study how people self-regulate goal commitment is to ***purposefully sample*** an organization such as that of Study One (wherein goal attainment journeys are so often challenging, that cases abound of goal commitment self-regulation despite extreme constraining situational factors).	Rare phenomena that appear within a large population would be relegated to random error, and considered ***unrepresentative of the entire population.*** Such rare phenomenon, because unrepresentative of the entire population would be missed in the positivist's search for immutable natural laws that are true of every context and everyone. This method is not suitable for studying rare phenomena.	(1) The entire study population of 608 people was sampled. ***This sample is the most representative*** of the population, since it is itself the whole population. (2) Context-free survey data was collected. (3) Structural equation modeling, a quantitative data analysis method, was used to analyse the data.

Make Salient a Theoretical Gap. Siggelkow (2007) writes that when existing theory and quantitative research show that A causes B, and a real life case appears which contradicts this assertion, it indicates some gap in existing theory and quantitative research. In Study One, the sample was purposefully comprised of people who were given seemingly impossible goals to achieve, who didn't give up, and who managed to achieve their seemingly impossible goals. These were the competent informants whose common sense this dissertation's author tapped into, in order to inform my constructivist research in Study One. These informants told vivid stories of heroic goal commitment despite constraining situational factors. These real stories contradict what the research literature suggests about goal commitment – i.e., that when constraining situational factors are higher, goal commitment is lower and thus people give up (Klein & Kim, 1998). Hence, employing a constructivist approach to researching goal commitment has allowed me to bring into sharp relief a theoretical gap in goal commitment literature.

The correlational field study research method could not have brought this theoretical gap into salience because such a research method focuses on testing a priori theories and hypotheses. In good correlational field study research therefore, one uses pre-established and pre-validated measures (Bartlett, 2005; Neuman, 2000; Whitley, 2002). Such measures being both pre-established and pre-validated only serve to test the theoretical premises which the domain is already aware of. Using purely correlational field study research, researchers can be blind to important practical realities about which no theory yet exists. In this manner, the grounded theory research

method can accomplish aims (i.e., bring a theoretical gap into salience) that correlational field study research cannot accomplish.

Theory Development. If no theory exists to explain a real life phenomenon, it follows that there is a need to develop it. If one needs to develop theory, it is methodologically rigorous to ground the theory development in empirical observations using a method such as grounded theory (Corbin & Strauss, 2008) rather than to develop a theory using logic and personal opinion. Such a grounded theory approach reduces the chances of developing an invalid theory. To develop theory, the grounded theory approach requires the researcher to interpret the data, in order to define constructs of interest and to develop hypotheses.

On the other hand, correlational field study method discourages similar researcher interpretation. The researcher is to maintain an impersonal distance so that objective mental realities can be captured without bias. In order to capture such objective mental realities (Bartlett, 2005; Guba & Lincoln, 1994), one must already have a clear idea of (1) what constructs to measure, (2) how to measure these constructs and (3) what hypotheses to test. Objective mental realities cannot be apprehended if one starts out with no known constructs of interest and no known hypotheses. Clearly, the researcher can again use the grounded theory method to do something (i.e., develop theory, define constructs and craft hypotheses) that the correlational field study method is ill equipped to do.

Rare Phenomenon. There are phenomena in the world that occur only rarely, but are instructive when studied. People who do not give up when the going gets tough are relatively rare phenomena. Yet, if one could study them and understand how they

manage to not give up, it would be instructive and helpful if one wished to help others demonstrate similar levels of goal commitment.

The correlational field study method is ill-suited to the study of rare occurrences because the focus is on a representative sample of a large population (Whitley, 2002). Rare phenomena that appear within a large population would be relegated to random error, and discounted because the correlational field study method focuses on searching for immutable natural laws that apply to everyone regardless of context (Neuman, 2000). The correlational field study method is sensitive to general population tendencies (Bartlett, 2005). It is less informative about rare occurrences in nature. Clearly, here again the grounded theory research method is able to achieve research aims that the correlational field study method research is not meant to achieve.

Table 3.8, just below, summarizes the weaknesses of the grounded theory research method against the strengths of the correlational field study method. The following paragraphs further elaborate on Table 3.8.

Table 3.8

The Weaknesses of the Constructivist Approach and the Strengths of the Positivist Approach

Method Features of Study One's Constructivist Approach	Weaknesses of Study One's Constructivist Approach	Strengths of Study Two's Positivist Approach	Method Features of Study Two's Positivist Approach
Competent informants: A group of interviewees, who work in an organization that believes seemingly impossible goals are the right ones to set, were the informants. This effort to draw on the common sense of competent informants is a feature of the constructivist approach.	Grounded theory cases can detect a relationship between two variables within particular cases – for example, a relationship between emotional energy availability and goal commitment for ***only the competent informants interviewed***. This method little allows researchers to claim that their findings are applicable to the general population.	The correlational field study enables the determination of whether a relationship between two variables hold up generally within a population of people. This better allows researchers to claim external validity for their findings i.e., claim that their findings are applicable to the ***general population.***	Objective truth: Most of the survey measures used in Study Two are established pre-validated measures known to objectively capture the intended psychological content without bias ***from the general population.*** This effort to be non-biased is a feature of the positivist approach.

Method Features of Study One's Constructivist Approach	Weaknesses of Study One's Constructivist Approach	Strengths of Study Two's Positivist Approach	Method Features of Study Two's Positivist Approach
Involved in knowledge creation: In analyzing data, this dissertation's author played an important ***interpretative role***, bridging the gap between raw data and the eventual creation of a theoretical model.	Since the researcher is ***integral to the interpretative process***, it is more challenging to guard against researcher bias.	The correlational field study ***minimizes researcher bias***. Though some amount of researcher bias exists in every study, this method requires that researchers rigorously guard against influencing study results in directions convenient to themselves.	This dissertation's author maintained an impersonal distance from the survey data collection process so as not to influence the responses of the participating individuals. The surveys were sent out in sealed envelopes. Survey responses were anonymous. In this way, one hoped to capture and test, ***without researcher bias***, the objective mental realities that pre-exist the survey.
50 ***purposefully sampled*** interviewees were picked. Interview data was collected. Grounded theory analytical procedures (a method of qualitative analysis) were followed.	***Purposefully sampled interviewees*** cannot be a representative sample. As such, the findings from Study One do not approach the ideal of the basic, observational laws of science" (Mulkay (1979, p. 21) as cited in (Neuman, 2000, p. 67)).	When a finding is true of a ***representative sample***, researchers come closer to the ideal of articulating the "basic, observational laws of science [that] are considered to be true, primary and certain, because they are built into the fabric of the natural world" (Mulkay (1979, p. 21) as cited in (Neuman, 2000, p. 67)) .	The entire study population of 608 people was sampled. This sample is the ***most representative of the population***, since it is itself the whole population. Context-free survey data was collected. Structural equation modeling, a quantitative data analysis method, was used to analyse the data.

Little External Validity. Given that grounded theory researchers draw on the knowledge and experience of a few competent informants, it is difficult to claim that the hypotheses crafted and the constructs found in the data, also apply to the general population. For example, having found that the informants from Study One's organization self-regulate goal commitment in a particular way, one is unsure whether people in other more normal organizations (i.e., organizations that do not set seemingly impossible goals for employees) also self-regulate goal commitment in the same way.

Study Two's correlational field study method allows researchers to determine whether a relationship between two variables hold up generally within a population of people because more people from different contexts, can be informants. Study Two's correlational field study method can thus complement Study One's grounded theory method by confirming that a particular finding is also true in the general population. Hence, in Study Two, Study One's findings were tested with a sample other than the competent informants used in Study One.

Researcher Bias. Grounded theory researchers are involved in interpreting the data and making sense of it. Whilst techniques such as inter-coder triangulation (Strauss & Corbin, 1990) do keep researchers intellectually honest, true objectivity is not possible in grounded theory research because of the large extent of researcher interpretation involved in the research process. A positivist method such as Study Two's correlational field study method allows researchers to minimize researcher bias because the researcher maintains (1) an impersonal distance from the survey (i.e., use

pre-established and pre-validated measures) (2) an impersonal distance from the respondent (i.e., use surveys with impersonal and consistent instructions) and (3) an impersonal distance from the data (i.e., statistical packages are used to analyze the data). Here again, the correlational field study method can complement the grounded theory method by confirming that a researcher's interpretation of reality, is in fact, also objective reality. Hence, in Study Two, the correlational field study method was used to test the findings of Study One's grounded theory research.

Cannot Define Immutable Natural Laws. When a finding is true of a representative sample, researchers come closer to articulating the immutable natural laws of our world, applicable to everyone regardless of individual context. However, grounded theory researchers do not draw representative samples. They draw purposeful samples. As such, it is difficult to claim a particular finding to be a law that can be generally applied to everyone regardless of individual context. One can only be sure that a finding is applicable to only the purposeful sample chosen because of the purposeful sample's specific characteristics.

Yet again, positivist research can complement constructivist research in order that the researcher might approach the elusive ideal of articulating the "basic, observational laws of science [that] are considered to be true, primary and certain because they are built into the fabric of the natural world" (Mulkay (1979, p. 21) as cited in (Neuman, 2000, p. 67)). Hence, in Study Two, positivist research was used to test for the existence of such a law.

Summary: Complementary Strengths and Weaknesses

In summary, grounded theory research and correlational field study research have differing aims. Their relative strengths and weaknesses exist in complement, not competition. It made sense to use the grounded theory research method in this dissertation to build theory, and then to follow that with the correlational field study method to test the theory that surfaced from Study One's data. In pairing these two vastly different paradigms within a single dissertation, a meaningful and synergistic pairing of methods was effectuated, resulting in a methodologically robust piece of work.

Chapter Conclusion

This chapter began by clarifying the ontological, epistemological and methodological foundations of the two complementary research approaches employed in this dissertation.

- Why Study One's research question is best examined through the lenses of the constructivist research.

- Why Study Two's research question is best examined through the lenses of the positivist research paradigm.

In the third step, this chapter also explains why the specific research methods chosen for Study One (i.e., the grounded theory research method) and Study Two (i.e., the correlational field research method) are appropriate choices from the panoply of

research methods available from within each of the respective research paradigms. In its last part, this chapter ends by explaining how in this single dissertation's, two contrasting studies each arising from polar opposite research paradigms, complement each other to effectively bring important knowledge to the domain of goal commitment research.

CHAPTER 4: STUDY ONE'S RESEARCH METHOD

Chapter Introduction

> *"Whereas much positivistic empirical research is designed so that method and results can be replicable… this outcome is typically not associated with qualitative research for numerous reasons (e.g., the person is the analytic tool, the unique constellation of relationships and interviews make some qualitative methods impossible to truly replicate). However, the standardization of methodology does create… a sense of trust that the author knows what he or she is doing. Qualitative researchers often attempt to garner such trust by showing that there was an intentional design and analysis strategy. This includes discussing steps for analyzing data… and an explanation for how data is related to findings. In this way, focus shifts away from replicability to expertise of the research"*
>
> (Pratt, 2008: 502).

In this chapter, the method of the present Study One, a grounded theory study, will be detailed. Such a description will not have the positivist aim of ensuring that Study One's results can be replicated by other researchers. Instead, this chapter is written with the constructivist frame more suitable for a grounded theory study. By explaining in the detail how the sample was chosen in view of the research question, how the interviews were done and how the data was analyzed and how the theoretical model was validated, this section aims to show that the research has been done with

great care and conscientiousness as well as skill, and therefore that the findings may be trusted.

This chapter begins by reiterating the research motivation for Study One and the specific reasons for implementing a grounded theory study in Study One. Next, it proceeds to describe in detail, the sampling strategies and the analytical steps used in Study One.

The grounded theory method requires a constant to and fro between sampling and data analysis. In order to clearly depict the iterative method steps used, it is necessary to describe both sampling and analytical strategies together. Doing so departs from the conventions of positivist research, wherein each step (1) sampling, (2) data analysis and (3) findings are reported in clearly separate sections. In this chapter, the following steps will be iteratively presented: (1) sampling steps, (2) data analysis steps and (3) only those particular emergent findings which guided further choices in person and incident sampling as the research progressed. Other findings will be presented in the next chapter.

Study One: Research Questions

The research question for the present study is "How do people self-regulate goal commitment?" This research question may be broken up into twin questions (1) What goal commitment self-regulation strategies do people use? (2) How do these goal commitment self-regulation strategies work to influence goal commitment?

In Chapter Two, it was argued that extant theoretical thinking (Klein et al., 1999; Locke et al., 1988) does not explain how self-regulation strategies as a class of

determinants, can influence goal commitment. This gap in theoretical thinking becomes salient when one considers that real-life cases exist (1) which suggest that human beings can and do exert some degree of self-regulation over their levels of goal commitment, (2) which suggest that heroic self-regulation of goal commitment in the face of challenging situational constraints appeals to a deep sense of moral ideals in people (Bannister, 1955; Brockovich & Eliot, 2002; Piper, 1930; Weinberg, 2001). Chapter Two's literature review therefore shows that there is an important real-life phenomenon that people value deeply (i.e., self-regulation of goal commitment) which extant theories fail to model, and researchers fail thus to examine. Given that extant theories of goal commitment overlook the role of goal commitment self-regulation, there is clearly a need to build theory. For this reason, Study One is a grounded theory study (Corbin & Strauss, 2008).

Sampling Procedure: Choice of Study One's Organization

Critical Case Sampling

The specific choice of organizational context was a result of a sampling strategy termed as critical case sampling (Passmore & Baker, 2005). The logic of critical case sampling requires the researcher to pick cases that permit logical generalization of knowledge to other contexts. "A clue to the existence of a critical case is a statement to the effect that 'if it happens there, it can happen anywhere' or vice versa 'if it doesn't happen there, it won't happen anywhere'" (Patton, 2002, p. 237). Since this dissertation is written for a business school PhD, its findings are intended for application to business organizations. Hence, a business organization (and not a university, nor a

charity) was picked for Study One in order that the findings can be logically generalized to other business organizations.

More specifically, in business organizations, goal attainment journeys are often fraught with unpredictable situational constraints (Hough & White, 2003; Michel & Wortham, 2009; O'Reilly & Pfeffer, 2000; Wu, Levitas, & Priem, 2005) which may make already assigned goals look impossible. The particular organization picked for Study One was similar to every other business organization in that goal attainment journeys within the organization are subject to unpredictable situational constraints which make assigned goals look impossible. Taking care to ensure that Study One's organization is a business organization, is itself a critical case sampling strategy; because, it ensures that the organization picked for Study One allows logical generalizations to be made from Study One to other business organizations.

Deviant Sampling

The choice of Study One's organization was also a result of a sampling strategy termed as deviant sampling (Passmore & Baker, 2005). Deviant sampling involves selecting cases which are information rich because they are unusual manifestations of phenomenon. Study One's organization is unusual in that the situational constraints that characterize its working environment are both extreme and numerous. Situational constraints are defined as situational factors that act as obstacles to goal attainment by preventing employees from fully translating their ability and motivation into achieving the goal (Klein & Kim, 1998; Peters, O'Connor, & Eulberg, 1985).

This point about extreme and numerous situational constraints is an important one since research documents that the higher the situational constraints, the lower the goal commitment (Klein & Kim, 1998). People experiencing smooth sailing goal attainment journeys would experience no downward pressure on their levels of goal commitment. As such, they would not need to activate strategies of goal commitment self-regulation to maintain their levels of goal commitment. Therefore, stories of smooth sailing goal attainment journeys would have little to teach about Study One's research question.

Put another way, it seems logical that strategies of goal commitment self-regulation need only come to the fore when situational constraints are so high that goal abandonment seems a reasonable course of action. For example, in The Little Engine that Could (Piper, 1930), the situational constraints are such that goal abandonment seems reasonable. No one would blame the Little Engine for giving up. But unusually, despite the extent of his situational constraints, The Little Engine that Could did not give up.

Recall now that Study One seeks to answer the question of how the Little Engine contrived to not give up. The operative word in the preceding sentence is the word "contrived". Implicit in the word "contrived" is an important idea. It is that individuals can and do exert some degree of self-regulation over their levels of goal commitment when situational constraints depress goal commitment levels. The questions that arise are then "What are these strategies?" and "How do they operate to affect goal commitment levels?" The stated research question for Study One summarizes both these questions in one question "How do people self-regulate goal commitment levels?"

It seems clear from the logic laid out above, that Study One's research question can only be answered by studying unusual real life stories similar to that of The Little Engine that Could (where the goal attainment journey is so fraught with high situational constraints that one must activate goal commitment self-regulation strategies). As mentioned earlier, the particular organization chosen for Study One is unusual in that the situational constraints characterizing its working environment are extreme and numerous. Such an unusual organization is a rare find and is highly informative for the stated purposes of Study One, because given the extent of the situational constraints in its working environment, it is a rich source of stories containing goal commitment self-regulation strategies (since goal commitment self-regulation strategies will come to the fore only when situational constraints are high). In this manner, Study One's organization provided an ideal source from which to draw a plethora of real life stories that are similar to those of The Little Engine that Could (Piper, 1930), Erin Brockovich (Brockovich & Eliot, 2002), Professor Brierley-Smith (Weinberg, 2001) and Roger Bannister (Bannister, 1955) – i.e., stories of goal commitment (maintained at high enough levels using goal commitment self-regulation strategies) in the face of situational constraints that unfold over the goal attainment journey.

Can a Case Be Both Deviant and Critical?

The example of Phineas Gage proffered by Siggelkow (2007) indicates that the answer would be in the affirmative. Every human is like Phineas Gage in that all possess frontal lobes. Therefore ***Phineas*** Gage is a critical case because the functions of

his frontal lobes would be entirely similar to every other person's frontal lobes. Hence, studying the functions of Phineas Gage's frontal lobes, permits scientists to make logical generalizations of knowledge from the case of Phineas Gage to all other cases. In the same way, the organization picked for Study One is a critical case because it is a business organization entirely similar to every other business organization in that goal attainment journeys are often fraught with unpredictable situational constraints which unfold over time and make assigned goals look impossible.

However, Phineas Gage was also a deviant case in that he blew a hole through his frontal lobes and survived. It is most unusual to find a human being walking around hearty and hale except for a hole in his brain. Only with such case as Phineas Gage can researchers examine how a human being dysfunctions when the brain's frontal lobes are damaged. Similarly, the organization picked for Study One is a deviant case because its specific circumstances are such that there is a much greater than usual prevalence of situational constraints which make assigned goals look impossible. For this reason, one is able to find in Study One's organization, a plethora of real life stories that are similar to those of The Little Engine that Could (Piper, 1930), and thus able to inform the domain of how people self-regulate goal commitment levels.

The paragraphs that follow will show the extent to which situational constraints are numerous and extreme in Study One's organization, a semi-conductor wafer fabrication facility (SWFF). This will be done in two steps. In the first step, supporting evidence from extant literature will show that Study One's organization is rife with numerous and extreme situational constraints. In the second step, excerpts will be provided from the interview data collected from Study One's organization, and use

these to show how real people experience the numerous and extreme situational constraints in a SWFF.

Extant Literature Illustrating the Situational Constraints in a SWFF

A semi-conductor wafer fabrication facility (SWFF) is a type of large-scale complex manufacturing system (Liu, Fung, & Jiang, 2005), wherein multiple layers of miniature integrated circuits are built on a wafer of silicon or other semi-conductor material through complex re-entrant processing (Narahari & Khan, 1996; V-Villamial & Rivera, 2000). Re-entrant processing means that a wafer product may pass through the same equipment several times throughout its manufacturing cycle; and different products that have different process routes and requirements are processed simultaneously (Uzsoy, Lee, & Martin-Vega, 1992). Typically, SWFFs are large-scale, comprising of several hundred production facility points, technically sophisticated processing machines and material handling systems (Liu et al., 2005). With several hundred production points and re-entrant processing, it is clear that any equipment failure can simultaneously affect several other production points along multiple product lines. One equipment failure has a domino effect that can materially change the situational constraints for multiple product lines and all the workers along those lines.

Typically too, "in the semiconductor industry, manufacturers are faced with astronomical capacity costs, long capacity lead times, high obsolescence rates and high demand volatility" (Wu, Erkoc, & Karabuk, 2005: 126). These conditions introduce even more situational constraints affecting employees. Teams are created and

disbanded often and quickly, to cope with product obsolescence and demand variability. Employees need to learn to work with new team mates. These conditions coupled with the above-mentioned sheer complexity of the production process, sensitivity of product quality to even gaseous molecular contamination i.e., odors (McIllvaine & Bagga, 1999), and the heavy costs of defective production (Wu, Chang, & Chiou, 2006) subject almost every goal attainment endeavor to unpredictable and frequent situational constraints.

In addition, to manage exacting product standards in a competitive industry and volatile work environment, the semi-conductor wafer fabrication industry has highly robust goal setting processes labeled with its own institutionalized jargon – "policy deployment" (D'Cruz, 1999). The policy deployment process cascades a series of specific, measurable, achievable and time-bound goals throughout the organization, and represents a minimum industry standard (D'Cruz, 1999) of operating excellence. To stay ahead of the technological curve, these goals are set to be challenging. Within a context fraught with situational constraints, these goals often look impossible to employees. Yet, somehow, they stay the course and achieve the goals. In the early meetings, when the notion of a research project was being pitched to the senior management in Study One's organization two members of the senior management team quipped "If it's an impossible goal, it's the right one to set".

Excerpts from Study One's Organization Illustrating the Context

Engineer 38292 (excerpt below) was newly recruited into the organization. The speed of change in Study Two's organization was such that even before he had

completed his probation, Engineer 38293 was moved from one team to another. He was very much discomfited by the change, and his discomfiture affected his commitment to his work goals. The following excerpt from my conversation with Engineer 38292 supports the notion that in Study Two's organization, teams are created and disbanded often and quickly, to cope with product obsolescence and demand variability.

Engineer 38292

"Wet module…because Wet there is a lot of reshuffling here and there. After reshuffling they found that Wet module actually had shortage of manpower, so they pulled me out and they put me there."

Engineer 79209 (excerpt below) went through a difficult time because the machine he was looking after had damaged large numbers of wafers. To give me a sense of his despair at the time, he shared with me the heavy costs of defective production (Wu et al., 2006).

Engineer 79209

"The impact was huge. The impact was huge because those wafers had to be scrapped. You know one wafer … one lot with twenty five wafers is equivalent to one Mercedes Benz [Researcher's note: High automobile taxes mean that a Mercedes Benz in Singapore is three times the price of one elsewhere]. One wafer lost is $5000 lost. So the impact is huge… Before we found out, … maybe five to ten lots were hit."

Engineer 69058 (excerpt below) chose to share the story of a production issue that was so uncommon that it took about three months to resolve. Along the way, he felt discouraged because nothing seemed to elucidate the mystery, and no solution seemed to work. The following excerpt from my conversation with Engineer 9669058

supports the notion that product quality is even sensitive to even gaseous molecular contamination i.e., odors (McIllvaine & Bagga, 1999).

Engineer 69058

> "Because, in the wafer fab, it's supposed to be a clean environment. Any dirt or particle that drops on the wafer will kill the wafers. So it's supposed to be very clean. Someone came up with this idea that open rack might have particles falling onto it. So they design a door to enclosed the rack and protect it from falling particles. But as we found out later, seems that there is some gassing problem from the new door that we put in. The material is not suitable for this kind of usage. The door itself emits some kind of gas. We call it AMC, Air Molecule Contamination."

Engineer 38297 (excerpt below) gave me a sense of the complexity of the production process. Wafers require one month to produce, from start to finish. Engineer 38297 was responsible for only one small phase in the production process which lasted only five to six hours. Within this phase alone there are 40 over steps of hyper sensitive production parameters of which any combination or any single one could go wrong. The whole production cycle of a single wafer can span a month and include far more than just 40 process steps. Next, Engineer 28112 explains the notion of parameter shift. This is the often inexplicable phenomenon of machines wherein parameters have been set and shown to be appropriate, but over time, become inappropriate even though neither product nor parameters have been revised.

Engineer 38297

> "When it hits you, it hits you. Yeah…. One batch of wafers requires 5 to 6 hours of processing time. So there are like 40 over steps inside this recipe. We call a set of processing steps a recipe. If the lot of wafers aborts, it can abort at any one of the steps. There are so many reasons

> that can cause abort. It's like huge area to cover, you know, to really zero out these aborts… it's near impossible. But the main objective is not really to zero out, but if we can keep on pressing it down at a reasonable level like below 4 a week, then I would say it's relatively good.

Engineer 28112

> Many of the process parameters shift because of human interaction inside the line maybe people make adjustments here and there so make certain things work. These things are not captured by the data analysis. This part is more difficult to simulate, that's what causes the model to be true for a while… and then later the model won't work.

> Ok. The difficulty will be... The process margin is tight, so there is a lot of surprise. So, for example, just to make it work, we in fact...There are multiple interactions between different process levels which cause yield to be low.

All the above illustrations of the work environment in Study One's organization are consistent with what is reported in the literature about the semi-conductor industry. However, the literature does not mention the setting quasi-impossible goals as a prevalent industry practice. Study One's organization was chosen for the very reason that its managers believe that impossible goals are the right ones to set, and its employees are socialized over the years to believe that "everything is possible" (Engineer 2611102)

The setting of what seem to be impossible goals is an every day occurrence in Study One's organization. Indeed, Study One's organization was specifically chosen because it made it a usual practice to set what seemed to be impossible goals. The following excerpts from the interviews illustrate this aspect of the organization. Engineer 4688107 (excerpt below) had had seven years of work experience in another semi-conductor environment. He recounted that unlike his previous experience, Study One's organization gave him multiple experiences of meeting goals that he had

thought impossible to meet. A same theme of quasi-impossible goals is echoed by Engineers 46153 and 11102 below.

Engineer 88109

"I was given a naked machine. Naked means it didn't have any chambers, didn't have any wiring. It was just a bare and empty structure. I had one month hook up the chambers, make it functional and release it for production. Initially I thought that there was no way I can make a machine. I'm not a machine manufacturer, I'm an engineer. At first, I thought it was almost impossible for me to do it.

But, I think that's what I learnt through the process that you have to learn that each goal, you have to divide into sub goals- daily goals, hourly goals and then you think if it's possible or not. When I try to put it on paper, I realize that when I divide that into sub goals like daily goals and hourly goals, it can actually be achieved and I started working on it. Although it was very tough when we were working for ten or twelve hours inside without coming out for breaks and without coming out for lunch, when you keep an objective in mind, you can do it. So everything can be done, basically. So, we did achieve it and released it on the dot. Then after that, we had a lot of these kinds of projects that looked impossible but we achieved them. And we realized that goals that we thought too high can be achieved in long run. I'll never say that any goal cannot be achieved."

Engineer 46153

"Probably 7 to 8 months. So that's why the system has significantly changed… I think that a lot of things were pushed through, and as a result I think, it caused a lot of stress in the sense that we were not even sure of the goal was realistic."

Engineer 11102

"It isn't entirely impossible, I mean… like I said, everything is possible. But it is quite a difficult challenge. If you ask me whether I have 90% confidence that I can hit this target level, I will say maybe 50%. I don't know… but I will still try my best to reach it."

In such a context as that of Study One's organization, where goals are extremely challenging and the work environment is complex and dynamic, situational constraints abound. The excerpts below are drawn from numerous interviews with different engineers and serve to provide a vivid illustration of the situational constraints faced

by employees in Study One's organization as they go about achieving their set goals. Situational constraints can range from repeated failures (Engineers 48011, 38307, 68019, 58012, 58111, 88243 and 89062) to a sense of isolation (Engineer 38038) to interpersonal conflict (Engineers 29017, 78089 and 10258) and having the management withdraw their support for the project (Engineer 68152).

Engineer 48011

Ok, I remember there is one, alright … I think this project, we actually did it 3 to 4 years ago. It was the first time that we engaged in such a project. Somehow, maybe the design or the drawing didn't work out as we expected, that's why we faced many problems when we are trying to develop the project according to the specs, but many a time when we kept on trying and trying, we still couldn't get the results. So, there is a point of time that we will think how to compromise the effort to meet the deadline.

Engineer 38307

Because at that time we are thinking of using certain models… We start to use certain model, to detect the false alarm. But somehow after doing a lot of experiment, you find out that the model is not a good one. You cannot really detect the false alarm so successfully. And then we had to consider other method, look at other method, to make this project continue.

Engineer 68019

October. And it was, and I was here for 4 months already. And then, we were doing this project which is in the manufacturing. This project considered have a high risk. So if you do something wrong, it will just cost too much in that sense. So I would practically wouldn't with the risk involved in this project. But that time, and at the same time, I was still learning and I was still new, so it is like very stressful for me. I tried to do my best. The thing hit me then. Something was mis-processed. So, that discouraged me of course. I mean because of what happened in the end. But then, people around me tried to tell me that it was not totally my fault… "it's not even your fault". It's just that I'm handling the project, so feel responsible for it and then was quite down at the point, to the point that I don't want to touch the project for a while. But it end up now I am still carrying on with the project. It is an ongoing project.

Engineer 58012

We kept on trying and trying, we still couldn't get the results.

Engineer 58111

To... this is a full package. We need to deploy the whole thing, but along the way there is a few process change need to be made. And some of them are other actions, so in the beginning before we understand all this, we just save in the log that material are yielding quite badly and we don't understand why. After we find out first root cause, and say this one could cause the yield to be low. So we thought we can explain why it is low. Then after a while, the results show that the problem is back again.

Engineer 88243

Because during the fine-tuning, I talk to the vendors. The vendors tell me to change these parameters. So then we tried, we monitor for 1 week still doesn't work. So maybe change to another parameters. And I tried again still doesn't work

Engineer 89062

Fix the exposure dose. But the critical dimension suddenly changed. But we need to find out what's the reason behind, why is the suddenly change. So we check a lot of… all the parameters. We check the scanner, the lens, the laser, the resist itself. We also have another coater developer, because it's a in-line flow. All this spinner system. Then the temperature, the chamber, the pressure all this kind of thing, this all we check. But we cannot find anything…

Engineer 38038

You are, it's like in a situation that you, you are in a, in a, tight spot, a tight situation, and nobody understand you, you will feel like giving up, you know. You will feel like there's no, nothing worth to continue anymore, because there's nobody actually looking at the issue that you are voicing out, looking at things that you hope to achieve, nobody is helping you. You are on your own man. You are on this island of your own. You are deserted from your own, you are being separated from your own team and in somebody's team and nobody is looking at you.

Engineer 29017

They were civilised when they talk to you face to face or just a mail between you and I, but when it gets CC-ed to the bosses, they get quite

finger-pointing, and quite nasty, like saying how come this problem so long and you still can't solve it, along this line…yeah…quite nasty.

Engineer 78089

I think firstly, whether deserve or not deserving, I would say I was commenting more in the tone plus the words used. It's not constructive in the sense: "You should do this thing this way because of this reason and that reason." What I'm trying to comment at is more of… raising your voice and saying things like: "Why can't you do this correctly? Why must I always tell you to do this?"

Engineer 10258

First thing he should verify with me first, he did not, he go straight and scolded me. So I think I am very upset with the fact that he did not trust me first. Ya so, I think that is the fact…what I am trying to…if you know me enough, you will know something is wrong, you should have clarified with me first. You didn't, you jumped…oh because I told him you just jump to conclusions, because I was very direct, I don't care whether he's my manager or not, maybe because I feel that he should have more trust in me in that sense. I mean other things that we quarrel…well we not really quarrel, we argue about how things should be done or…that is more of work processes and all that, I can take it you see, but this one is, I felt it was…personally I was hurt by this incident.

Engineer 68152

When the bad feedback came, and when I felt that the sponsors were abandoning the project, in the sense that because of the bad feedback, they started distancing themselves away from the project.

The purpose of including the above excerpts in this chapter is to give the reader a clear appreciation of the context which Study One's organization provided for research. Given the complexity and dynamism of the work environment in Study One's organization as well as the quasi-impossible goals given to employees to meet, Study One's organization was an ideal context within which to explore the research question: "How do people self-regulate goal commitment?" This is because, as mentioned earlier in this chapter, goal commitment self-regulation is most necessary in situations where goal commitment levels are depressed by situational constraints, and

the individual needs to regulate his own goal commitment to levels high enough to be able to continue to exert effort towards goal achievement. In such an organization as Study One's, where numerous situational constraints exert strong downward pressures on individual goal commitment levels, researchers would be able to find a rich source of data on how people self-regulate their goal commitment.

Sampling and Coding Procedures

Sampling and Analysis in an Iterative Loop

Grounded theory methods require the constant to and fro between sampling and analysis. "This is because concepts and their relationships also accumulate through the interplay of data collection [i.e., interviews] and analysis" (Strauss & Corbin, 1990: 178). Simply put, as the analysis and interviews progress, one must be prepared to use the findings from earlier interviews to make informed decisions on whom else to interview, and about what. "Rigidity in sampling hinders theory generation, which after all is the main goal of grounded theory" (Strauss & Corbin, 1990:178). In essence, unlike sampling strategies in the positivist frame (which are decided upon a priori and implemented in strict accordance to what was planned), grounded theory sampling strategies evolve in response to what emerges from both data analysis and literature consultation. Figure 4.1 below illustrates how this iterative loop was effectuated in Study One.

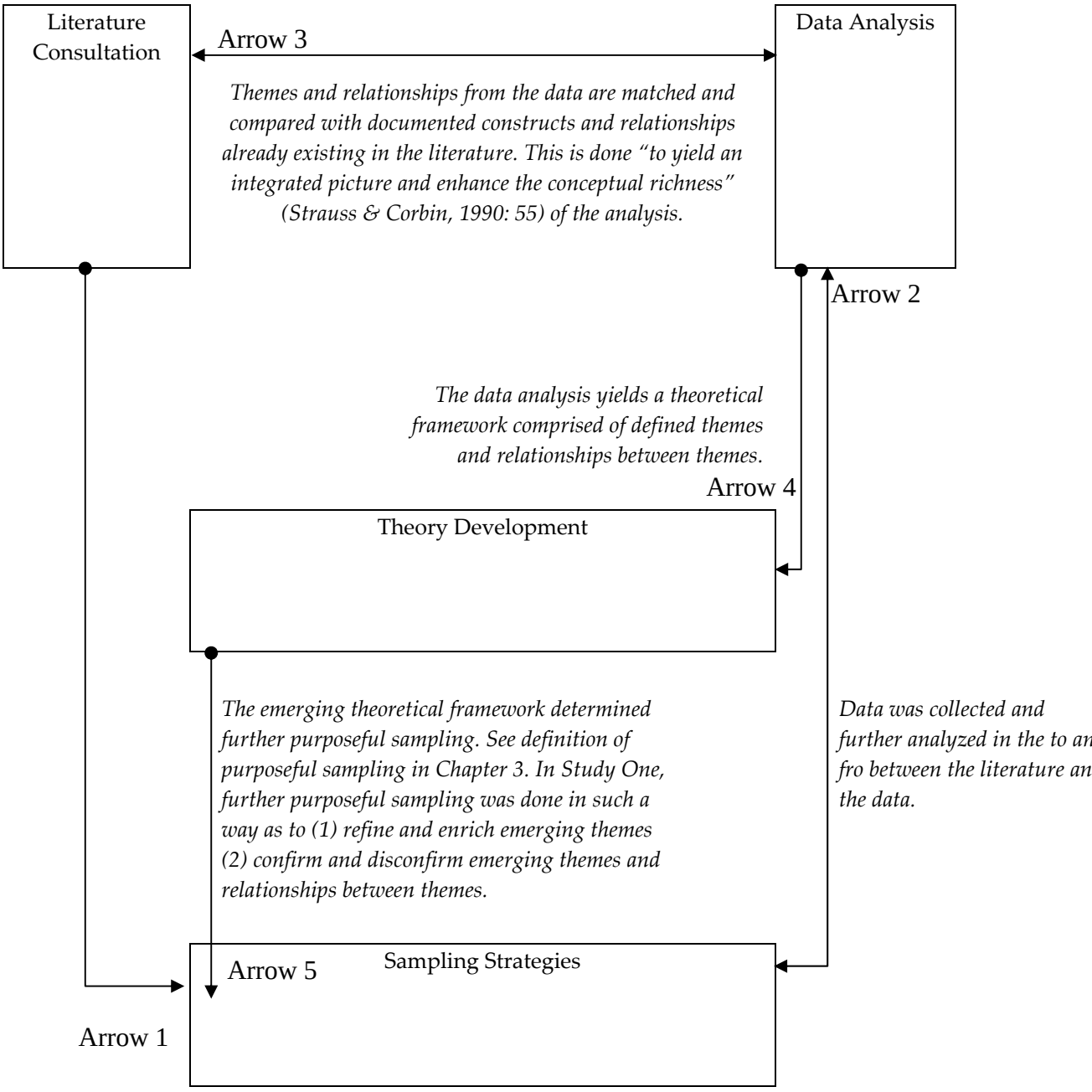


Figure 4.1. Sampling, Coding and Literature Consultation in Study One

Figure 4.1 will now be examined in detail. Arrow One depicts the influence of extant literature on sampling strategies. In Study One, this manifests as theoretical sampling, i.e., a type of purposeful sampling wherein "cases [whether persons or incidents] are selected because they are particularly suitable for illuminating and

extending relationships and logic among constructs" (Eisenhardt & Graebner, 2007: 27) relevant to the research question.

Arrow Two is a double-headed arrow which depicts the influence of sampling strategies on analytical strategies, and vice versa. In brief, Corbin and Strauss (2008) prescribes three stages of grounded theory sampling. These three stages of sampling are inextricably tied to three corresponding stages of data analysis. The three stages of sampling are (1) open sampling, (2) relational sampling and (3) discriminate sampling. Each one corresponds to a counterpart in grounded theory analytical methods. Open sampling is done in conjunction with open coding. Relational sampling is done in conjunction with axial coding. Discriminate sampling is done in conjunction with selective coding. See Figure 4.2 below for an illustration of how these sampling and coding stages are linked. Each sampling-coding stage will also be clarified in further detail below. It suffices for now that the reader understand the iterative and interdependent nature of the sampling and data analytic stages.

Arrow Three is another double-headed arrow which depicts the iterative to and fro between literature and data analysis. Themes and relationships from the data are matched and compared with documented constructs and relationships already existing in the literature. This is done "to yield an integrated picture and enhance the conceptual richness" (Strauss & Corbin, 1990: 55) of the analysis.

Arrow Four is a uni-directional arrow that depicts how the data analysis results in a theoretical model being developed. Finally, as the theoretical model emerges from the data analysis, a need arises to fill in gaps in the nascent model, to confirm and validate the model. As such, the nascent model dictates specific requirements for

sampling. One is required to sample very specifically for information that is still missing and/or to sample very specifically for the purposes of confirming/disconfirming and validating the model. The new data that is collected is subjected to data analysis as depicted again by Arrow 2.

In view of the constant to and fro between sampling and analysis, and in order to clearly depict the iterative method steps used, it is necessary to describe both sampling and analytical techniques together. This manner of describing the research method departs from the conventions of positivist research, wherein each step (1) sampling, (2) data analysis and (3) findings are reported in clearly separate sections. In this chapter, the following will be iteratively presented: (1) sampling steps, data analysis steps and (3) only those particular emergent findings which guided further choices in person and incident sampling as the research progressed. Other findings will be presented in the next chapter.

Person Sampling VS Incident Sampling

Grounded theory methods make a difference between "person sampling" and "incident sampling" (Strauss & Corbin, 1990: 177). Unlike quantitative methods wherein the person or team is the unit of analysis and sampling usually means sampling for people, grounded theory methods "sample incidents and not persons per se" (Strauss & Corbin, 1990: 177). The unit of analysis for the present Study One was the goal attainment narrative drawn from within the personal life experience of each case, i.e., each individual respondent's own experienced goal attainment journeys. The aim at incident sampling was to ensure literal replication (Yin, 1994), wherein each unit of analysis results in a similar outcome i.e., successful goal attainment.

Grounded theory methods also advocate the use of theoretical sampling i.e., a type of purposeful sampling wherein "cases [whether persons or incidents] are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs" (Eisenhardt & Graebner, 2007: 27) relevant to the research question. In Study One, theoretical sampling requirements determined both person-sampling and incident-sampling strategies. The paragraphs below will detail how theoretical sampling requirements determined both person-sampling and incident-sampling strategies.

Choice of Persons (or Person-Sampling Strategy)

The SWFF has two main populations of employees, executives and non-executives. As a general rule, non-executive employees depend on executive employees to solve problems and bring about innovation. Non-executive employees' job scopes are more restrained and predictable. Whilst they are held accountable for the smooth routine operation of the equipment they are deployed onto, they are not accountable for trouble shooting problems or solving production issues. These tasks fall to the executives. The population of non-executives in the SWFF failed to satisfy one of the three sample characteristics required by our research questions – that of extreme situational dynamism. Hence, for reasons of theoretical sampling, only the population of engineering executives in the SWFF was sampled, because this population offered the most opportunities for elucidating the relationships being examined.

Choice of Incident (or Incident Sampling Strategy)

Since the study also samples for incidents from within an individual's personal life experience, the respondent's help was needed to choose the stories to tell interviewers. To ensure that the individual chose the "right stories" from his life experience, clear boundary conditions were framed to guide their choices. Interviewees were asked to recall the most painful goal attainment experience they had ever had. It needed to be an experience wherein they considered goal abandonment, but did not abandon the goal.

3 Stages of Grounded Theory Sampling Strategies

In addition to person and incident sampling, Corbin and Strauss (2008) also prescribes three stages of grounded theory sampling. These three stages of sampling are inextricably tied to three corresponding stages of coding. The three stages of sampling are (1) open sampling, (2) relational sampling and (3) discriminate sampling. Each one corresponds to a counterpart in grounded theory coding methods. Open sampling is done to support open coding. Relational sampling is done to support axial coding. Discriminate sampling is done to support selective coding. See Figure 4.2 for an illustration of how these sampling and coding stages are linked. The paragraphs that follow with clarify each stage in more detail.

According to grounded theory methods (Strauss & Corbin, 1990) open sampling and open coding are done at the very start of a grounded theory study when researchers do not have any a priori notions of how the data might answer the research questions. See Stages 1a and 1b in Figure 4.3 for open sampling and open coding. Once key concepts and categories begin to emerge, one embarks on the second stage of data

analysis. This stage comprises relational sampling and axial coding. At this second stage, one strives to choose and/or analyze people and incidents to study which will further clarify the key concepts/categories and relationships that have already emerged. See Stages 2a and 2b in Figure 4.3 for relational sampling and axial coding.

Once no new information arises to give more definition to the key themes and relationships, one then moves to discriminate sampling and selective coding (i.e., once saturation of key concepts/categories and relationships has been reached). At this stage, one strives to choose and/or analyze persons and incidents that are most suited to confirm the validity of the key concepts/categories and relationships. See Stages 3a and 3b of Figure 4.3 for discriminate sampling and selective coding. See also Stage 4 of Figure 4.4 for selective coding only. The sections below will further detail the steps and requirements in each of the above three sampling-coding stages.

Open sampling and open coding

In open sampling, one chooses cases with an open mind in order to get a first appreciation of the domain (see Stage 1a of Figure 4.3). At this stage, coding can be "quite indiscriminate, in the sense that one could choose every third person who came through the door or could proceed systematically down a list of names" (Strauss & Corbin, 1990: 181). As such, person-sampling was begun by picking engineering executives randomly from all departments in turn.

Since this research was also sampling for incidents from within an individual's personal life experience, the interviewee's help was required to choose the stories to

tell the interviewer. Theoretical incident sampling was done. Stories about goal commitment, the theoretical construct of interest in Study One, were specifically gathered. To ensure that the individual chose the "right stories" from his life experience, clear boundary conditions to guide their choices were framed. Interviewees were asked to recall and recount most painful goal attainment experience they had ever had. It needed to be an experience wherein they considered goal abandonment, but did not abandon the goal.

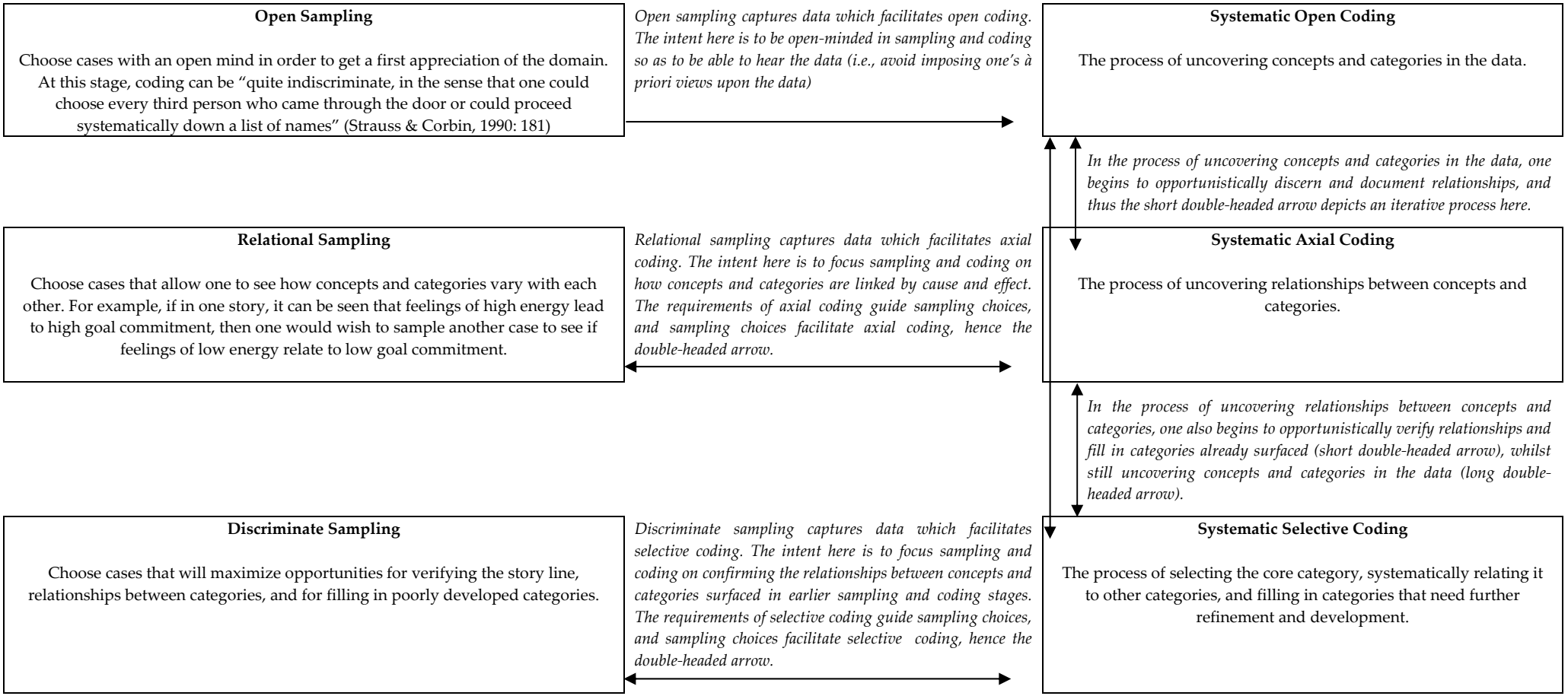


Figure 4.2. Three Stages of Sampling Linked to Three Stages of Coding

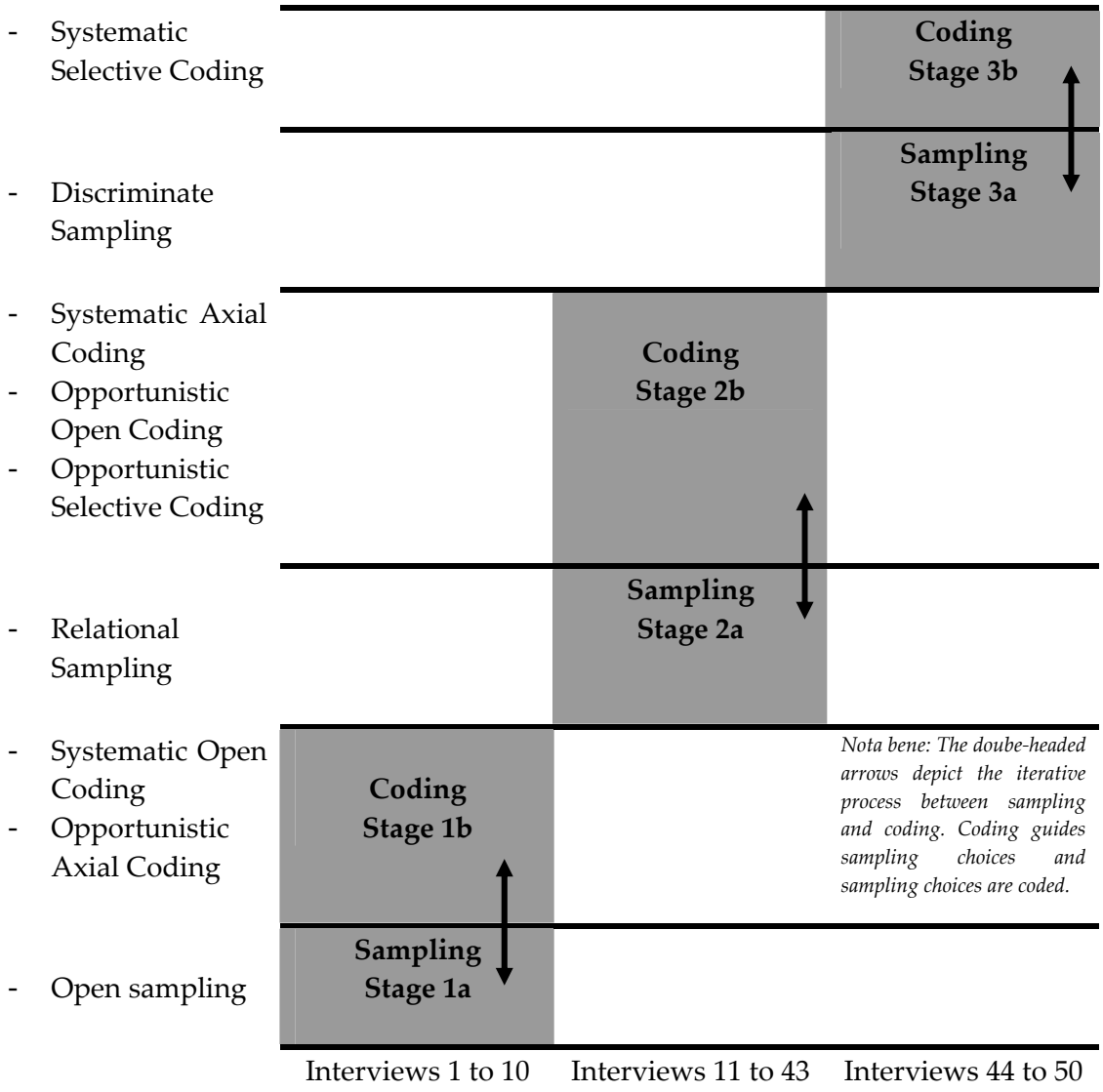


Figure 4.3. Slow Progression Through All The Sampling-Coding Stages in the First Pass of Coding

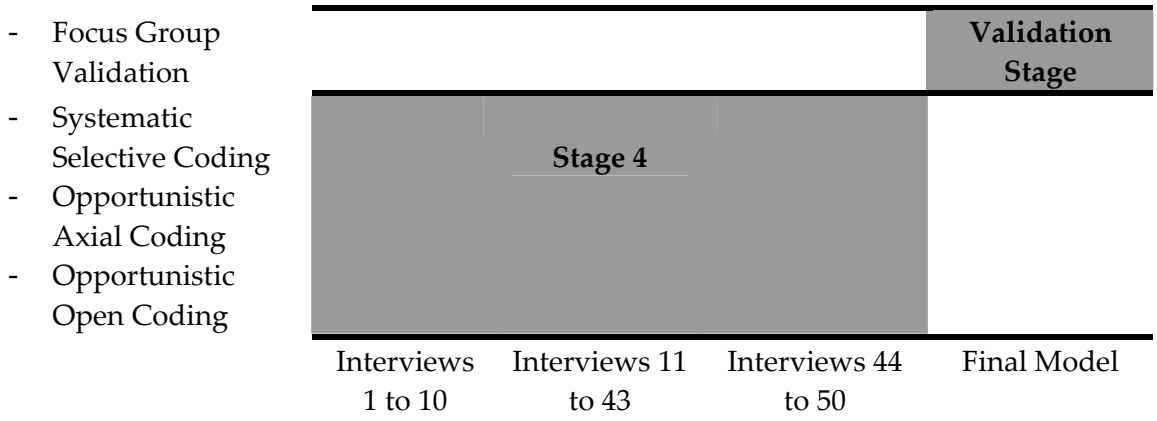


Figure 4.4 Second Pass of Coding and Model Validation

Open sampling corresponds to the open coding stage. Open coding is defined as the process of uncovering concepts and categories in the data. In the open coding stage, the text was coded word for word (see Stage 1b of Figure 4.3). Any concept construed as even vaguely connected to the research question was identified and labeled. Each pass of coding alternated with literature reading such that there was a to and fro between extant theory and grounded theory. This to and fro between extant theory and the nascent grounded theory is depicted in Figure 4.1 by the double-headed Arrow 3. This was done in order "to yield an integrated picture and enhance the conceptual richness of theory" (Strauss & Corbin, 1990: 55). After the first 10 interviews were conducted and transcribed, a key theme labeled "emotional energy availability" had emerged. With the emergence of this key theme, it was time to move to the next stage of purposeful sampling – i.e., relational sampling. At present, it is appropriate to gain a clearer understanding of (1) what "emotional energy availability" (the key theme) is, as well as (2) the contours of the emergent relationships that appeared to relate it to goal commitment. The paragraphs below will (1) define emotional energy availability, (2) illustrate it with excerpts from the interviews, (3) clarify the manner in which emotional energy availability relates to goal commitment, and (4) illustrate this relationship with excerpts from the interviews.

"Emotional energy availability" is defined as (1) feelings for work that (2) provide information about the quantity of personal energy the self holds (3) available for work goal attainment. The key referent for "emotional energy availability" is work goals. When people feel enthusiastic, eager and excited about their work, they perceive high levels of emotional energy availability for work. When people feel reluctant, lethargic and unwilling vis-à-vis their work goals, they perceive low levels of emotional energy availability for work. Each of the three parts in the above definition

will now be examined in turn. The first part of the definition of emotional energy availability refers to "feelings for work". Feelings for work are high energy feelings such as interest, excitement and happiness which people associated with the work they had to do. The following excerpts from the interviews illustrate this point.

> **Engineer 49268**
>
> "when I am happy, my walking pace is much faster. I lift my head much higher. ..I will have the initiative to do things"

> **Engineer 59513**
>
> "It affects the mood with which you go to work each day. It is important that you have a good boss. That way, you look forward to your work"

> **Engineer 58307**
>
> "It's a very good experience. It's a very good feeling that a few people work together and help each other. And when you really see the thing work, all of us shout out "yay, it works!" Then we just continue to work, to work more, get it done"

> **Engineer 58547**
>
> "When there are new things [at work], I will be very interested to do that [work]"

> **Engineer 59288.**
>
> "every time we solve the problem… it's a big high… then everybody is very happy. We feel good about it. … The people are really focused on work"

The second part of the definition of emotional energy availability refers to information about the quantity of personal energy. The high activation positively valenced feelings of happiness, joy, interest about their work indicated to the individuals that they possessed high levels of energy for work. The feelings of sadness and demoralization indicated to the individuals that they possessed low levels of energy for work. Engineer 10171 made a mistake at work which made him feel

"demoralized". He described this as a state in which he emotional "less energetic", with his energy turned inwards to self-recrimination "thinking why I did not [foresee] the problem". A few days after however, his energy recovers because "joyful events happening around you helps to level back the energy". Engineer 10202 received negative feedback about what he had done. He described his reactions as "I feel… feel bad, in the sense that, 'Did I say the wrong thing? Did I do the wrong thing? Is my way of saying things wrong? Does he see that way?'". He further describes that his energy levels stay down for the better part of the day, before he recovers. He goes on to elaborate that in anticipation of the next work interaction with the same person, he experiences a dip in energy levels. "Before I meet this particular person, [my energy levels are] at a six. If it goes well, I go to eight or nine…. Maybe it is a sign of relief… just a little bit happier that it has gone well". Engineer 10208 said "I still had to follow up on the issues and make sure there is closure. But I did it with dread in my mind. So my energy level was low." Engineer 10252 said "So when you're able to find the root cause and close the job, normally you will feel very happy. So if there's a lot of job in the queue then first thing in your mind is to clear those jobs. Then let's say you're able to close many of the jobs then definitely the energy level is higher because there's a result being shown, that means I'm able to complete many job in one day". Engineer 10172 shared his joy at being promoted thus, "Ok. This was when I was promoted. I got very energized. That's when I started to have a lot of drive, a lot of energy to start working."

The third part of the definition of emotional energy availability refers to energy as a resource held available for work goal attainment. In the narratives I captured, individuals made reference to energy as a pertinent resource to invest in work goals.

Engineer 18107;

"… how much energy you have to achieve those [work] goals"

Engineer 10203;

"…so all the energy is spent thinking about this [distracting] issue rather than the [work] problem we are looking at"

Engineer 48432;

"After you [complete the work], they say actually [there is] no need to do. So you … waste … your energy doing it"

Engineer 48437;

"people will appreciate the effort that you put in, the amount of energy, the amount of hard work"

Engineer 48437;

"if [the wife] is not comfortable with it, then the amount of … energy… that you will like to spend on work, is not going to be full commitment, because you are afraid that she cannot cope"

Engineer 68107

"that energy is probably focused on making improvements [at work]"

Together the narratives pull together a picture of a theme labeled "emotional energy availability" . What emerged from the interviews was that emotional energy availability was positively associated with goal commitment. High emotional energy availability (i.e., feelings of joy and happiness) seemed to go together with very high goal commitment. Low emotional energy availability (i.e., feelings of lethargy and dejectedness) seemed to go together with very low goal commitment. In the next few paragraphs, let me use five accounts from the interviews to illustrate how emotional energy availability relates to goal commitment.

Engineer 28011 had been asked to start and complete a project. Upon completion of the project and with a good product already developed, she was told that there would be no product launch after all. She recounted, "Personally I feel very sad that this project cannot be launched. So to this extent, whenever we come to another system, I will just bring it up again and say 'are you sure its not going be just like that project that is not going to be launched again?'" Implicit in Engineer 28011 's skeptical question is the notion that any such subsequent similar project may not be worth committing any effort to. This account shows that her feelings of sadness were associated with her lack of goal commitment to similar subsequent projects.

Engineer 28018 was in the midst of a project when a very bad error with serious consequences occurred. This event demoralized him to the extent where he said "I don't want to touch the project for a while". This account shows that his feelings of being "down" are associated with his reflex of abandoning his goal/project.

Engineer 38031 was responsible for part of a project which was hastily implemented and thus the end product comprised major faults. He said "Uh…no, because they [the users] tell you very frankly.. they don't hide from you, because, they are like your friend, they tell you the problems, and sad to see.. sad to say you see the problems but this are problems that the management will never ever see because they don't use [the product].. and they don't see the pain [of those who do use it]". The project was still ongoing (in its last stages of refinement) and Engineer 38031 was still despondent at the time of the interview. He spoke slowly and his body language at the interviews communicated an overall dejectedness. He was keen to abandon the goal/project but the organization would not allow it and so he was seriously considering quitting his job altogether.

Engineer 58308's shared that at the toughest moments of his project, he needed a period of recovery and rest before he could renew his goal commitment to the project he was given to deliver. He said "Sometimes you feel very bad, because you can't get the result you want. But whenever I go home, probably I'm busy with the kids, busy with other things, then I will temporary shut off, not thinking of that. After a good sleep, then the next day come out, probably I will feel better. Then I will start again, to explore a new thing, see whether I can get a better way to go or not. Probably I will just take a short break, take a rest then, and then continue again." In this account, one can see how feeling better is associated with the will to continue working on the goal/project.

Engineer 69058 worked with a group of good friends on a project which involved finding the root cause for batch after batch of defective wafers. The project was by no means easy because it involved air molecular contamination, a problem that

is rarely if ever encountered. Despite failure after failure, Engineer 69058 was so committed to his goal that even when the management had considered the issue closed after Engineer 69058 and his team had fixed a few things, Engineer 69058 and his team went back to ask for time and resources to work on finding the true root cause of the defective wafers. He described his experience thus, " the pure fun of doing something that we have never had a chance to do before. It's just something you never thought you can do, and now, just do it. More of the length of the unusual things we tried and.. Well, it's just a group of friends doing… having fun". This account shows how being happy about work (because of hanging out with people one enjoy, and doing something one enjoys) relates to very high goal commitment despite repeated setbacks and failures.

The paragraphs above have (1) defined emotional energy availability, (2) illustrated it with excerpts from the interviews, (3) clarified the manner in which emotional energy availability relates to goal commitment, and (4) illustrate this relationship with excerpts from the interviews. The imprecise contours of the notion of emotional energy availability as well as its relationship to goal commitment had begun to appear by the 10th interview. As such, the researcher proceeded to the next sampling-coding stage.

Relational sampling and axial coding

Relational sampling (see Stage 2a of Figure 4.3) is sampling for the purposes of further defining and validating the relationships between key constructs that have become apparent as interviews and coding progress. In relational sampling, one

chooses interviewees or incidents that are most apt to give information that enriches the meanings of the categories and relationships that have begun to surface. In the case of the present study, the aim was to select people and incidents most apt to give "density" (Strauss & Corbin, 1990) to (1) the notion of emotional energy availability, (2) its relationships with various situational factors, (3) its relationship with various goal commitment self-regulation strategies and (4) its relationship with goal commitment. Therefore, at the relational sampling stage, my aim was to sample persons and incidents which would further define the concepts/categories already surfaced, and further validate the relationships between (1) various situational factors with emotional energy availability, (2) various goal commitment self-regulation strategies with emotional energy availability, and (3) between emotional energy availability with goal commitment.

Since every engineering executive in the organization was an equally able informant to help me define and validate relationships between the categories surfaced in the earlier 10 interviews, the initial person-sampling strategy of drawing interviewees randomly from each department in turn, was maintained. However, some changes were made to the incident sampling strategies. For incident-level relational sampling, a context relevant question to deepen the focus on emotional energy availability, was added. For contextual relevance the question was asked in several different ways but it always meant the following, "How did that make you feel about what you were doing?" This question allowed me to sample for incident data that would give greater density to the category emotional energy availability, how situational factors and goal commitment self-regulation strategies affected it, and how it affected goal commitment.

Relational sampling corresponds to axial coding (see Stage 2b of Figure 4.3). Axial coding consists of seeing patterns of relationships between theoretical constructs. Specifically, the theoretical constructs surfaced were examined and coded in relation to how they influenced the emotional energy availability of the interviewee, and the manner in which emotional energy availability related to goal commitment was also examined and coded. Even at the stage of axial coding, open coding is still performed on an opportunistic basis i.e., when a new concept/category is found, it is still labeled. In this stage, 33 interviews were coded by the first author and checked by two other trained coders independently and successively. Instances where the coding did not make sense were highlighted, and discussions were held to resolve the differences in opinion before the final agreed coding was entered into NVivo 7. The last four of these 33 interviews generated no more new codes indicating to the point of saturation had been reached. Since the point of saturation had been reached, the next step was to validate the key theoretical relationships and constructs that had emerged.

Discriminate sampling and selective coding

The researcher therefore proceeded to the next stage of theoretical sampling – discriminate sampling (see Stage 3a of Figure 4.3). Discriminate sampling seeks to "maximize opportunities to verify the story line, relationships between categories, and for filling in poorly developed categories" (Strauss & Corbin, 1990: 187). The aim of discriminate sampling is to choose interviewees/incidents who can best confirm the theoretical framework that has already surfaced. Considering that no one department's engineering executives were more or less able to verify the main story line and the key

relationships between categories, the person-sampling strategy of drawing interviewees randomly from each department in turn, was maintained.

As to incident sampling however, in the remaining 7 validation interviews involving discriminate sampling. In these seven interviews, an additional question was asked of interviewees in order to confirm the theoretical framework that had emerged earlier from the previous 43 interviews. The question "What did this mean for your energy levels?" was added. This was done to confirm the validity of the dominant theme – emotional energy availability. As prescribed by Strauss & Corbin (1990), selective coding was done on these seven validation interviews (see Stage 3b of Figure 4.3). Selective coding is defined as the "process of selecting the core [theme], systematically relating it to other [themes], validating those relationships and filling in [themes] that need refinement and development" (Strauss & Corbin, 1990: 116).

In the next step, even though grounded theory methods do not explicitly require that all interviews (from Interview 1 through to Interview 50) be selectively coded, it was decided to apply selective coding retrospectively to all 43 interviews captured before the seven validation interviews. See Stage 4 of Figure 4.4. This allowed me to achieve greater analytical rigour for three reasons.

- Firstly, it was a safeguard against researcher bias. Questions asked at the seven validation interviews risked biasing the responses of the interviewees towards the emerged model. Hence, if the researcher was able to retrospectively find the emerged model in the 43 interviews captured before the model was specified, it meant that the model was really there in nature.

- Secondly, coding is a process of seeing concepts/categories and relationships in data that is extremely rich. As interviewing and coding progresses, concepts/categories and relationships gain more density and definition in later interviews because the researcher begins to see more and more concepts/categories and relationships as he/she immerses himself/herself in more and more richness. This means that even if the earlier interviews did also contain the same richness of information, researchers (having been not sufficiently immersed in the data as yet) may have missed some relevant information and missed coding it. As such, it made sense to go back through the earlier 43 interviews to specifically apply selective coding using already mature concepts/categories.

- Lastly, coding also becomes more focused as interviews progress and the emerged model becomes better defined. Information in earlier interviews that may have been missed out due to a lack of focus would not be missed out in a second pass of selective coding focused on sculpting the emerged model into sharper relief.

Selective Coding of 43 Prior Interviews for Greater Analytical Rigour

At this point, the researcher did no more sampling. The researcher recoded 43 interviews using selective coding. Selective coding was conducted using (1) clean transcripts, (2) mature concepts/categories and (3) the key relationships from the emerged model. Recall that selective coding is defined as the "process of selecting the core category, systematically relating it to other categories, validating those

relationships and filling in categories that need refinement and development" (Strauss & Corbin, 1990: 116). In this second pass of coding, the researcher sought to systematically relate the core category of emotional energy availability to all the other categories in the data. For even greater coding rigor, the researcher worked with two teams of two trained coders. Each individual in each pair of coders independently coded 25 of the 50 interviews. I myself coded all the 50 interviews, and met with each pair of trained coders regularly to hold a three-person coding discussion of two interviews at a time. The final coding for each interview was a consensus reached in the tri-partite coding discussion, and this was keyed into NVivo 7. This coding process mirrors that of Kreiner et al. (2006) and observes the logic that it "makes traditional interrater reliability measures impractical, as new codes [are allowed to] emerge throughout the process and are not determined a priori… [our] process ensured that multiple perspectives were offered for each transcript, helping alleviate researcher bias in the analysis" (Kreiner et al., 2006:1036). Opportunistic open and axial coding was still done at this stage to ensure that concepts/categories relevant to the emerged model would be missed out.

Model Validation

At the end of the second pass of coding, I conducted one focus group validation session with the CEO and his senior management in an even stronger form of member validation prescribed by (Seale, 1999), comprising the attempt to show that the researcher's account can allow him/her to "pass as a member" of the organization being studied (Seale, 1999: 61). See Stage 5 in Figure 4.4. This means that the emerged theoretical framework must be immediately recognizable to the members of the

organization as evocative of the experience and knowledge of their organization. The CEO and his senior management team were individuals who were familiar with the organization and its people. I presented the emerged theoretical framework to them to confirm that the categories and relationships were meaningful to them given their contextual grasp of the organization and its daily work processes.

Interview Procedure and Strategies

Interview Procedures

The interviews were conducted with the approval of the organisation. The approval letter has been lodged with the University of South Australia. The interviewees were selected from each department by an executive in the HR Department. The HR Department then invited the interviewees to an interview with this dissertation's author. Interviews were scheduled by the HR Department, and conducted in a small room with no windows. No one else in the entourage of the interviewee was notified of the interviewee's participation in the interview with this dissertation's author. The emailed invitation sent to the interviewees contained specific instructions to interviewees to refrain from informing any others of their participation in the study.

The first 15 minutes of the interview was devoted to explaining the study, and gaining the permission of the interviewees to record the interviews. Interviewees were informed of the following:

- The study was conducted as part of the author's PhD dissertation requirements, and also with the intent of gathering feedback to help the interviewee's organisation to improve conditions in the workplace.

- The interview would be recorded with their permission.

- The recorder could be turned off at any point of the interview upon their request, and notes taken.

- The recorder has a red light that indicates that it is recording and it is placed in a highly visible position.

- The recorded interview will be transcribed by research assistants and only the interviewer and her research supervisor will have access to the recordings and the transcriptions.

- The organisation employing the interviewees will only be given aggregated results at the end of the study.

There was no structured interview questionnaire. As will be described herein below, the interview strategies prescribed by Rubin and Rubin (2005) propose the use of a series of main, follow-up and probing questions. By definition, follow-up and probing questions are derived in the midst of an interview. As to main questions, there was only a single question from interviews one to 10: "Describe in detail a goal attainment experience that was so challenging that you almost gave up; but you did not, and you eventually attained the goal."

From interviews 11 and 43, an additional main question was asked, "How did that make you feel about what you were doing?" From interviews 44 to 50, yet another main question was added "What did this mean for your energy levels?" These questions are detailed in Appendix 2.

Interview Strategies

This section details the interviewing strategies used in collecting the interview data. Interviews were conducted in such a way as to elicit the key required features of a narrative text enumerated in Pentland (1999) and indicative of ethnographic narrative accounts (Berg, 2007), (1) sequence in time e.g., sequence of energy depleting events, (2) focal actor e.g., the interviewee, (3) the narrative voice e.g., the interviewee's voice, (4) the frame of reference e.g. the organization within which the events unfurl and (5) other indicators of content and context e.g., time of day, number of people in the room, mood of the place etc… In short, the aim was to build a narrative that would allow one to visualize in the head a thought video of the events as they unfolded through the words of the interviewee.

Interviewing techniques suggested by Rubin and Rubin (2005) were employed. This dissertation's author prepared "main" questions that formed "the scaffolding of the interview, the skeleton of it. Main questions encourage the conversational partner to talk about the research puzzles that motivate the study" (Rubin & Rubin, 2005: 124). In their research, Kreiner et al. (2006) terms these questions "required" questions (Kreiner et al., 2006: 1036). This structured aspect of the interviews allowed me to firstly, focus the interviews on my research question by setting broad boundaries to the

conversations. Secondly, it allowed me compare the data meaningfully across interviews. In line with progressively more focused incident sampling requirements described one more required question was added after the tenth interview, and another required question after the 44th interview.

In all interviews, as recommended by Rubin and Rubin (2005), "follow-up" and "probing" questions were used. "Follow-up questions are specific to the comments that conversational partners have made. In working out follow-up questions, the researcher listens hard to hear the meaning of what the conversational partner has said and then asks additional questions to explore particular themes, concepts, and ideas introduced by the conversational partner. Follow-up questions are crucial for obtaining depth and detail, and can help in obtaining more nuanced answers" (Rubin & Rubin, 2005: 136). Probing questions "ask the interviewee to keep talking on the matter at hand, to complete an idea, fill in a missing piece, or request clarification of what was said. Other probes ask for examples or evidence of particular points" (Rubin & Rubin, 2005: 136). These latter two types of interview questions allowed the researcher to drill deeper into the details required for building a "thick description". They comprise the unstructured aspect of the interviews.

In this present study, the quality of the data collected depended on the interviewees' willingness to share that required the interviewer's ability to stay focused on probing for relevant data as well as be sensitive to the emotional state of the interviewee. For the interviewer, it required maintaining the challenging balance between allowing oneself to flow empathetically with the emotions of the interviewee, whilst still retaining the presence of mind required to probe for data, all whilst managing speech patterns, body language and respondent comfort. Strategies

suggested by (Rubin & Rubin, 2005) were referred to and applied the to minimize the discomfort to interviewees, e.g., maintaining an attentive, non-threatening body posture and a sympathetic facial expression. There had to be effective control simultaneously over different dimensions of the interview: questions, probes, body language and speech patterns, whilst staying alert for conversational openings to probe in places where pain and stress lay hidden in the recesses of the individuals' memory. The process of data collection was thus mentally and emotionally draining for the interviewer. Hence, not more than two interviews were scheduled in a day. Each interview lasting an average of 90 minutes was transcribed for analyses. The interviewing challenges described just above had previously already been described in Strauss and Corbin's (1990) own evocative words below.

> "It is crucial to maintain a balance between consistency (that is, systematically gathering relevant data about categories) and the making of discoveries (uncovering new categories, or new properties and dimensions)… Knowing how to approach the subjects, how to question… These are very important elements in the research process, and part of the researcher's characteristics that lead to and allow this important balance. Understandably, in order to carry out data collection… every researcher must be skilled [emphasis in original text]… in interviewing and observational techniques… Grounded theory research cannot be done satisfactorily using relatively unskilled interviewers (as is often done in survey research) or fieldworkers."

(Strauss & Corbin, 1990, p. 182)

Data was judged of poor quality when the interviewee contradicts himself/herself too often for a coherent chronology of events to be mapped, or when the interviewee repeatedly refuses to give the details that allows the interviewer to build a "thick description" (Burns, 1980; Kreiner et al., 2006: 1031) of the goal attainment story being described. This assessment of data quality is coherent with an interviewing protocol aimed at eliciting "ethnographic narrative accounts" (Berg, 2007: 206) which allows the interviewer to draw out "a complete picture of the observed events, the actors involved… the social contexts in which these elements arise" (Berg, 2007: 206). Unless the interview content allowed the recreation of a mind's eye video of events, people and environmental details, the interview was not included in the analysis. Given this study's rigorous probing techniques and the interviewer skill (described earlier) gained from previous professional experience as a company recruiter and assessment centre consultant, only one interview did not meet the above quality criteria and was excluded from the analysis.

Chapter Conclusion

This chapter presented in comprehensive detail the methodological steps used in Study One. In this chapter, the reasons for picking Study One's organization as the ideal research site to answer the question "How do people self-regulate goal commitment levels?" were detailed. The particular nature of grounded theory sampling-coding wherein the two are carried out iteratively (in such a manner that coding results guides sampling choices as the research progresses) was also described.

The key theme of emotional energy availability was defined; and it was shown how this key theme guided subsequent sampling choices. In the next chapter, the results of Study One will be presented.

CHAPTER 5: STUDY ONE'S FINDINGS

Chapter Introduction

This chapter aims to detail the grounded theory model that emerged from the data in Study one. It begins by presenting the theoretical model. It then proceeds to clarify each construct in the model by (1) defining it, (2) detailing the various sub-themes within each construct and (3) providing excerpts from the interviews in support of each sub-theme. In this manner, the reader will gain first an overview of Study One's findings before systematically delving in-depth into the richness of information characteristic of a qualitative study.

In this chapter, "within-the-body-of-the-text-quotes" (Pratt, 2008, p. 501) will be used in order to invite the reader to interact with the data. Pratt (2008) cites and commends the example of how Locke (1996) sprinkled quotes throughout her findings to both construct the narrative and strengthen the theoretical story. This is the approach taken in the preceding chapter when presenting findings relating to the key theme of emotional energy availability. However, in this chapter, in addition to "within-the-body-of-the-text-quotes" (Pratt, 2008, p. 501), another one of Pratt's (2008) suggested methods to present findings will be used – i.e., "compartmentalized in-table quotes". This manner of presenting the findings is meant to systematically give more "density" (Strauss & Corbin, 1990: 178) of meaning to the various constructs in the theoretical model depicted in Figure 5.1.

In this chapter, the presentation approach advocated by Van Maanen (1979) on the "theory-data separation in writing up ethnographies" (Pratt, 2008: 499) will also be adopted. This involves separating "first-order concepts, which are from the informants'

perspective, and second-order concepts, which are infused with theory" (Pratt, 2008: 499). In this approach, this dissertation's author "identified first-order concepts that were attributable to the data provided by informants" (Anand, Gardner, & Morris, 2007: 410). For example, "Supervisor's Verbal Aggression" was assigned to the portion of interview text that read "I find that there are times when he likes to use threat, raising voice in a threatening manner and saying… we mean using words of …which we think it's not appropriate…" (Engineer 68588). In other words, first-order concepts are theoretical labels assigned directly to "text passages comprised of words, ideas, and phrases from the interviewees" (Kreiner et al., 2006: 1037).

Following that, this dissertation's author assigned theoretical labels based on a more general description that subsumed several first-order concepts into a second-order concept. These second-order concepts are "more abstract concepts developed from linkages and themes in the first-order [concepts]" (Kreiner et al., 2006: 1037). Second-order concepts are more theory, than data. For example, "High Outcome Valence" is a second-order concept that subsumes three first-order concepts such as "Role Consequence", "Breakthrough Project" and "Rare Opportunity" amongst others. See Table 5.1 below.

Do note that theme counts are not provided. Theme counts are not the usual manner of presenting grounded theory study results. Grounded theory research reports in Academy of Management Journal do not give theme counts and the practice is specifically cautioned against by Pratt (2008) in his article on reporting grounded theory studies published in Organizational Research methods. Pratt (2008) writes, "…in my own experience, I find that the use of theme counts often triggers more positivistic frames by reviewers… Finally, this approach literally hides the voice of the

informant—a voice that many qualitative researchers want to capture" (p. 500). In other words, Pratt (2008) cautions against giving theme counts because it is more consistent with positivist research. Constructivist research focuses more on quotes and participant voice.

Table 5.1 also shows that in turn, "High Outcome Valence", another second-order concept labeled "New Experience" and various other second-order concepts are subsumed under a third-order dimension labeled "Encouraging Goal Characteristics". In some instances, first-order concepts are directly subsumed under a third-order dimension. Table 5.1 also shows two first-order concepts that were directly subsumed under the third-order dimension labeled "Encouraging Goal Characteristics".

Table 5.1
An Example of Theory-Data Separation

Lower Degree of Theoretical Abstraction ⟷		*Higher Degree of Theoretical Abstraction*
1st Order Concepts	2nd Order Concepts	**3rd Order Dimensions**
- Role Consequence	High Outcome Valence	**Encouraging Goal Characteristics**
- Breakthrough Project		
- Rare Opportunity		
- Interesting Learning Experience	New Experience	
- Novelty		
	Various other 2nd Order Concepts	
No Dynamic Complexity		
Role Clarity		

Lastly, the third-order dimensions were aggregated into the six categories which appear in the theoretical model depicted in Figure 5.1 below: (1) situational factors that deplete emotional energy availability, (2) situational factors that enhance emotional energy availability, (3) ineffective goal commitment self-regulation strategies, (4) effective goal commitment self-regulation strategies, (5) emotional energy availability and (6) goal commitment. This manner of presenting the "theory-data

separation" (Pratt, 2008: 499) is accepted by qualitative researchers and often used (Anand et al., 2007; Gioia & Thomas, 1996; Kreiner et al., 2006; Pratt, Rockmann, & Kaufmann, 2006).

The Emotional Energy Theory of Goal Commitment

Figure 5.1 below depicts a dynamic process model that depicts a dynamic equilibrium between two sets of opposing forces exerting their effects on emotional energy availability. At the top left hand of the model, are the situational factors that push down levels of emotional energy availability. See Arrows A. At the bottom left hand of the model, are the situational factors that lift up levels of emotional energy availability. See Arrows B. The manner of presenting the theory is similar to the presentation approach taken by Kreiner et al. (2006) who described this manner of presentation as a "force field in action", and argued that "situations are made clearer by a set of forces that interact to create a 'field' or context in which… individuals operate. Changes in an individual's behavior arise from changes small or large in the [dynamic forces] comprising the field (Lewin, 1951)" (Kreiner et al., 2006: 1037).

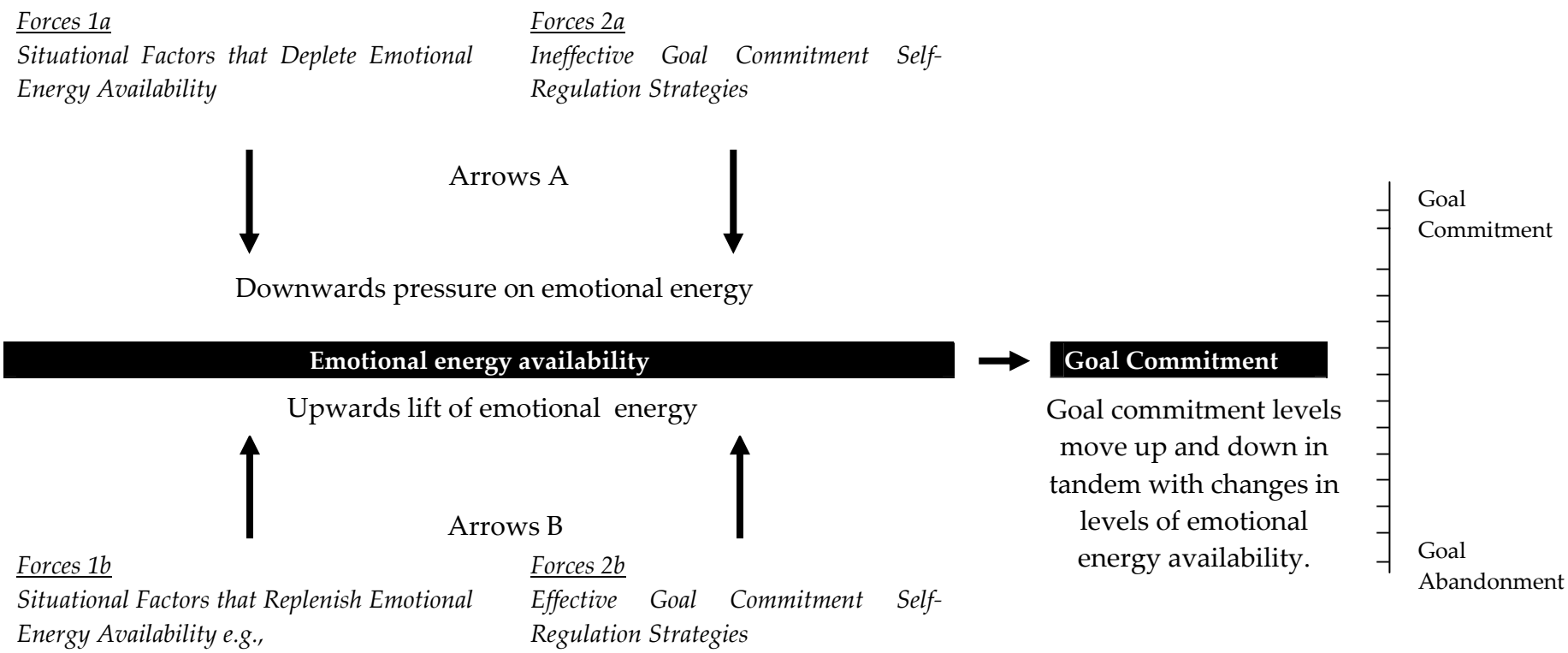


Figure 5.1 The Emotional Energy Availability Model of Goal Commitment

As such, Figure 5.1 shows that emotional energy availability at any one time is a result of the dynamic equilibrium created by a combination of opposing forces comprised of (1) Forces 1a - situational factors that deplete emotional energy availability, (2) Forces 2a - ineffective goal commitment self-regulation strategies, (3) Forces 1b - situational factors that enhance emotional energy availability, and (4) Forces 2b - effective goal commitment self-regulation strategies. See Figure 5.1.

Mediating Role of Emotional Energy Availability

A key feature to note in the Emotional Energy Availability Theory of Goal Commitment depicted in Figure 5.1 is the mediating role of Emotional Energy Availability. In this section, the narratives will show how Forces 1a, 1b, 2a and 2b influenced emotional energy availability for work, which in turn influenced to goal commitment. Pratt (2008) recommends "within-the-body-of-the-text-quotes" in order to invite the reader to interact with the data. He cites the example of how Locke (1996) sprinkled quotes throughout her findings to both construct the narrative and strengthen the theoretical story. This is the approach that will be taken in the next few paragraphs to present this dissertation's findings.

Engineer 78732 started off committed to his goal. "One day, my boss asked me to his room and told me that there's this project. The initial description was very positive and uh… with that, you are persuaded that you know… seems like a viable project.. looks good, sounds good". However, along the way, the end-users of the project deliverable confided in him the problems they experienced with the product. "They don't hide from you, because,[as] friend, they tell you the problems, and sad to

say, you see the problems but these are problems that the management will never ever appreciate because they don't use the thing". Over this matter, Engineer 78732 further experienced "quite heated arguments" with a senior level employee he needed to work closely with from another department "because [the person from the other department] just cannot accept the fact that because the system is not user friendly that's why people are not using it". Instead, the senior level employee blamed Engineer 78732 for the problematic product user acceptance. Engineer 78732 turned up for my interview with a general air of sadness, and when asked if anything in the work situation gave him energy to continue striving towards the goal, he replied "Sad to say, no. It's a job. It has to be done." The project ended with him making it very clear that he had achieved "the management's target" and that "you feel that you don't really have to put in so much effort. 6 o'clock, time to go and have your own life. You don't want to contribute more". Engineer 78732 started off committed to his goal. He experienced some situational factors that made him angry and frustrated. These high energy negative emotions expended his emotional energy availability for work, and his early enthusiasm for the project became the heavy lethargy which characterized his entire interview. Tellingly also, he ended the project by mentally divorcing himself from a goal he had initially committed to, calling it "the management's target" instead.

Engineer 56157 actually started by asking for the budget to achieve his goal. The constraining situational factors that he faced along the goal attainment journey made him unhappy – "I felt that… I didn't feel good, having to push in that way. I knew they were trying their best, but still I knew that they were not happy and it didn't make me happy". Even though he had some social support from a peer, "when I felt like giving up, she would listen and when she felt like giving up, or when she didn't feel too good about it, I would listen, and we helped each other through the

project. Like any good friends would", he still vacillated in his goal commitment saying "that we were not even sure the goal was realistic", even though this represented a contradiction since he himself had chosen this goal at the start and had fought to get the budget to do it with. In one part of the interview, he made a contrast between the energy levels at start of the project and at its end – "When we were working on the pilot, everybody was really excited, you know, [the excitement] was feeding off itself. [Later], it was not… it was more of like, we have to get it done, we have to get it done. That kind of thing". Engineer 56157 did not talk about his anger. He spoke of a low energy affective state – unhappiness. Again, it is telling how his excitement and high goal commitment at the start of the project, contrasted with his sadness and his wishing to "give up" when he came to the middle of the project.

Engineer 68737 took on his assigned goal because he saw it as a rare opportunity to prove his worth – "It's really an opportunity I think. It's time to prove [myself]… and management is giving me a chance. I should take it up and I took it up". But along the way, constraining situational factors comprised of a critical and unsupportive supervisor, a lack of knowledge and a lack of resources were daunting and he said "… tried a lot of things that probably [I don't know] why I'm doing that, because I can't figure it out, so I almost wanted to give up at that point of time, that after trying for probably six to nine months". But there was one thing about this project that gave him a great deal of high energy positive feelings – excellent work life balance. So "typically I plan my time on my own in such a way that until my kid fall asleep, alright, in the night, after [that] I have some time that my wife came back, have dinner, we talk about things at night when I pat my son to sleep [at] about ten, then I leave home to come to company. So I had that extra of buffer time from six to ten which typically people might have started work, you know, that additional amount of

flexibility to juggle my family, my work, my kid and so on. That helped a lot. It felt good to be able to take care of all that beautifully". Clearly, work-life balance had little to do with the constraints of the project. Those remained daunting, and he still spent a long time wondering whether if he had not taken on an impossible goal – "Every hour I will see the clock, and one o'clock, two o'clock, three o'clock, I am still, I've not fallen asleep and every time… the same thing will resurface again and again … Hey, whoa no resources, technically not capable, and my performance is at stake, promotion is at stake, should I continue stay in this company? … Should I give up? Tomorrow I tell my boss that's it, I'm done with it. I'm going to move on in life, and now, every time it just come back." Yet, the happy feelings generated by his satisfaction with his family life, gave him the energy to persevere - "She made arrangement for me to work in the night. I doesn't need to come in the day, alright. And if I need to [do other things], I probably would just manage my own time. She gave me a lot of flexibility to manage my own time to do the project to prove myself to the management. So I think, that keep me going for a long time. If wouldn't have that time management and flexibility part, I think I would long ago… this is something that is impossible to handle… then I would give up long ago". In this narrative, it becomes clear how positive high energy feelings generated by events unrelated to the goal, can provide the emotional energy availability required to persevere. Indeed, in the iterative to and fro between the literature and the data, this dissertation's author found that other researchers had already noted this. "The possibility arises that family activities may produce more energy precisely because of the sympathy therein… In other words, perhaps some roles may be performed without any net energy loss at all; they may even create energy for use in … other role performances" (Marks, 1977: 926).

The above narratives show that situational factors exert an influence over an individual's affective state, which is in turn associated with goal commitment. Some situational factors deplete emotional energy availability, other situational factors replenish emotional energy availability (see Figure 5.2, Paths A and B below). Examples of situational factors that deplete emotional energy availability are "Discouraging Supervisors" and "Failure". Examples of situational factors that replenish emotional energy availability are "High Quality Relationships" and "Encouraging Supervisors". Tables 5.2, 5.3 and 5.4 below illustrate the above situational factors with illustrative quotes from the interviews. The above narratives show that high energy emotional states such as excitement and happiness went with high goal commitment. Low energy affective states such as lethargy and emotional tiredness went with lower goal commitment (see Path E).

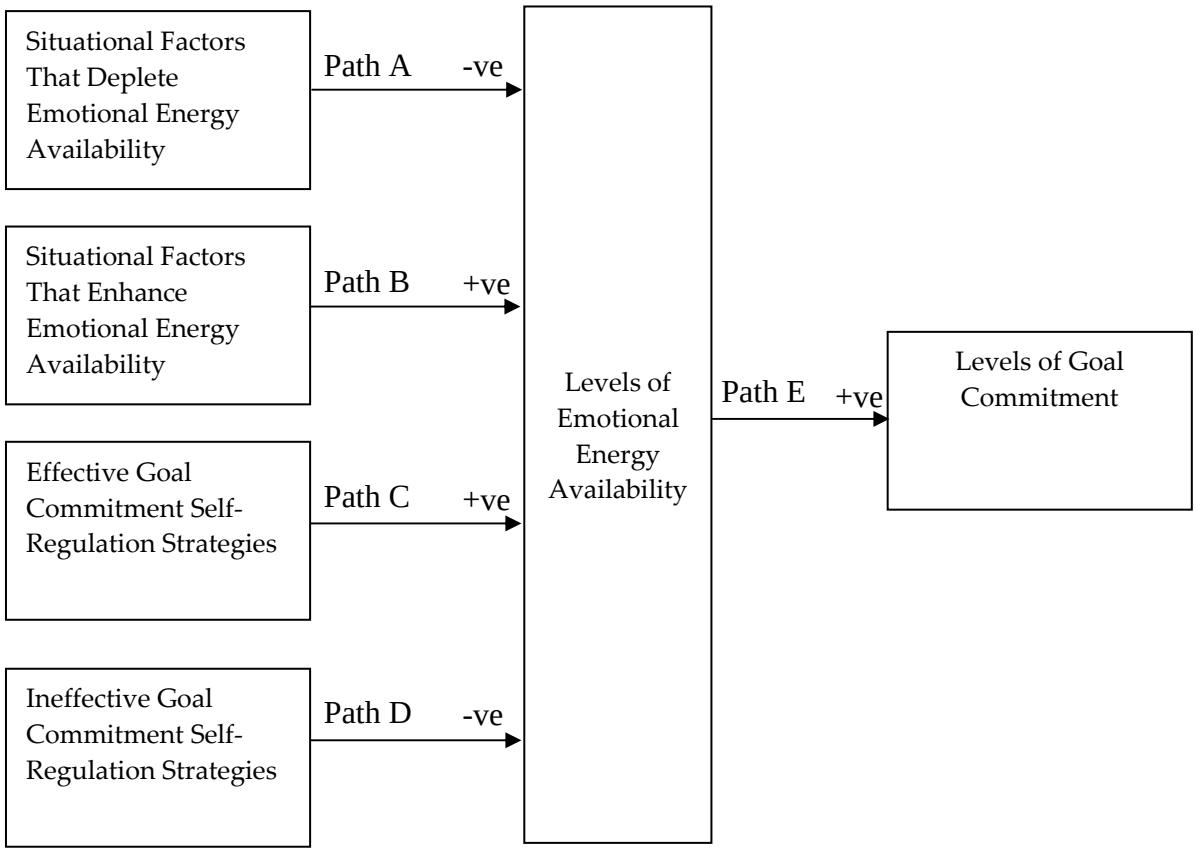


Figure 5.2 The Emotional Energy Availability Model of Goal Commitment
(This figure is a replica of Figure 2.6 and is inserted here for easy reference)

Forces 1a and 1b – Situational Factors that Deplete/Enhance Emotional Energy Availability

Table 5.2 summarizes the first-order concepts, second-order concepts and third-order dimensions which were categorized under Forces 1a (situational factors that deplete emotional energy availability) and Forces 1b (situational factors that enhance emotional energy availability). Note that in several cases, the third-order dimensions classified under Forces 1a are the mirror opposite of those classified under Forces 1b. For example, Encouraging Family Characteristics (classified in Forces 1b) is the mirror opposite of Discouraging Family Characteristics (classified in Forces 1a. Forces 1a and Forces 1b contribute to maintaining a dynamic equilibrium in an

individual's levels of emotional energy availability because the one acts to depress emotional energy availability; and the other acts to enhance emotional energy availability. How Forces 1a work to deplete emotional energy availability will now be examined by looking at a few first-order concepts in vivo (i.e., by looking directly into the interviews).

Table 5.2

1st Order Concepts, 2nd Order Concepts and 3rd Order Dimensions of Situational Factors

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Visibility Others' Expectations		Encouraging Social Pressure	Discouraging Social Pressure		Others' Disapproval
Spiritual – Grace		Encouraging Punishment	Discouraging Punishment		Undeserved Punishment
Extrinsic Motivators After Effort Deployment Action Recognition Appreciation Verbal Recognition		Encouraging Rewards	Discouraging Rewards		Extrinsic Motivators Before Effort Deployment Lack of Extrinsic Motivators after Effort Lack of Appreciation Lack of Verbal Recognition
Committed Followers Competent Followers Followers with Initiative Subordinates' Harmonious Relationships Subordinates' Respect		Encouraging Subordinates	Discouraging Subordinates		Followers Without Initiative Intransigent Followers Subordinates' Unhappiness Unco-operative Subordinates Underperforming Followers Subordinate's Verbal Aggression

Table 5.2 *… cont'd Part Two*

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Effective Management Representation		Encouraging Supervisors	Discouraging Supervisors		Ineffective Management Representation
Supervisor's Ability to Hear					Lack of Supervisor's Clear Direction
Supervisor's Action Recognition					Lack of Supervisor's Helpful Autonomy
Supervisor's Clear Direction					Lack of Supervisor's Support
Supervisor's Competence					Lack of Supervisor's Trust
Supervisor's Concern					Supervisor's Inability to Hear
Supervisor's Emotional Support					Supervisor's Incompetence
Supervisor's Expectations					1upervisor's Lack of Interest
Supervisor's Good Manners					Supervisor's Micro-Management
Supervisor's Helpful Autonomy					Supervisor's Unfriendly Emails
Supervisor's Instrumental Support					12 Supervisor's Unreasonable Expectations
Supervisor's Intellectual Support					
Supervisor's Interest					
Supervisor's Trust					
Supervisor's Verbal Recognition					
Success in Sight		Success	Failure		Failure in Sight
Experience of Success					Experience of Failure
Visible Success					Visible Failure

Table 5.2

… cont'd Part Three

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Autonomy	Encouraging Task Characteristics	Encouraging Goal Characteristics	Discouraging Goal Characteristics	Discouraging Task Characteristics	No Autonomy
Task Identity					No Task Identity
					No Task Variety
Possible Emotional Benefit to Others	High Outcome Instrumentality			Low Outcome Instrumentality	Insufficient or No benefit to Anyone
Possible Practical Benefit to Others					
Realized Practical Benefit to Others					
Possible Practical Benefit to Self					
Realized Practical Benefit to Self					
Appreciation of Practical Application					
Higher Relative Status					
Possible Practical Harm to Others (if unachieved)					
Possible Practical Harm to Self					
Realized Practical Harm To Others					

Table 5.2

… cont'd Part Four

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Feeling like a Real Engineer		*Encouraging Goal Characteristics …cont'd from above…*	*Discouraging Goal Characteristics… cont'd from above…*		Not Feeling like a Real Engineer
				Goal Difficulty	High Goal Difficulty Impossible Goal
Role Consequence Breakthrough Project Rare Opportunity	High Outcome Valence			Low Outcome Valence	Role Inconsequence
Interesting Learning Experience	New Experience			Complexity	Component Complexity Co-ordinative Complexity Dynamic Complexity R&D-Like Project
Novelty					Unforeseen Obstacles
Role Clarity				Returns on Effort Expended	Low Returns on Effort Expended No Returns on Effort Expended
Family Responsibility Life-to-Work Facilitation		Encouraging Family Characteristics	Discouraging Family Characteristics		Life-to-Work Interference

Table 5.2

… cont'd Part Five

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Positive Feedback Respectful Negative Feedback Objective Data Feedback		Encouraging Feedback	Discouraging Feedback		Negative Feedback
Accepted Goal Chosen Goal		Encouraging Goal Setting Characteristics	Discouraging Goal Setting Characteristics		Forced Goal
Common Purpose Enhanced Relatedness Lack of Blame Casting Data-Driven Approach to Conflict Resolution Bail You Out at Their Expense Satisfied Peers Enjoyable Relationships Understand problems and needs		High Quality Coworker Relationships	Low Quality Coworker Relationships		Blame Casting Conflicting Viewpoints Lack of Co-operation Lack of Understanding Person Avoidance Ruptured Relatedness Others' Conflicts Non-Data Driven Approach to Conflict Resolution
Co-operation Peers' Competence	Effective Working Relationship				Peer Aggression Peers' Incompetence

Table 5.2… *cont'd… Part 6*

Situational Factors that Enhance Emotional Energy Availability			Situational Factors that Deplete Emotional Energy Availability		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
			Challenge Stressors		Heavy Workload
					Amount of Responsibility
					Little Room for Error
					Number of Assignments
					Pressure
					Time - Yes Time Pressure
			Hindrance Stressors		Lack of Opportunity for Learning
					Lack of Resources
					Organizational Politics
					Red Tape
					Socio-emotional role ambiguity
					Task Role Ambiguity
					Unproductive Distractions
					Lack of Opportunity for Learning
					Lack of Resources
					Organizational Politics
					Red Tape
					Socio-emotional role ambiguity
					Task Role Ambiguity
					Unproductive Distractions
					Lack of Opportunity for Learning
					Lack of Resources
					Organizational Politics

Table 5.2 … *cont'd… Part 7*

Situational Factors that Enhance Emotional Energy Availability			**Situational Factors that Deplete Emotional Energy Availability**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
			Complexity		Component Complexity Co-ordinative Complexity Dynamic Complexity
		Justice	Injustice		Justice - Distributive Injustice Justice - Procedural Injustice
Work-to-Life Facilitation					Work-to-Life Interference
			Unavailability of Help		No Companionship No Instrumental Companionship No Intellectual Companionship Loss of Companionship Rejection

The aim in this sub-section is to show how events coded with the label "Heavy Workload" deplete emotional energy availability. When people feel enthusiastic, eager and excited about their work, they perceive high levels of emotional energy availability for work. When people feel reluctant, lethargic and unwilling vis-à-vis their work goals, they perceive low levels of emotional energy availability for work.

Engineer 59067 recounts how the heavy workload assigned to him caused him to feel lethargic and tired vis-à-vis his work goals: "… the workload was really too immense, there was really too much to do and the management didn't really sit down and think about what went wrong, but just keep pushing us… 'You should know this what! You should know that what!' They don't have this feeling that…they don't understand that actually we are new. There isn't much help that we can get from our own section. The workload was so immense and you need so many details. Sometimes just getting the job done can waste so much time and he still want us to go into so much detail…. I feel quite tired because you know… everyday you do this… do that."

Next, Engineer 58107 recounts that working 10 to 12 hours every day can make a person feel de-motivated about work (i.e, unwilling and reluctant to get on with achieving work goals). "There were moments when I thought I could not do it, I

thought it was unfair for me to work like 10-12 hours inside everyday… It's a very aggressive environment. People who can take this environment and can progress fast are motivated. But those who cannot take this environment can get very 'de-motivated'".

Following that, Engineer 28152 juxtaposes the mention of late nights (and unrealistic goals) with mention of his feelings de-motivation vis-à-vis work goals (i.e., unwilling and reluctant to get on with work goals). "During, it felt like, I was working very late, my people were working very late, the consultants were working very late. There was a lot of pressure to get it out…. And because I personally felt that maybe this project schedule is not realistic. In fact, talking to the external project manager, my co-project manager, he also felt that it was not realistic in their own experience. But because it was a customer's goal given, they had to make it work whatever it comes out. So because of that, I also felt that, yeah I felt difficulty in motivating my team, because already there's conflict in me. That says, "Maybe, how do I motivate someone to do something that I don't believe is achievable?""

Forces 1a – Hindrance Stressors – Organizational Politics

The aim in this sub-section is to show how events coded with the label "Organizational Politics" deplete emotional energy availability. Engineer 58299 explained that in the previous year's round of promotions, he was passed over and because of that felt like doing less and less work. "I get more de-motivated when I feel that there are certain people or that gets promoted and I am still there, but I think that I can match them in terms of quality and stuff like this la. So that is more de-motivating for me rather than harp on the qualities I lack…. So it becomes like that guy isn't

working as hard, or the strength isn't as so superb. So why am I working here so hard to achieve what I want, and whereas other people at the right place, you get the right position. So in that way, unknowingly you do less and less and less."

In the case of Engineer 39012, the organizational politics surrounding performance appraisals made her reluctant to work for her ex-boss, so much so that she found herself a new boss shortly after. "I think that there is still a gap between my ex-boss and me. He's the boss. There is a line drawn. The current one as well, but I feel more comfortable talking to my current one. Probably because I feel that my ex-boss isn't very fair in some areas. He isn't very fair in certain things he does and in his work as well. I am talking about work, not about whether he lets me go off or not. He is not fair in terms of drawing appraisals and all that. I didn't want to raise the issue with him [my ex-boss]. I worked in HR and was able to see all the increments across the whole company. If I want to get angry, I could. There was no point fighting for them because you could see the difference already".

Engineer 29197 talked about how de-motivated she felt about her work when (for political reasons) she was not promoted to engineer even though she was doing an engineer's work. "It's not only at that time. I mean, a few years. It's not only that time. The de-motivated has nothing to do with the study. The de-motivated is in terms of like, how come, like the question you ask just now, how come I'm doing the same job, but I'm not ready to be promoted? And how come I'm doing the engineer's job, and how come my boss still say that I'm not ready to be the engineer? That is the what de-motivated me."

Engineer 48032 came into the interview with a general air of fatigue and sadness (low emotional energy availability) and he explained that organizational politics was a contributing factor in his reluctance to put more effort into his work goals than his job description requires. "Ok, one example could be like this happens to be a VP's good friend's son. All of a sudden he just gets the job. He didn't go through the usual procedure then… usually when these things happens it is always very pressuring for the interviewing managers, because it's the VP's very good friend's son. So it's like, by default this guy would definitely get the job and then uh.. you know, the norm is 2 years, 2 years be it you achieve or didn't achieve you would get the promotion. Such things are quite clearly apparent…. you feel that you don't really have to put in so much effort. 6 o'clock, time to go, you go and have your own life. You don't want to contribute more because you don't see the benefits."

Engineer 79067 explained that organizational politics used to make him moody (i.e., low in emotional energy availability), but as he matured and read books on how to manage organizational politics, his feelings improved. "Hmm, sometimes it gets so bad that you wake up in the middle of the night. It can make you wake up in the middle of the night and it disturb me personally. Disturb in the sense that your family life can be affected. I can be very moody when I go home, okay and if you ask me the period, two days, worse case three days. But if the minor one I can just get over it immediately, but as I said it's a training area for me. I have started to learn what this is all about and I'm getting more matured when it comes to handling this kind of situations. It doesn't get past me after work at all right now. It's a lot of…see. I start of read books personally. See, this kind of office, can call it office politics happens everywhere. I read books and it happens everywhere. And initially you feel handicap

and you don't know what to do with it but there are many books outside that will teach you how to handle this alright. And I kind of pick up some tricks from there."

Forces 1a – Other First-Order Concepts

The above excerpts show how events coded under Forces 1a co-occur with interview subjects' mention of the low activation unpleasant feelings (de-motivation, and moodiness) about work, that indicate low emotional energy availability for work. That "Heavy Workload" and "Organizational Politics" causes low emotional energy availability is not obvious in every interview, but the relationship appears often enough to indicate that causality is possible. The purpose of the above excerpts was to give illustrative quotes which would serve to elucidate how such events (coded under Forces 1a) lowers emotional energy availability. Given the large numbers of first-order concepts surfaced from the data, it would not be practical to illustrate each first-order concept's relationship with emotional energy availability within this dissertation. The above excerpts illustrate how first-order concepts categorised under Forces 1a affect emotional energy availability. The above adequately illustrates the dynamic downward pressures that Forces 1a exert on emotional energy availability. With regards to the numerous other first-order concepts also categorized into Forces 1a, each will be presented in a table with one illustrative quote to show what the concept means. See Table 5.3 below.

Table 5.3

First-order Concepts and Illustrative Quotes of Situational Factors Which Deplete Emotional Energy Availability

1st Order Concepts	Illustrative Quotes
Others' Disapproval	Partly also because of the unpleasant feeling of having a bad response from him. - Engineer 10202 -
Undeserved Punishment	Yeah… because it's like the project don't do well, there is only one person at fault, you. In my boss's eyes, there is no need for an explanation. So I feel like not very right, I am only coordinating, a lot of things out of my control, kind of thing. Yeah… so, we had a few series of…I had a few series of lectures based on this fact. - Engineer 10257
Extrinsic Motivators Applied Before Effort Deployment	I didn't even know whether I could make it or not, and and…my boss sort of…I mean I don't think he meant to threaten me, but he sort of said that this…if I do well in this project, it's a make or die kind of thing you see, so.... it's discouraging in the sense that may cause a bad mark in my appraisal, because all this talk about performance, your work performance. So then, at that time I was thinking if I don't do well, then my appraisal will go down the hill right, and that is also my career down the hill, so yeah… this is the… - Engineer 10253 -
Lack of Extrinsic Motivators after Effort	In my Performance Appraisal the past year, I was very sad that I was given a bad rating. I had put in a lot of effort and commitment but I was given a bad rating. - Engineer 28043 -
Lack of Appreciation	I felt that, with the sacrifices that I made, that I put in, it is not appreciated in any way. That was the basic feeling. - Engineer 28087 -

1st Order Concepts	Illustrative Quotes
Lack of Verbal Recognition	That's all, nothing else. Nobody said 'you've done a good job.' - Engineer 29222 -
Followers Without Initiative	I have lead some projects where, in name, we're team, but of course, because usually, impression, you're the team leader, they need to be prodded, to, say, 'Eh, could this be a problem?' They'll say, 'Oh,' then, 'How about that?' 'No, no.' They need to be pushed, that kind of thing. - Engineer 59058 -
Intransigent Followers	What I can think of is… actually it's not one to one, it's in a pass down meeting, I mean I have pass down meetings with my guys in the morning, so normally we will review all the problems that we need to do. So he was the one who was working in the night, then supposed to hand over to the day, that's another engineer, so he used his method of thinking and of course the other engineer don't agree so ask him why you do this. So I mean he keeps defending his way of doing. Then he gets very agitated cause it's like getting to be a conflict like that la, because that guy is quite hot tempered also la… - Engineer 10252 -
Subordinates' Unhappiness	I felt that… I didn't feel good, having to push in that way. I knew they were trying their best, but still I knew that they were not happy and it didn't make me happy. - Engineer 86152 -
Unco-operative Subordinates	Normally, the top-up is done when the reading is at a certain level. When he took the log sheet, the reading had not reached the level. So he said that it was not wrong of him not to have topped up. I have told him that I don't want the alarm going off in the morning. I want to top up as much as I can during that time. Since chemicals smell and can splash, it's better to do it in the night when there are very few people. He has improved, he has put in effort. But he still has not done a few things that I told him to. - Engineer 99222 -

1st Order Concepts	Illustrative Quotes
Underperforming Followers	For example, I need him to get things done and there is a certain schedule to be followed. Because he did not capture the idea straight from the start, things did not progress the way I expected or committed to management that things would be done. So things get bogged down that way. - Engineer 10202 -
Subordinate's Verbal Aggression	He just said, 'No, I'm not going to do it!' Something like that. He raise his voice a little, and.. - Engineer 10202 -
Ineffective Management Representation	In fact that is the project we actually spend nights and yet it didn't get launch. I will feel that that is one of the de-motivating experience that I had, and I feel that our management is not strong enough to push it through. - Engineer 28012 -
Lack of Supervisor's Clear Direction	Maybe the previous boss, he has the habit of telling you something, but not very clear. He gives you instructions, but not very clear instructions. - Engineer 29192 -

1st Order Concepts	Illustrative Quotes
Lack of Supervisor's Support	Of course yes, because I have been in this company for quite long, about 6 years, so I more or less have encountered simple and difficult projects. So for those tough ones, what is the most difficult part is, the manager or your supervisor just throw you the project, and you are all alone yourself. So I think the difficult part is not having your supervisor's support and don't know whether the things you are doing is right or wrong. Of course experience, the knowledge, is all there. So when you encounter a problem, you need help somewhere, but your help is not there, so maybe it's our company culture, I am not sure, that they would want you to hold certain important projects and test out your capabilities, to see whether you have the resources and the decision-making portion to complete this whole project. So I think the most difficult part of the project is without the supervisor's support. But as to how difficult for those projects that I have handled so far, basically I feel that I still can manage it, so there isn't any difficult milestones that I see that I cannot handle at this moment. - Engineer 29229 -
Lack of Supervisor's Trust	Ok, like there's one case which I say…because from…at that time you see a similar problem encountering you will more or less know what problem it is, then I say I am quite confident that this problem is linked to this issue. So…then he said something like "If you want me to trust you…ehh…people look at your past records to determine whether what you say is correct." Something like that. - Engineer 79011 -
Supervisor's Inability to Hear	Well, they just, sometime they just won't listen to you, or try to make the effort to understand what you are trying to say. Some want just, this one he just, like he have in a discussion, he has something in his mind already, is like, oh, before I really explain out what the problem is, he already jump to conclusion… he just doesn't really listen to you, nor really make the effort to try to understand what you're trying to say first. - Engineer 28018 -
Supervisor's Incompetence	But that one, practically that boss was only here for half a year. And I wouldn't consider that person as my boss because she had practically no knowledge about what we were doing. I call her a postbox. - Engineer 48101 -

1st Order Concepts	Illustrative Quotes
Supervisor's Lack of Interest	No he wasn't aggressive, he was actually very mild. Sometimes when there is an issue, you felt he didn't care much, in terms of working with you. - Engineer 99278 -
Supervisor's Micro-Management	Erm, well I guess when he attends all the meetings, sometimes meetings where I'm supposed to help the contractors … then he will say, oh you should do this, you should do that. … We can't even manage our contractors. We are not even managing anybody. We are, we are just there sitting beside him while he manages, because I thought he's supposed to, you know, allow us to do our work, which is project management right. He just sends us down, and then, we will, we will handle the meetings and things like that. But he attends the meetings with us and then he makes decisions. - Engineer 66168 -
Supervisor's Unfriendly Emails	Right, and a lot of time I do see mail from him would be things like, why training do not arrange all this training early? Why has to be last minute? You know those kind of mail. Those very negative comment that is always forwarded by him to us, our team, when our training engineer. Why things can't be? Why you did not keep me informed on this training? All sort of things. I had never see a good comment from him before. Probably he had sent it to other people, but as far as I see that e-mail transacted across, it's always not so good, so it form an impression you know, that this person is not easy to work with, he has a lot of expectations on training function. To the extent that, he might be, don't like training engineer. He might think that this engineer from his team is far more technical competent, far more superior than training engineer. That gave me the impression like that lah. - Engineer 28037 -

1st Order Concepts	Illustrative Quotes
Supervisor's Unreasonable Expectations	Because that time I was actually working night shift. So, night shift is actually 9pm to 9am. Before that was actually…because this is sort of an added role for me… that piece of equipment. So, I first had to cover my shift. That day I think it's until around 12…12 to 1 o'clock already. And I left around 2…2 plus 3. So I'm working for… forgot how many hours… around 18 hours already. And after night shift it's very tiring. You just want to go home and sleep. And then he called and asked me to follow up on something. Then I said, actually I have passed down to someone to help in this issue. Then he said… that it is quite simple, just collecting the data. Then he said, "As the owner, actually why should you pass down, you should do it yourself what!" he said something like that. I was like, huh? I work so many hours already. Can't I even have a rest? - Engineer 29018 -
Failure in Sight	It felt like basically, how to get this done? That was how it felt like, it felt like maybe this thing has a high chance of not completing, the way we wanted it to complete. That maybe it would take more time than what we expected, more resource than what we expected. Definitely it felt that we had underestimated what we had to do to get the thing going. - Engineer 38152 -
Experience of Failure	No. Revenue. Always the thing with revenue. By then the announcement has been made. Everybody knows they would be getting bonus and we found that there was an error in the revenue. And it was quite substantial 2 million. - Engineer 29117 -
Visible Failure	But, the secondary thing, I mean, of course, it's public. Internal review is not that bad, but if you're in a public meeting, and it's being pointed out that you have made a mistake.. It's quite.. The feeling is not that good. - Engineer 58291 -

1st Order Concepts	Illustrative Quotes
No Autonomy	You know, like today, if the interview is outside the plant, I will have to clock-in and clock-out huh… Then my clock-in and clock-out, I got 2 hours of absence. So I have to explain, you know, why I am absent these 2 hours. It's like in a jail. Or those like what, those people, those criminals that have to stay at home after 9pm, this type of system. - Engineer 28241 -
No Task Identity	It just beginning stage, so, and sometimes you just do things but you don't know what it is for, I mean, cause I'm doing programming, so sometimes we program things, we just don't see what it is for. - Engineer 28018 -
No Task Variety	I would say that in HR function everything is administrative, repetitive. You don't see much… It is like, I would say, compare… because I'm an engineer by profession… so I would deem that it is just extremely repetitive and administrative. Very very much. - Engineer 48031 -
Not Feeling like a Real Engineer	It's very… sigh… doesn't use your brain, doesn't use your engineering knowledge. - Engineer 28231 -
High Goal Difficulty	Challenging in the sense that the established tools that we use everyday doesn't work and, if you have to think, really think, to find out what are the other alternatives that you have, that you must try to fix it. Because it's really causing a major yield loss at that time. So you.. mm.. I will say that, on reflection right, it's challenging because the problem came from an angle that we have never thought of before. Unexpected. Because, as I said earlier, when you do the semi-con.. I mean, from since I join and all the things that I've learn from my seniors and so on, it's machine problem, it's environment. If not it's particle. Everything you can see. And this problem, it's invisible. Because you can't see, you can't detect it. And it's not really expected. And it's unexpected, not seeable, so it's a very, very difficult problem to solve. - Engineer 29057 -

1st Order Concepts	Illustrative Quotes
Impossible Goal	Initially I thought that there was no way I can make a machine. I'm not a machine manufacturer, I'm an engineer. At first, I thought it was almost impossible for me to do it. But, I think that's what I learnt through the process that you have to learn that each goal, you have to divide into sub - Engineer 88109 -
Insufficient or No benefit to Anyone	If this is what you want us to have, ok fine. We can do it. Because end of the day, for local purposes, we do not need all these figures at all. - Engineer 88102 -
Realized Practical Harm to Others	Was quite disappointed when my manager came and tell me this incident there was a 8% yield loss, something like that. I've forgotten what was the exact figure. I was like, I mean… it can be prevented but just that sometimes I just feel frustrated with myself. This kind of incident we can do something more but you know, because of we don't have the time to really sit down and scrutinize, supervise the work, it's a waste… it's a waste even though the wafers are eventually being reworked, we lost that time. - Engineer 88231 -
Role Inconsequence	It's like you're just going through the motion, whether you're there, not there, things still go on. You don't see that you are really that badly needed, or you know since, you know, it's like uhm.. you don't see that you're contributing la. - Engineer 28032 -

1st Order Concepts	Illustrative Quotes
Component Complexity	Different, ok actually one machine can be three to six different types of resist, one machine itself. So inside we have twenty to thirty machines so actually almost every day we have changing of the resist. So the chances, the possibility of changing wrong resist is high. So once change the wrong resist you're getting mis-process la. Scrapped, wafer need to be scrapped. Sorry. So this project, this project actually to prevent wrong resist hook up so… actually I have come up with the idea, say ok… [gesturing] this is actually the resist water right… this bottle of green tea is resist water. Actually our resist water also have this so called handle la, so before we hook up ok all those resist water inside all the resist cabinet let's say all the full one ah… actually we hook up with the unit resist connector, the connector la, so called. - Engineer 29209 -
Co-ordinative Complexity	Ok, because in order to do my thing, I have a few files. So when they want to change, change what is to be included in the files, because the worksheets are all interlinked. So I have to figure out how I should link all the things, all the different worksheets, all the different cells, to make it into a very simplified workbook, which can meet my ultimate goal. And at the same time, it can cross check each other, so if there is any error, I can pick out that error. So actually I did have all my initial worksheets… I need to think how I should link it, which worksheet to which one. And certain worksheets, because last time they report by Feb, now they don't want to combine to Feb. It's just combine into one. So how to combine them, yeah… I have to do all the planning… thinking first, before I start changing. - Engineer 58247 -
Dynamic Complexity	We set up the milestones right at the beginning of the project, but, because it's such a long term project, the milestone deliverables actually changes along the way, so er… I guess at the beginning, the milestones to reach the goal seems like it's very clear. But then when you actually move along, because each milestone changes, the deliverable for each milestone changes, then errrrr… then it becomes very different from what, errr… at first I thought the whole thing will be like. - Engineer 26168 -

1st Order Concepts	Illustrative Quotes
R&D-Like Project	No, they are in the advanced development team, they are in QA department, they are probably in product department, that means, all the technical departments. Day in day out, they probably will do all these technical stuff using the equipment to conduct tests, they know the technique that the industry has produced to conduct a test, what are the standards that are being used. So those are the things that at least you must have some background, then it's easy to kickstart the job. But unfortunately, I have, what I have, the only thing I have is probably my background – I studied Microelectronics in University, so it give me a little bit of headstart, in terms of, I know which textbooks got cover some of these stuff before. So, but that's not good enough you see, because textbooks usually cover things that is long ago, very fundamental stuff, so you need someone that actually know the job to guide you. But, unfortunately, don't have, a lot of, a lot of difficulty in asking who know the area of work, so got to go through a very long, painful process of reading technical paper that is in the 1960s you know. And along the way, why things developed into this, this era right now, and what things that has been becoming, so tried a lot of things that probably have no reason why I'm doing that, because I can't figure it out, so I almost wanted to give up at that point of time, that after trying for probably six to nine months. - Engineer 68038 -
Unforeseen Obstacles	Somehow, maybe the design or the drawing didn't work out as we expected, that's why we faced many problems when we are trying to develop the project according to the specs. - Engineer 88011 -
Low Returns on Effort Expended	What am I doing man, I'm trying to do something that probably have no returns at all, even though if you prove yourself worthy, it might not guarantee you a promotion because it's not stated that if you can complete this project I will promote you. There's no clear, yah promise that, it's like, ok, you just bank on fate that if it turns out well, you get promoted. So, at that junction, the feeling is always this kind of like, is it worth? Should I stay? Is there anymore resource can help me? - Engineer 68038 -

1st Order Concepts	Illustrative Quotes
Life-to-Work Interference	The most de-motivating is actually when my personal problem, when I broke up with my boyfriend. That is the most ultimate time just totally not motivated. It's just like fighting fire everyday. You tell me to do this ok I do this. Just trying to get by. - Engineer 36161 -
Negative Feedback	Negative feedback… I was just told the pace at which I am going is not fast enough. That's why I was sad. Not that much more negative things. - Engineer 36158 -
Rejection	After that one, I don't feel like working on the project anymore. After that, we did go one more round to propose it again but after it was rejected, I stopped working on it anymore. - Engineer 48163 -
Forced Goal	Yeah, and we need to deliver this within 2 months. The budget is already given, we expected to execute immediately, and we need to finish this by a certain date, and this was the duration that was given to execute. I felt that it was not right. Because I think that this whole thing is new to us, and we don't know enough to actually plan the project… basically I'm rail roaded into it, and not having enough say. - Engineer 26151 -
Blame Casting	We as the new staff, are in charge of metrology which is measurement, because you need the measurement to measure our process. So there is a conflicting interest. We are actually a section formed up to monitor the process people. So…there is like a fault pushing around which for certain people they'll say they are right, and for our side, they will say it's correct, and so both side will argue. So there is fighting going around. - Engineer 59018 -

1st Order Concepts	Illustrative Quotes
Conflicting Viewpoints	So after we work right, he say no no, it's your problem, you go and check it out, but I already checked it out. He insisted that it's my problem, so it's very difficult to proceed to the next step already. - Engineer 29228 -
Lack of Co-operation	And then sometimes I page for them, they don't reply. I have to go to the cubicle to drag them to my office to sit down. - Engineer 38081 -
Lack of Understanding	Basically from my managers at that time. I only felt desperation because the management manager did not understand the difficulty or the complexity. I understand from the manager point of view that it is a deadline, I need to meet a deadline.. kind of thing… Yeah, I know you have a bigger picture where if you miss this deadline, other project may get delayed. But it's something like beyond my control. It's not that I do not feedback progress. The progress is that "Yeah… I encounter this problem. Need more time need more time…" kind of thing. So I guess that kind of understanding is not there. - Engineer 78089 -
Person Avoidance	Actually I don't know. Just feel that, just not a good feeling, feeling that, I don't like to stay, I don't like to work with him. Thinking of "should I get a new job, or should I request for some… transfer to a new place…" Something like that, you just feel that you don't like to continue to work under… together with him, under the section or what. - Engineer 88307 -
Ruptured Relatedness	And in that current position because of all this conflicts, I find that the relationship with my boss is actually in a very bad…We are not in a very good relationship today. - Engineer 48088 -

1st Order Concepts	Illustrative Quotes
Others' Conflicts	This particular scenario happens when I'm here, was being asked to do a presentation for [the parent company] people. And my peer doesn't agree to do that because it's not his responsibility to do it right. So they start to yell at each other to push here push there, push here push there. That is the incident that which I feel is unnecessary - Engineer 10037 -
Non-Data Driven Approach to Conflict Resolution	From the other side la. And sometimes the data is grey, alright it could be here or it could be there. But sometimes a person comes in and overrides everything. When I say override it could mean the way he speaks is louder or the way he insisted that do do many other things to get around it, to prove it which I think sometimes I disagree with because it could be taking up a lot of time or it's not so meaningful to do it. So it is always biased the person involvement, he is always protecting his own turf. - Engineer 49069 -
Peer Agression	But sometimes, remarks like, "Wow! You're good! You did this [bad thing] huh?" It's like you feel like… Here I'm trying my best and then I get criticized. It's not that I purposely… on purpose that I did this or I did this on purpose to sabotage the company or what. I'm trying my best to do my job and then I unhappy. - Engineer 49231 -
Peers' Incompetence	Some person that makes you …. Think, when they do things halfway, and not doing it properly, in the sense of when you work together, he just do in the sense, do minimally, but sometimes also do less than minimal. This, so it's like I have to project and okay, you share with this two people. So, I share with him, so in particular this guy, he just "Okay", I have to tell him, "Okay this is the specification, I need you to do this, this is the requirement" But then, when he did it, he said completed already, but I end up testing up most of the time, testing his program to make sure it's working, it's end up I'm doing the testing of his program, whereby this kind of testing is should be a standard, as a basic testing, at least when you're doing it, you're testing these few things. So, it's quite de-motivating. - Engineer 48017 -

1st Order Concepts	Illustrative Quotes
Justice - Distributive Injustice	Haha. Ya. I get more de-motivated when I feel that there are certain people or that gets promoted and I am still there, but I think that I can match them in terms of quality and stuff like this la. So that is more de-motivating for me rather than hub on what I lack. - Engineer 59297 -
Justice - Procedural Injustice	I think that was not very, it's like, not correct… because she already, already go through the flow already, and then now she's presenting it to everybody and then you should actually point it out during the initial discussion and then, rather than, rather than like in fronting, rather than criticize. Criticise is one thing lah, but trying to put her down yeah, yeah. Something that is not right, yeah. - Engineer 48082 -
Work-to-Life Interference	Until I find that I spend more time in the office then at home. And now as I mentioned to you, we have the email access from home. On Friday night, I just feel that I need to log onto the e-mail to check my work or to finish up something that I did not finish. So that I can enjoy my holiday over the so called break. Then when it comes to Saturday and Sunday, what if US sends in something here, because our Saturday is their Friday so go and check again. So at the same time, continue to work again. So the working hours become longer, even though we may not be physically here, its also at home. Is like more time working at home, because in the past we don't have the remote access, but now we can access. So the hours worked longer over here also stay longer, and I don't drive here. So I say now a days, every few every month I incur minimum $150 on cab fare just to go home, because I've been working late. The number of days working late is more than the number of working of going back on time, but at least 6,7. Which is in the past when I first joined, its like ok probably only certain period of time I need to work late. But now its practically, so called during peak and non-peak, I got to work late. Not that I don't know why, its like continuous and continuous, and I say when I can I have the downtime. - Engineer 58101 -

1st Order Concepts	Illustrative Quotes
No Companionship	Because within my own department…section, there's isn't…there's no one who can help me. I have to ask for help, I have to ask from external help, either from the vendor or from the…with this own… So its quite, quite a…lonely battle. - Engineer 29019 -
No Instrumental Companionship	if they got this human resource, all this non-exempt help the portion of critical levels, so this part is very difficult to get help from people, so need to carry out yourself. - Engineer 79064 -
No Intellectual Companionship	Work discussion, yes. But she doesn't contribute. She'll just listen. She's very passive. But sometimes, I do expect her to say something. But it's not in her nature to advise others. That's what she is. - Engineer 88049 -
Loss of Companionship	One person. I was very close to her, because she came in a bit later then me, she joined about one month plus later than me, so came in about the same time. Then ya, we were quite close, then our working ethics were about the same, and the way we…the style of work is also about the same, so very easy to communicate you see. Ya then she left earlier this year, so I was quite sad, ya actually I was very sad that she left. - Engineer 10259 -
Heavy Workload	Now is like I feel very very shagged. Very tired. Probably there is a lot of changes going on in the last few months, since last year. Its like there is no stop. Workwise, work has definitely increased a lot. Nature has also changed. I feel that as this point in time, working harder then ever I have ever work whole my life and over such a prolonged period. Ya, maybe I might have worked hard, its probably after so called peak time, you might have off-peak, but up till now, since last year, its like after this project, another one come out. And you still keep on keep the previous project ongoing. Until I find that I spend more time in the office then at home. - Engineer 58101 -

1st Order Concepts	Illustrative Quotes
Amount of Responsibility	So we have to decide is ok for this wafer to continue on the process, or we should scrap it there, and stop it. Sometime like that. So we have to make the decision, and sometimes is quite stressful, whether the decision we make is it the correct one, or not the correct decision - Engineer 68308 -
Little Room for Error	We got to make sure you look at these things. This has been an area with least margins, and anything that will go wrong, this will go wrong. Make sure you look at it and double confirm it, and make sure you pay special attention to it. Because anything that can go wrong during the release module or the area people, they might not look at it. Touch and go probably. - Engineer 49069 -
Number of Assignments	They were doing things concurrently and we have to supervise. Sometimes cos of the busy schedule that we have, there are two fabs in this factory and then you know, there are so many things we have to follow, we have to see, we have to supervise ourselves. So at certain times we tend to overlook, run around here… - Engineer 48231 -
Pressure	During, it felt like, I was working very late, my people were working very late, the consultants were working very late. There was a lot of pressure from me to the rest of the team, from the top to me, to get it out. So that was how it felt - Engineer 28152 -
Time - Yes Time Pressure	And then we had a requirement that we had to finish it by one month and release it for processing. - Engineer 88109 -

1st Order Concepts	Illustrative Quotes
Lack of Opportunity for Learning	And also maybe through the.. Through the years, also, another thing that can cause the de-motivation also, is the training opportunity. Like I feel that my superior never give me the… enough training opportunity. - Engineer 99199 -
Lack of Resources	That time was a bit less…that time I had additional MA on MC, so I was very lack in manpower. It was 3 people, I had 3 manufacturing assistants, I got 2 Fab to take care, Fab 1 and Fab 2. So at the same time, I am running the line, and at the same time I was running the machines also. So the manpower was also a bit shortage. - Engineer 49081 -
Organizational Politics	No. It felt very unjust. Felt that it might be some.. Of course, when rejected, then there were suggestions that there's some political issue. Because by right, the people who brought in the door, they should have examined for the out-gassing, and so on. But maybe they did not detected it, or whatever. So, there were some suggestions about that. - Engineer 59056 -
Red Tape	In the whole two weeks, there's 20 problems. I think it's more than that, 20 to 30 problems they need to resolve. So every one problem if I were to feedback to them and they go and fix right away, I think we can clear the whole thing in one week. Because of constant feeding back, no let's go and take a look. See the symptoms, redo the experiment for them to see, it take 3 weeks. - Engineer 10038 -
Socio-emotional role ambiguity	Previously you only needed to take care of problems, to solve problems. Now as a manager, I have to manage people. So besides managing the tasks, I have to manage the emotions of subordinates. I find that to be one of the more difficult things to do-in terms of managing people. - Engineer 10207 -

1st Order Concepts	Illustrative Quotes
Task Role Ambiguity	Just, unknowns, I would say. Unknowns in another area, I would say. If you're promoted vertically up, I think, wouldn't be that bad, I guess. Because you already know the groundwork, everything. But it's promotion and it's to another area, there's a lot of unknowns, I would say. At that time. But it wasn't.. I wouldn't use the word awful. But just that it's the tight deadlines that makes me quite helpless doing the job. - Engineer 58294 -
Unproductive Distractions	Basically it's things… did not complete on time when we need to deliver. Then always give you a lot of excuses say equipment is not working I cannot do my work, this and that. Then you have to go in to really troubleshoot to really clarify whether it's equipment problem or he's covering a lie that kind of thing. So this is that part that is actually taking up a lot of your time just to go and investigate to see who is right and who is wrong. - Engineer 10252 -

Forces 1b – Situational Factors that Enhance Emotional Energy Availability

Table 5.2 summarizes the first-order concepts, second-order concepts and third-order dimensions which were categorized under Forces 1a (situational factors that deplete emotional energy availability) and Forces 1b (situational factors that enhance emotional energy availability). Note that in several cases, the third-order dimensions classified under Forces 1a are the mirror opposite of those classified under Forces 1b. For example, High Quality Relationships (classified in Forces 1b) is the mirror opposite of Low Quality Relationships (classified in Forces 1a). Forces 1a and Forces 1b contribute to maintaining a dynamic equilibrium in an individual's levels of emotional energy availability because the one acts to depress emotional energy availability; and the other acts to enhance emotional energy availability. How Forces 1b work to enhance emotional energy availability will now be examined by looking at a few first-order concepts in vivo (i.e., by looking directly into the interviews).

Forces 1b – High Quality Relationships – Understanding Problems and Needs

The aim in this section is to show how the first-order concept "Understanding Problems and Needs" enhance levels of emotional energy availability. Engineer 19068 shared that he was poor at dealing with people, and he felt discouraged by the organizational politics which he was victim of "Once a while when this situation happens… you see people tapping on your shoulders. If you go to the washroom and meet them, they will generally talk a little bit on this situation and say they disagree with it alright… but that's how it goes…. So they empathize with me sometimes". The experience of having those peers around him understand his predicament helped enhance his emotional energy availability.

Engineer 48014 had to deliver a project which challenged her greatly and in the midst of all the difficulty, “I guess sometimes when you have a colleague who is your good friend, they will be able to understand your situation better, compared to someone who is not your colleague at all, you got to tell them the whole situations, how it happens, and what is your company’s culture.” The understanding from her peer helped lift her emotional energy availability.

Engineer 28017 felt very dejected because the software he had developed was responsible for major yield loss. His peers came by to explain that they too had “written similar stories”, meaning that they too, at one time or another in the past, had written software programs that had lead to yield loss. “Well, mostly it’s my boss basically. Because he keeps saying, ‘It’s not your fault when, if these things happen.’I mean the encouragement from the colleagues. Sometimes, I mean when that thing happen also, they also say, “Never mind, you just write what this story, we all already write many It is just that it happens that it is the first time for you. Okay.” Such understanding from his peers made him feel better and gave him the strength to stay committed to the software project.

Engineer 48089 was very discouraged by his poor relationship with his boss. However, he felt encouraged by the understanding from his colleagues who would approach him and empathise with his predicament, and therefore continued to stay committed to his work goals. “Even my peers at the other sections, even people from other departments, even my users and all that. I’m very surprised that even my users come up to me and say, “Don’t worry, take it easy..”that kind of thing. I’m surprised that they notice that kind… sometime the situation or why I feel that way… I’m surprised that they actually come to me and talk to me.”

Engineer 68182 specifically stated that having a colleague who would listen and understand her challenges prevented her from giving up on them. "It was important, because then, it was important in the sense that, when I felt like giving up, she would listen and when she felt like giving up, or when she didn't feel too good about it, I would listen, and we helped each other through the project. Like any good friends would."

Forces 1b – High Quality Relationships – Enjoyable Relationships

The aim in this section is to show how the first-order concept "Enjoyable Relationships", enhance levels of emotional energy availability. Engineer 68092 was giving account of how he was put in charge of the night shift with neither experience nor guidance. A few things went wrong during his shift which he found very difficult to cope with. Fortunately, he was able to quickly break the ice with the technicians on his shift and in the midst of a serious situation, they found their spirits lifted by an element of fun. " Hmm…you start pushing trolley, then you push trolley beside your MA, then you see who is getting faster to go over the other fab, because we're doing cross fab, so have to push trolley, make sure who is faster then you run over. So the fun part is when you are working with them, because I think the grop of MAs I used to work with are quite fun. They don't really show attitude but sometimes they do speak abit of vulgar language, shouting at each other but I think it's…that makes them interesting also…. at the end of the shift, you can just sit down and relax and talk to a friend, its quite something which you don't really have everything, if you compare to just finish work and go back and rest, I'd rather go out. Just be a bit tired, just go out and have big breakfast, and just go home and sleep. Because it's quite fun, it's the people you mix around with. They will just talk about anything under the sun."

Engineer 29272 and his subordinates worked past midnight quite often on a project. He too felt that the enjoyable relationships he had with his subordinates kept him going. “Because we are always quite close. The teams I have managed are normally quite close. We spend a lot of time outside company also. Normally we go for dinners, beyond that we go for drinks. I do spend personal time with their family. I do know some of the groups go jogging every Saturday, so on and so forth. So at least….”

Engineer 58083 had to deliver on a project on which she worked solo. There was so much to do at the last minute that her colleagues helped out. What would otherwise have been a difficult night turned into a joyous one as people worked and had fun together. “Enjoyable in the sense that there are a lot of teamwork, you know. And then, although we, we worked pretty late everyday, but we, we have fun also haha. We have fun and yeah. It’s a mixture of, the stress is mainly on the limited amount of time we have. We have to complete a lot of things in a short time. Yeah. The joy is that a lot of, a lot of help around, and then, then we are pretty positive about it, and then, then we had fun. Hahaha. Sometimes when we, when we worked, when we actually worked till pretty late, we, we are still very jovious, still joke about this, joke about that Haha.. Yeah. Ok lah, the stress if mainly on the need to meet the timeline yeah.“

Engineer 28012 recounted how he felt motivated by colleagues with a sense of fun. “Are there many? Well, the main motivating people are those who are friendly enough to, I mean, fun enough, not so dull. So it light up the situation, I mean in the

sense, because, it's more of the working environment, so, it's more, if the people are quite lively, not so silent, they do talk, they do jokes, and I feel motivated about it."

Engineer 79054 recounted how working with a group of friends helped them stay committed to ensuring that an elusive root cause of yield loss was found and eradicated (even after the management had already given up and decided to close the project). "Oh, for that case right, that was the pure fun of doing something that we have never had a chance to do before. It's just something you never thought you can do, and now, just do it. More of the unusual things we tried and.. Well, it's just a group of friends doing work…"

Forces 1b – Other First-Order Concepts

The above show how events coded under Forces 1b intervene at moments where work is particularly difficult and discouraging to lift individuals' spirits and give them emotional energy availability to channel into work. The purpose of the above examples was to illustrate how events (coded under Forces 1b) enhance emotional energy availability when the going gets tough. Given the large numbers of first-order concepts surfaced from the data, it would not be practical to illustrate each first-order concept. With regards to the numerous other first-order concepts also categorized into Forces 1b, each will be presented in a table with one illustrative quote to show what the concept means. See Table 5.4 below.

Table 5.4

First-order Concepts and Illustrative Quotes of Situational Factors Which Enhance Emotional Energy Availability

1st Order Concepts	Illustrative Quotes
Visibility	Usually we have QIT presentation, to our president. So, it's a major thing to present to the president. So, at that time, if you were.. Usually if you view those managerial issues, let's say, that concerns the company.. So this yield loss right, was a fairly major one. - Engineer 49057 -
Others' Expectations	So of course when I say I lead it, there's no official term that say "oh you lead it" okay. Everyone…ok… by the fact that I was in… I went for training six months and back, there were a lot of expectations that you lead it. - Engineer 59068 -
Grace	I'm supposed to do a double-checking and then yeah… I guess I overlooked some… some criteria and I missed… I actually missed out something. Then I feel very bad so that's why this morning I had to see her and tell her, "Oh sorry I made this mistake, and I'll send an amendment memo afterwards." And she, she's ok about it. And I feel very good after that, feel like oh ok, at least my boss didn't actually… yeah, but it's quite a big error… haha… I made. Ok waiting for her to scold me but hey… she, she actually tell me that ok you probably next time you won't make this mistake again because you'll remember it yeah… so I think it, sometimes making mistake is, is not that, not that bad as in, as long as we, we learn from it and…going forward, I'll make sure that I won't make the same mistake ever again. - Engineer 48082 -

1st Order Concepts	Illustrative Quotes
Extrinsic Motivators After Effort Deployment	But in between from then until now, they actually given me 2 adjustments. More because… the first one is more because they felt that I really put in a lot of effort, really a good worker to have.The second one was they sent me to overseas for an assignment and I did quite a good job. And based on that they gave me another adjustment. So I find that it's fair that if you put in enough effort and people recognize it, they will reward you. - Engineer 88118 -
Action Recognition	And then after a while, then I see there is a bit improvement and the people in manufacturing actually used it. - Engineer 48017 -
Appreciation	But you feel good in the sense that people still appreciate what you have done. - Engineer 48291 -
Verbal Recognition	After the event people say "Eh good job, good job, good job." - Engineer 78232 -
Committed Followers	It is stressful, but when, I guess, in a team you share the stress as a team. You can see that the other members, the whole team, there.. The whole team you can see everyone is really trying their best to contribute by giving suggestions and so on. Wait. Let me think ah, there's this person.. Ok. It's very.. I would say it's stressful, but the stress is shared upon all the members. You feel good that you're not alone and people are really whole-heartedly trying to fix the problem with you. - Engineer 49057 -

1st Order Concepts	Illustrative Quotes
Competent Followers	What do I particularly like.. I think each of them, they're.. they are good in their own ways. And they have been assigned jobs that suits them, so they do rather well. I don't have much problems. Most of the time, they can handle, they can run by themselves. I mean, even if I'm not around for one week, two weeks, nothing will go very wrong. So I'm very happy about that. - Engineer 10201 -
Followers with Initiative	Whereas for this team, people will volunteer and give suggestion. They have more initiative in pointing out, and volunteer, and discuss. And, also, although we're not experts in the other field, for example, thin film and diffusion, thin film guys present and then diffusion will say, 'Hey..' ask, 'Could that..?' I mean, ask about certain details, 'Could that be a problem'? And they will discuss. - Engineer 89058 -
Effective Management Representation	Because for this case, it is quite good because I tell my own boss right, I have done this but I cannot improve already. Then he say oh he agree with what we say, then he speak for us to the other team. Then it's settled. If my boss say, always settle one. - Engineer 49061 -
Supervisor's Ability to Hear	I mean, we all voice out our own views before we come to a consensus. In a way, that's why I felt that, here, it's listened to, and not totally brushed aside - Engineer 28117 -
Supervisor's Action Recognition	Ya. The pump resist, I draw it up by hand. The resist will go through this and then go out here… My boss took it and and put on his office cubicle wall. - Engineer 29206 -

1st Order Concepts	Illustrative Quotes
Supervisor's Clear Direction	I find it in a… I take it in a nice manner because initially he made me to know what is it about, and then send me the work, so that I would have a better feel and understanding of what I am going to do and what is this device for. So I was quite happy to take it in such a manner, rather than being dumped up with all of things together. - Engineer 46158 -
Supervisor's Competence	But he's somebody who have a very good thinking process and I do respect him a lot for that. - Engineer 98164 -
Supervisor's Concern	Ok there's a, ok, my mum had a heart attack, ok and it was on a Sunday ok, and, and then the whole family rushing her to the hospital, and Monday I couldn't come back to work because she is in the ICU. Then I called my, I actually told my immediate superior, my boss lah, and the she actually tell me that ok, go ahead and settle, settle whatever you need to settle and I'll give you a blanket approval for all your leave, you don't have to go to the SAP to key in to log on, to apply, she will just give me a blanket approval, for for my leave … and if, if during the, if there's any, because my mum was at the hospital for about, about a week or so and then, and then, in between I need to, I need to go to, to the hospital to see, to meet out with the doctor, to see what are they, what do they propose to do to her, and there is this week whereby I keep rushing to, to the hospital and coming back to work, rushing there and back before I… it's a very, very tiring week. And my boss actually tell me that, you don't have to, don't have to apply leave, I just give you blanket approval, whenever you need to go, you go, so I, I feel in debt after that, she actually give me this clearance to, to just put down my work and then rush to the, to the hospital to, to see my mum, and then, sometimes, because, sometimes I cannot predict when the doctor will come and, come and visit, my mother so I have to wait there for like half a day, and then, just to get to talk to her doctor. And then, yah and then there is this period whereby, whereby I was, I was really in need, in need for time off, and then she, she actually expressed it from the start that she will, she will understand, which I really feel that, that she is very kind. - Engineer 98082 -

1st Order Concepts	Illustrative Quotes
Supervisor's Emotional Support	VP did try to come and console me and tell me that he think what I should do and my director also came to talk to me and also contributed what she think that what I would have done to prevent the mistake from happening. - Engineer 98119 -
Supervisor's Expectations	Even it may be a small simple project, or to the boss maybe it is a small simple thing, he feels that this person can complete it, so he assign to you, so he is expecting to see results, so at the end of the day I am able to deliver what he wants. - Engineer 49228 -
Supervisor's Good Manners	It was definitely not communicated to me as if I wanted this. But it was communicated nicely that 'this was the requirement that we want you to achieve'. It's up to the person if he wants to accept it, negotiate or not achieve it. I said I would give it a try. I was an engineer at that time and at the engineer level, we don't put it across like "I want this done". But sometimes we got that. It was not given to me aggressively though. It was given to me nicely. - Engineer 98109 -
Supervisor's Helpful Autonomy	Actually is, probably is the way he manage us. He's like… because for myself I prefer the relationship I prefer is, I want to achieve this. Then he gives me freedom and some guide, and I will complete my job, give him the timeline. - Engineer 28308 -

1st Order Concepts	Illustrative Quotes
Supervisor's Instrumental Support	There's more other difficulties because the test I'm supposed to do is, the equipment, is actually some other departments' equipment, which I can't actually use it, because they want to use it in daytime for their own agenda. But fortunately, that equipment in the night, are, all the time leave alone, not utilized at all, so my boss is kind enough, that she made arrangement for me to work in the night, I doesn't need to come in the day, alright. And if I need to conduct training, I probably would just manage my own time. She gave me a lot of flexibility to manage my own time to do the project to prove myself to the management. So I think, that keep me going for a long time. If wouldn't have that time management and flexibility part, I think I would long ago, this is something that is impossible to handle, then I would give up long ago. - Engineer 48036 -
Supervisor's Intellectual Support	Guidance, mainly will be the way how you are doing the whole thing. As in she will guide you through.. Especially when I was new to the job. She did guide me through a lot of things. What are the things that you need to expect in various situations. It's being explained to me patiently, by that person, I would say. So in terms of guidance wise, in terms of headstart to the job, I think it was given to me by this person quite well. - Engineer 58293 -
Supervisor's Interest	He also asked questions, showing interest in the project. As a boss, you want to motivate your employee to do something that's critical and challenging. You have to show interest in it. That means to follow up on it. You have to catch up points when the employee cannot go on from and give him support. - Engineer 98109 -
Supervisor's Trust	My relationship with my boss is actually quite good. I mean, he's a very nice boss. Generally. Doesn't really shout at people, and so on. He treats you as a friend. And, trust wise, I would say that he.. You get the feeling that he believes in you and he can rely... He can trust in me to get the job done. So, I felt that he really trusted us. - Engineer 99059 -

1st Order Concepts	Illustrative Quotes
Supervisor's Verbal Recognition	Well, I actually didn't know about it until I came back from the trip. My boss asked me to go into the office and told me that they felt that I've done quite a good job. - Engineer 48118 -
Success in Sight	So all this was in the pipeline of achieving, we are very near to generating, in actual right, I find a way to generate that defect, we are very near to the way to actually find the method of detecting this defect, yah. - Engineer 48039 -
Experience of Success	But I see a few, a few fruits ah. For example if I actually, I actually tried to teach, or tried to train my 5 engineers to write, and then I saw like about, 2 of them did really really well, after it, so the sense of satisfaction is very very big. So for the, this is an annual event, so after the first year right, second year more engineer comes to me, then ok, so I try harder. Then second year, I managed to, managed to impart some skill into more of the engineers. And then for the third yr that I'm doing it, almost about twenty over people, twenty over engineers actually came and then approached me for, for help and assistance and to guide them. So if I, I thought if I had given up for the first try right, I won't be able to see all these, all these fruits down the, down the road. Yeah. So… - Engineer 68082 -

1st Order Concepts	Illustrative Quotes
Visible Success	QIT presentation, to our president. So, it's a major thing to present to the president. So, at that time, if you were.. Usually if you view those managerial issues, let's say, that concerns the company.. So this yield loss right, was a fairly major one. So we had to present to him our conclusion. That was when we.. That was when we took out the door already, and we're still waiting for the results. We have some results out already, but not much. So that was the point where we presented. And we showed him the theory how we thought that the door could have caused this problem. So, we presented that, then after that, after the presentation we go back to continue monitor. That, after a few more weeks, that was when we really confirm when there's no more lots getting hit and that was the real root cause. Ah.. Okay. Ah.. He's very pleased with that, because as I said it's the unusual problem, that we have never thought of could affect us. So, although they never.. I mean, they were pleased with it. A very big part. Because I could imagine, I mean, if this thing never happened, and I mean, sometimes I thought, what if another team was assembled? I mean, you have different team dynamics, what the different members. We might not have found this, and I mean if we have not found this we would not have contained the problem and maybe, 2 or 3 years later, when we move to another device, and then that problem can come back again. And people, I mean, people.. It will come back in another form. People will.. Maybe another team, not me, some other team. They will come to fix the problem, then they found it, then set up. Then kind of another history, kind of thing. History would have been different, just to put it that way. So, glad that we actually did something that affected the company. - Engineer 49057 -
Autonomy	Ya, the freedom to make decisions and to be in control of certain things. Maybe that is the things that give me the drive. - Engineer 68102 -
Task Identity	I have been 10 years in this job. I left my previous job in a relatively small company where we didn't have goals and we weren't really managed. I wanted challenge. In this company, I enjoyed the challenge. I liked being in control of the entire process from the initial contact with the supplier right through to closing the contract. In some other jobs, your success depends in largely on other people playing their part. When I first started my career in here, I was part of the Process team. In Process, there are a million and one reasons why things can go wrong and one cannot control everything. In my Procurement job, I am in control of every part that leads to success. I can see results and control outcomes. - Engineer 28302 -

1st Order Concepts	Illustrative Quotes
Feeling like a real engineer	I feel professional enough to say, 'Ok, this is what I see.' I feel very satisfied with myself, technically. I mean, at least I'm a network engineer lah. Professional. - Engineer 48242 -
Realized Emotional Benefit to Others	When she was watching the video, somebody actually caught her tearing [with joy]. - Engineer 48014 -
Possible Practical Benefit to Others	Partially I think its because I had evaluated the system, and it's a system that I believed in, that I thought would make [this] a better company, that would help a lot of people, that I though it would make a difference to how things work. Partially that was also the reason why I took up the project, and worked on the project, and I was willing to push it through. So if you asked me that was actually the reason, that I thought it could make a difference. - Engineer 46152 -
Realized Practical Benefit to Others	So, it is a very fulfilling experience when you see people using it - Engineer 98012 -
Possible Practical Benefit to Self	Our equipment always has a problem with the particles. If you have a project that reduces your particles, you can reduce your workload. - Engineer 10032 -
Realized Practical Benefit to Self	Meaning to say, I don't have to do that anymore. No, wrong. I can comfortably tell Product that, '2 weeks from now, my defects are going to cause very high yield loss. Expected to drop, because of this,' without them, you know, drilling me. So I become.. I don't become reactive to what they are going to throw at me. I basically tell them way in advance so that they won't pester me. - Engineer 49282 -

1st Order Concepts	Illustrative Quotes
Appreciation of Practical Application	Because at that time I just graduated from NTU, is like very new. What I learn in school is when you come here, you really see it, how the real thing actually happens. That's why is quite interesting at that time. I learn about new process, equipment, although I never touch about equipment before that. So all these things, it is quite… I feel that I'm enjoying the job. - Engineer 28307 -
Higher Relative Status	If you can optimize, you have the most capacity. When I do conversion, I need to understand if it's feasible. In the past, I didn't know anything about conversion. They also had the impression that I knew only numbers. But after equipment planning, they (equipment people) have some respect for me now. - Engineer 10032 -
Possible Practical Harm to Others (if unachieved)	If this is going to be a failure or if the machine is not going to run successfully, it's going to cost an impact on overall project delay. - Engineer 88156 -
Possible Practical Harm to Self	Yes. And we really don't want it to come back and bug us again. Because if it comes back, a few months later, it will be.. We'll still be the ones fixing it, since.. I assume we'll be the ones fixing it, since we had done it previously. - Engineer 29058 -
Feeling like a Real Engineer	I feel professional enough to say, 'Ok, this is what I see.' I feel very satisfied with myself, technically. I mean, at least I'm a network engineer lah. Professional. - Engineer 48242 -

1st Order Concepts	Illustrative Quotes
Role Consequence	Finally I decided to get my resources and went ahead to do a good job myself. Well the satisfaction at the end of the day is… After the thing was really set and then reports start churning out and then people start to request for even more data, and the only thing they can get is to get from this database which I designed... The only way to get the report out is getting the data from this database, which I proposed. So that satisfaction that time is I will… like stand up and say, "You see, without this we would not have achieve this today." - Engineer 48088 -
Breakthrough Project	Firstly, this was something that was never before. You have to charter your own new way of doing it, ways and means. Then you execute it and show it. That becomes the way for the followers. So in a very subtle manner, it's a discovery. You set the way to things. And there's always the pride and excitement of doing it for the first time. - Engineer 88048 -
Rare Opportunity	Only a few people can do some real engineering job, so that's why it feels… I mean not so easy, to got this opportunity to work like real engineer. So even say if you work here right, if you work in normal daytime engineer, sometimes your boss just ask you to do this, you just do this. Very simple, without your… you know? You don't do… I mean you just do what you're told to do, but you don't do what you think you should do. But for this night shift, because it's quite special. Not everybody can afford night shift, because it's also quite tired. So but you can… you have this opportunity to make a call, to whatever, to practice the… you know, the real engineering work, what is it about. Not simply do what your boss ask you to do or other people ask you to do. So I mean it's to… you know? It's something like you… you appreciate it, this opportunity you are given to make this kind of decision, to uh… you know? Ya. Something like that. - Engineer 29062 -

1st Order Concepts	Illustrative Quotes
Interesting Learning Experience	Basically, I feel that learning is very important. You cannot possibly just work and work without learning anything. So doing this project is definitely a very good learning experience for me. As I mentioned, due to the prior experience that I have, but this experience that I had was like 5 years ago. 5 years ago when I was still doing that project, so cannot really remember much things. So it is from this project that I have done that I managed to recall more and more things. That I managed to explore more and more of the software. - Engineer 88012 -
26 Novelty	It was the very first video I have ever done in my life - Engineer 78013 -
Role Clarity	I was able to pick up much faster because through other experiences, I know how to so called like…I know the loopholes, try to actually find more things by myself, rather than wait for them to come to me to check out what are the things I need, so I checked up all the things myself. - Engineer 29084 -
Family Responsibility	2 weeks ago, I just got my ring. At least I know that this is my future, it could be our future also. If I can excel in this company, it will be good for the whole family, at least in the future. It motivates me… it does… especially when I was in the US for training, I was quite motivated. I actually stayed quite late everyday. I am doing it for her and for me. - Engineer 69268 -
Life-to-Work Facilitation	But I told my wife, "I'm going to be missing for the next four months." Of course the support from her also matters. I was a section manager then and had two kids. But one thing that helped me to get through was that I didn't have to bother about the things at home. I used to go to school from 7.30 to 10.30 after office hours, half-day on Saturdays and full day on Sundays and back to office on Mon mornings. - Engineer 48047 -

1st Order Concepts	Illustrative Quotes
Positive Feedback	Some of the positive feedback, yeah, that I received actually moved me. And then, then I decided, ok, hang now, hang now, and then I tried another few years, and then, now I think it's being quite well received. - Engineer 48082 -
Respectful Negative Feedback	Usually when he wants to pass the negative comment to someone, he will usually be more subtle about it lah. As in, although everybody knows who he's talking about, but he doesn't use harsh words. He doesn't point to the person straight. He mention some facts lah. - Engineer 78223 -
Objective Data Feedback	These defects are actually monitored by certain charts that we have set up. That means it's more actually arbitrary in this way. You can see the defects count down the charts that means it's a measure of the success. - Engineer 88222 -
Accepted Goal	There were only four engineers. Two engineers are fully allocated to other devices. One engineer is doing a big project. The only available engineer at that time was me. That's why I was given the assignment. - Engineer 11012 -

1st Order Concepts	Illustrative Quotes
Chosen Goal	Why did I do that? Erhm, I guess at that point of time, before that 3 weeks, I was actually assigned to administer a specific project. I was actually to administer a specific process. But however, as an administrator, I think that it is a very manual process. Cause everything is in terms of paper work. Everything comes in paper. So I'm just considering why can't it be simpler, rather then everything is in paper. So at that point of time, what I did during this 3 weeks was, initially, I do not have such a background on such a development. So what I did during this 3 weeks, I thought it was a very fulfilling 3 weeks. I actually picked up the skills and did one. So, after this 3 weeks, I came back and I showed some of the managers, I showed some of my peers who are together in this project or related to this project. And from the feedback they have given me, I feel that there are interested in this kind of work. And they want to be able to see more details that is done. And they want to launch this work. So it is my very first application that I have done for this company. So I thought it was very fulfilling, very motivating. - Engineer 58012 -
Common Purpose	But I said lor, it's the people around. Everyone with a common interest working, it tend to be more fun than if you work with people that doesn't share the same interest and passion as you. Then uh.. it's a bit hard to motivate and influence positively. - Engineer 58034 -
Enhanced Relatedness	I tend to mix around with the engineers. I have a closer relationship with the engineers' level, even for engineers in this section at that time although I'm not in this section. So I have a closer rapport in terms of section manager to engineer relationship. In terms of rapport, I was the one who actually could mix around with them more frequently. - Engineer 28087 -

1st Order Concepts	Illustrative Quotes
Lack of Blame Casting	It's very difficult to recall specifically. But to be very honest, my boss was actually very supportive. He didn't like, "why you screw up?" and so on and so forth. He wasn't in that mode at all. He was just very focused, "ok, it's a big problem, so on and so forth, what's the best recommendation that we should put forward right now." So at that point of time we were just discussing in terms of how to fix that problem and stuff and so on and so forth. What would be the best decision at that point of time. - Engineer 69278 -
Data-Driven Approach to Conflict Resolution	The 2 data cannot agree definitely will be conflict. When the guy analyze this data, this guy analyze this will probably think probably think the because the data suggest different conclusions so there will be some discussion, try to see why the data is like this and why I draw up different conclusions, try to understand. - Engineer 88111 -
Bail You Out at Their Expense	My colleagues are very very nice yeah. Ok. Actually ok, I talk about the technical seminar. Ok I just took over to organize the last technical seminar and during the organize, during the process of organizing right, one of the more, one of the most experienced staff actually left and, and I have to actually do a lot of things by myself, and because we are very lean, our company is actually, we are pretty lean, so most of my colleagues actually chipped in their staff to help me, to put, to go to, to put me through the, the whole organizing process. - Engineer 28082 -
Satisfied Peers	(pause) maybe the process of going through the whole thing with them together, and its like teamwork and at the end of it, you will feel the appreciation shown by your teammate, some sort. - Engineer 29019 -

1st Order Concepts	Illustrative Quotes
Enjoyable Relationships	Hmm…you start pushing trolley, then you push trolley beside your MA, then you see who is getting faster to go over the other fab, because we're doing cross fab, so have to push trolley, make sure who is faster then you run over. So the fun part is when you are working with them, because I think the grop of MAs I used to work with are quite fun. They don't really show attitude but sometimes they do speak abit of vulgar language, shouting at each other but I think it's…that makes them interesting also. - Engineer 48091 -
Understand problems and needs	I guess sometimes when you have a colleague who is your good friend, they will be able to understand your situation better, compared to someone who is not your colleague at all, you got to tell them the whole situations, how it happens, and what is your company's culture. Ok, whenever we encounter problems, we will encourage one another. We will always be a listening ear to each other. Like, we tend to complain to each other about the problems that we have - Engineer 48014 -
Co-operation	One is user, some are very cooperative which is fine… when you face a useful or helpful user then you like doing with them. - Engineer 98239 -
Peers' Competence	Yes. But the one is quite senior. 8 years already. Haha. Very experienced. Very nice guy. - Engineer 29061 -

1st Order Concepts	Illustrative Quotes
Work-to-Life Facilitation	What else could have helped a lot ah? Other than the contact? One good thing coming to this point is, I'm grateful that the timing that allowed me to come to office is not follow a standard person timing. People have a standard time to work. For me, due to that machine availability, Cher Wee actually gave me the flexibility to come in at a time that I have the machine time, and also to juggle the work in training and handle projects, so typically I plan my time on my own in such a way that until my kid fall asleep, alright, in the night, after I have some time that my wife came back, have dinner, we talk about things at night when I pat my son to sleep about ten, then I leave home to come to company. So I had that extra of buffer time from six to ten which typically people might have started work, you know, that additional amount of flexibility to juggle my family, my work, my kid and so on. That helped a lot, too, that helps a lot to make it a point that, well, you can do all the things prettily. It's well… - Engineer 48012 -

Forces 2b – Effective Goal Commitment Self-Regulation Strategies

As mentioned earlier, this dissertation draws upon Lewin's (1951) field theory to create a dynamic model of goal commitment, depicted in Figure 5.1, to illustrate the ongoing dynamics between situational factors and self-regulation strategies. "In essence, the argument of field theory is that situations are made clearer when viewed as being maintained by a set of forces that interact to create a 'field' or context in which individuals operate… Lewin's view was that if these forces could be identified and diagrammed, it would then be possible to better understand why individuals behaved in certain ways" (Kreiner et al., 2006: 1037), e.g., why individuals continue to stay committed to a goal, and why others abandon the goal.

As described above, Figure 5.1 shows that emotional energy availability at any one time is a result of the dynamic equilibrium created by a combination of opposing forces comprised of (1a) some situational factors that exert a downwards pressure on emotional energy availability and, (1b) other situational factors that exert an upwards lift of emotional energy availability. Given the role of emotional energy availability levels in determining goal commitment levels, the self-regulation of goal commitment involves strategies that regulate emotional energy availability. Hence, Figure 5.1 also shows that emotional energy availability at any one time is a result of the dynamic equilibrium created by a combination of two opposing forces which interact dynamically with the two types of situational factors. These additional two opposing forces are comprised of (2a) ineffective self-regulation strategies that exert a downwards pressure on emotional energy availability and, (2b) effective self-regulation strategies that exert an upwards lift of emotional energy availability. See Figure 5.1. The findings in this section will be presented in two ways. Firstly, "within-the-body-of-the-text-quotes" (Pratt, 2008: 499) will be used in order to construct the

narrative, strengthen the theoretical story and invite the reader to interact with the data as Locke (1996) did. Secondly, "compartmentalized in-table quotes" (Pratt, 2008: 499) will be used to provide the reader greater density of meaning for each of the self-regulation strategies enumerated herein.

Seeking Help

At their lowest point, individuals seek out other people to help them replenish their fallen levels of emotional energy availability. Engineer 58157 was a recent graduate hired into his job for barely two months, the first of which he spent in a lengthy orientation program. He was assigned a goal to attain about which he "felt that the expectation was too high" because "he was just assigned some data, and [he] was the only one engineer" working on the project. As a result, he "was not able to move in any direction… for the progress for the project. And [he] was a bit tense and frustrated". In addition, he "was a bit upset over the project and the pace which it has to be done for [his] boss". This dissertation's author asked him what he did in the "deepest darkest moment" of the project. He sought help from "a consultant coming over here… very experienced", and this consultant "he guided me. He just said my approximation was good enough for this computation, so I was quite happy".

Engineer 68717 shared that being able to get advice from others gave him a good shot of positive feelings: "Hmm okay. For example, you can, [what is] motivating is, you can get advice, just from anyone, from anyone, they will just entertain you, even though it's not of their scope. Sometimes, you just, 'Hey, I've this problem, maybe just exchange a little bit', then I, they just 'Okay!'"

Engineer 28162 said that she was "demoralized" because "sometimes, I mean, if you take a long time to explain with a lot of details and he doesn't understand, then he'll… he don't understand… It's like 'No! No! No!' then he'll talk about how it's done in the other sections and you don't have the chance to explain. Once you lose that concentration of his, it's very hard to get him to understand", and this demoralizing experience made her think "for some moments, you'll wish that this doesn't have to be… this doesn't have to be executed". Again when asked how she coped, she responded that she asked "other colleagues to see how they are doing with their own product and what are the problems they have". See Table 5.5 below for more examples of such first-order concepts that come under the third-order dimension of Seek Help.

Frame the Situation Positively

By framing energy depletion situational factors positively, individuals arrest the depletion of energy. Instead of dwelling on the energy depletion events and allowing energy to be consumed by anxiety and/or anger, individuals choose to draw positive conclusions from the energy depletion events. Engineer 88241, faced daily with aggressive internal customers, chose to see the continuous barrage of problems as a guarantee of job security – "If there's no problem with the thing, then, don't need me already. I will be out of job. If, I mean, I think positively! Correct or not?" Similarly, Engineer 58582 reframed the negative feedback she received positively by viewing it as a good way for other people to let off steam – "I think it's ok to have negative feedback, because sometimes [people] just need to release something out you know, yeah".

Letting Go

Engineer 10203 "let go" by accepting that an unpleasant event (being yelled at by his subordinate) had happened, and by choosing to move forwards constructively from it by not blaming himself unnecessarily – "Energy? Of course, in terms of energy, the energy will drop. For that moment, you feel a bit disheartened. In that sense, the energy drops… throughout the rest of the day, while I was doing other thing, this thing comes to the mind, it bugs you, and you keep thinking about it. So I can't… maybe… can't concentrate for a while." After a day of emotional anguish he let the problem go by concluding that he was not to blame "I don't think it was my fault, at that time".

Engineer 10172 was in charge of a part of the wafer production process that had generated a disastrous error. He spent up to four days mired in anxiety and self-recrimination - "Right. I want to sit down and analyze what went wrong, in terms of coming into terms with myself. In terms of how many lots this will impact. What's happening, how's it going to affect the company, how it's going to affect me… better part of the time I will be thinking why did I not find out that problem". On the fourth day, he let go of the problem by not blaming himself, but still taking the responsibility for the error rectification, and by willing himself to think about other things – "... [after introspecting] for the first few days you start to realize that maybe it may not be your fault after all, so you will feel much better. Ok. But you still have to take it as your responsibility… so you feel much better… you try not to think of it so much, then you will not be so preoccupied". Other ways of letting go are illustrated in Table 2.4, e.g., "Forgiving" and "Selective Forgetting".

Drawing From Deeply Held Values

Another strategy to manage energy levels for goal commitment involves revisiting deeply held values within the self. People drew strength from the most precious thing in their lives, like Engineer 39383 who "gets going" at work because of his noble role as the family breadwinner – "I just have my second daughter…when I start become a father… I feel that at least there is something different that we can actually work for… I think daily… we must strive for something in life. We are motivated to continue to strive further. So I think having a family actually.. actually get me going". Even though his daily work experience was fraught with energy depleting events, Engineer 39383's family infused his work with a meaning that represented a deep well of energy to draw upon. Others were powered by a deeply held ideal. For example, Manager 78687's respect for quality work kept him committed to a very challenging quality goal even though he could have discreetly compromised on quality standards. Some people infuse their goals with a deeply held personal value that in turn helps them create energy for goal commitment – "I take pride in my work… just being able to feel good about doing quality work".

Taking Time Out

Rest and enjoyable distraction allows the natural restoration of energy levels. Engineer 58308 believes in taking a short break, rest and then trying again – "Normally when I feel discouraged, I will just try to cool down…Sometimes you feel very bad, because you can't get the result you want. But whenever I go home, probably I'm busy with the kids, busy with other things, then I will temporary shut off, not thinking of that. After a good sleep, then the next day come out, probably I will feel better. Then I

will start again, to explore a new thing, see whether I can get a better way to go or not. Probably I will just take a short break, take a rest then, and then continue again".

Engineer 58157 forgets everything at work when spending time with his family who flew in on a visit - "At least you have someone who you like love when you are not working, rather than being lonely. At least someone else to share your feelings, feelings everything. You forget everything what how much ever stress is there in the office when you come back home, see your parents, just have a nice time with them".

Indeed, Engineer 58591 created energy by merely thinking of the how much happiness a McDonald's big breakfast after work would give him – "Ya, I mean end of shift. I mean because usually we work in a 3-4 day week, one week we work 3 days, one week we work 4 days. Then in my current shift now, I am in B shift, so we will work a 4 day night, so at the end of the 4 day night usually the MEs we will just gather around and just go for breakfast in the morning. That's something which motivates me to work, just look forward to the breakfast later on, just sit down, oh end of shift, can just relax".

Seek Positive Inspiration

Individuals also look to role models, success stories and even their own previous memorable successes to generate energy when faced with energy depleting events. Manager 49287 had failed and given up, only to re-commit to the same goal with renewed feelings of optimism after hearing that it had been achieved elsewhere in the global community – "Ehmm… I think we had a worldwide meeting in Japan or somewhere... So we came to know that this Italy fab has done it… eh if these guys can

do, why not we can do? Why can't we do, although everybody knew it failed the first time. Everybody said eh, if they can do it, probably we can do it".

Focus on Completion

Faced with energy depleting events, other individuals force the generation of energy whilst simultaneously stemming its unproductive depletion, by keeping the goal salient in their sights. They channel their energy into productive goal-related tasks rather than into unproductive anxiety. In the process of task concentration, more energy is generated. Engineer 58161 did just that - "There's a lot. I mean it can be quite yucky… She tends to be very hot tempered and then give very personal remarks so it's very hurting, very traumatizing. It's like you are very stressed, very traumatized but because of that, you are always not doing very well because you are always worrying what's going to happen next. So there's a point in time where I decide not to be afraid anymore. That's when I start to perform, where I feel motivated to just concentrate on doing it well. That's when I really start to perform…"

Table 5.5 *Effective and Ineffective Goal Commitment Self-Regulation Strategies*

Effective Goal Commitment Self-Regulation Strategies			**Ineffective Goal Commitment Self-Regulation Strategies**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Success Stories		Seek Positive Inspiration	Seek Negative Inspiration		Failure Stories
Previous Memorable Successes					Previous Memorable Failures
Role Model					
Person-Failure Separation		Letting Go	Not Letting Go		Person-Failure Identification
Possible Failure Pre-Acceptance					
Failure Acceptance					
Selective Forgetfulness					
Forgiveness					
Learning Goal Orientation		Effective Goal Orientation	Ineffective Goal Orientation		Avoiding Goal Orientation
Effort Goal Orientation					
Proving Goal Orientation					
Personal Beliefs		Drawing from Deeply Held Values and Beliefs	Mis-Matching Goal Characteristics with Deeply Held Values and Beliefs		
Personal Values					Against Values
Towards Congruence with Self-Concept					Towards Incongruence With Self-Concept

Table 5.5

… Cont'd Part 2

Effective Goal Commitment Self-Regulation Strategies			**Ineffective Goal Commitment Self-Regulation Strategies**		
1st Order Concepts	2nd Order Concepts	3rd Order Dimensions	3rd Order Dimensions	2nd Order Concepts	1st Order Concepts
Understanding the Others' Viewpoints Lesson Learnt		Frame the Situation Positively			
Rest Enjoyable Distractions		Take Time Out			
Spousal Companionship Family Companionship Instrumental Companionship Intellectual Companionship		Seek Help			
Get it Over With Goal Focus Invested Effort		Focus on Completion			

Table 5.6

First-order Concepts and Illustrative Quotes of Effective Goal Commitment Regulation Strategies

1st Order Concepts	Illustrative Quotes
Success Stories	Ehmm… I think we had a worldwide meeting …in Japan or somewhere... So we came to know that this Italy fab has done it... Then they said, eh if these guys can do, why not we can do? Why can't we do, although everybody knew it failed the first time. Everybody said eh, if they can do it, probably we can do it. So that's how it started. - Engineer 29288 -
Previous Memorable Successes	I toyed with the idea of giving up completely but decided instead to use the two days to study for the exam. I passed. It looked impossible but it could be done. Ever since then, I don't give up without giving it a good go. - Engineer 38152 -
Role Model	So that was really tough so at that time I used to see that when I come to office, the VP's car is already there. I also used to come to office really early because it is a difficult period and we need to find out how to get going. And when I go late, I used to go late, and I find his car is still there. And it is not one day. It is day after day, day after day, almost the whole of 2004. So this thing is pretty motivating because that means that the top manager is not only delegating tasks… I am really amazed at how he keeps physically fit. Before that I was 75kg, and for my height it should be 69. So… and he is almost my age probably or maybe one year senior or something and then wah, I find him so physically fit because sometimes we have this informal football soccer games and all those things. And he can run very fast and all this. And actually I started jogging and all those things and I said that if he can do it then I can do it because he is almost my age. So in the process, I lost 5kg and I feel much better and physically fit. And recently we had this active day and we are running, and now I can see that I can keep pace with him. - Engineer 29288 -

1st Order Concepts	Illustrative Quotes
Person-Failure Separation	Ok. Two days you feel better because first of all because you know the situation, you know how bad it's going to be, it sticks with you. Everybody knows about it and the dust has settled. We have come to terms with this disaster...second of all as I said once you start to analyze for the first few days you start to realize that maybe it may not be your fault after all, so you will feel much better. Ok. But you still have to take it as your responsibility, so you feel much better. Third of all because I don't think of it so much, you try not to think of it so much, then you will not be so preoccupied. Then fourth of all, you still have other activities going around you… - Engineer 10171 -
Possible Failure Pre-Acceptance	If we try hard and cannot succeed then never mind, we have the satisfaction of trying hard, so in the end came out to be ok. - Engineer 49288 -
Failure Acceptance	And we looked at it and said, ok, we accept the truth, and then we sit down and decided what to do next. I don't think I was really demoralised. It was more like, we knew it… yeah… we accept that statement, and we just had to figure out how to move on. Demoralise doesn't do much for you. - Engineer 48152 -
Selective Forgetfulness	Another thing maybe I can let you know is that I seldom remember sad stuff and I seldom remember unhappy things, so I can't really remember what I thought through. - Engineer 68221 -
Forgiveness	Knowing my boss enough, I have been working with him for 7 years, so I know he is forgetful and sometimes he cannot control himself very well. So after a while, you still may upset at times, but after a while should be ok. - Engineer 28111 -

1st Order Concepts		Illustrative Quotes
Learning Orientation	Goal	The other thing was that I was hoping to gain some knowledge from the course. I started with learning new things and sometimes I get excited while learning new things like financial management. Apart from the numbers, what does it tell? What is the whole thing about? All these things were opened up to me. - Engineer 78047 -
Effort Orientation	Goal	No I don't know. Many projects we did and many things in life we do, sometimes we succeed and some times we do not succeed. And what I found is that we grow up and I find that in any project that if I've given my 100%, and I have failed, it doesn't pinch me so much. But if in a project I failed and I didn't give my 100% then it feels bad. So it may be from experience of something. As we grow inside, I mean not everybody succeeds in everything he does right? So the same for me also, I didn't succeed in everything that I do, but what I found that those things that I failed, and those things I've given 100%, it's not bad at all. I mean I don't feel bad. But those things where I fail and I have not given 100%, I feel bad. So that is probably what, because we want to avoid feeling that bad, everybody wants happiness. So maybe that is the thing from my personal experience I feel that way. - Engineer 99286 -
Proving Orientation	Goal	I want to prove that I can really deliver it, can make it happen. So it's more of to prove to others that, well despite all the difficulties I would still be able to complete it. I acknowledge that I slow down, miss the deadline. But in terms of technical, capability, I just want to prove that I am capable. So it is more of a technical achievement to myself. - Engineer 48088 -

1st Order Concepts	Illustrative Quotes
Personal Beliefs	Apart from that, I would say that it's my belief that, in the long term, people who… over time, people would appreciate quality work because it is something that would work on and on for years. And if you compromise in the quality of work, you may show result fast but down the road, over the years, people will start to notice, "Eh you are not doing a good work actually." People need to go in and patch up the thing. So that's my belief that if you deliver good work, it will be the right kind of management, the right kind of appreciation and recognition will come in the long term. That is my belief. - Engineer 98087 -
Personal Values	Of course the other… I would say that the other attribute which I hold on is in terms of loyalty. I always believe in loyalty even to a company, to something. I persevere in doing something continuous, to get it done. Difficult project I also try to make it through. So I feel a sense of loyalty to the company. - Engineer 88088 -
Towards Congruence with Self-Concept	For me, I think my character is that I try not to compromise on standards. It can be a good point or a bad point, depending on from which angle you look at it. I do see colleagues, friends… they get their work done. But like you say, they may do in a more compromised method, cut corners, but you get the work done. So it's very visible to management that it is done. For me I like to do the thing right in the first place. And I like to do it right even after that, meaning that people who need to sustain the thing is able to sustain the work and carry on. So it's not "Do and forget" kind of thing. I mean over the years I find that it can work against me because I wasted time in perfecting the thing, wasted time in getting everything right in the first place. Basically my character is not to compromise. I would say that's my personality and character. - Engineer 88088 -

1st Order Concepts	Illustrative Quotes
Understanding the Others' Viewpoints	In here har? Feedback… Sometimes people too grumble, grumble, grumble but you know, ultimately, if they had, if there is totally no feedback it's even worse I think. Sometimes we have positive feedback, we have negative feedback, and I think it's ok to have negative feedback, because sometimes people just need to release something out you know, yeah. So… - Engineer 88082 -
Lesson Learnt	So we all put down things we need to improve on, and then make sure, as much as we can, try to prevent some of the hiccups that actually occurs lah. Yeah. I think it's the learning process lah. So yeah. So we have a long list hahaha. So we try to prevent all these hiccups from happening next time? - Engineer 88082 -
Rest	Definitely I feel that it's worth doing lah. From the start I, I feel that they need someone to, to guide them, yeah. And the, the resistant I face is, is just, is not difficult to get all over all these resistant ah, you just need more time and patient, yeah. During the, during the most difficult time I just feel that oh I want to go back and rest. - Engineer 88082 -
Enjoyable Distractions	Normally when I feel discouraged, I will just try to cool down, and then probably I will work until the whole day also can't get it figured it out. Sometimes you feel very bad, because you can't get the result you want. But whenever I go home, probably I'm busy with the kids, busy with other things, then I will temporary shut off, not thinking of that. After a good sleep, then the next day come out, probably I will feel better. Then I will start again, to explore a new thing, see whether I can get a better way to go or not. Probably I will just take a short break, take a rest then, and then continue again. - Engineer 78306 -

1st Order Concepts	Illustrative Quotes
Spousal Companionship	Then after that, of course, talked a lot with my wife, right. at that juncture definitely, it's not appropriate to share with my boss, definitely, you know right. So I talked a lot with my wife you know, and she also had, she played a very important role in that sense that if cannot then just move on, if you think that it's still worth trying you know, just continue to try and leave the kid to me, night time you just go and work until morning. Because that time, my son is still pretty young you know, probably aboutt a year to two years ago. It is definitely, to me lah, I think in a man's career, if the women are supportive, alright if my wife is supportive, I can put 100% of my heart onto the task I'm supposed to. - Engineer 68039 -
Family Companionship	So I can tell the pros and cons and tell hey, this is how I am taking the decision. He most of the time he says fine, yeah, it seems logical. I mean very rarely he impose his ideas on me and asks no no… this is the way to go. - Engineer 69289 -
Instrumental Companionship	Yeah… approach the other engineer for help because in times of need, they will try to help each other. - Engineer 48091 -
Intellectual Companionship	Ok, because the work that we are doing is similar. I wouldn't say that it is exactly the same, but it is similar. So when we have some spare time to spare, or if possible, if we see some other person who is really really tied up, we will try to stay a little bit later to help out with that person. Or, if the person is, because we do designing as well, so sometimes we will run out of ideas. So we will ask each other about ideas, design ideas. - Engineer 78012 -
Get it Over With	But sometimes when you are really doing this, when you are building the model, time goes by very fast and you don't notice it. And you just want to erm… finish building it up and testing it before you go back, so that the next day, then more results will come in, and you can see whether it's performing up to what you want. You have less error flagged out. - Engineer 88169 -

1st Order Concepts	Illustrative Quotes
Goal Focus	Ya. Because there's no time to think about other things. We need to make sure… because it's a listed company we need to have a AGM by latest end may. So I need to make sure that get all the things done. That's one option that doesn't affect the immediate task, just leave it and move on and get the other things done. - Engineer 29117 -
Invested Effort	I mean project is already half way, so I just finish up the rest, the remaining of the works. - Engineer 28232 -

Table 5.7 First-order Concepts and Illustrative Quotes of Ineffective Goal Commitment Regulation Strategies

1st Order Concepts	Illustrative Quotes
Failure Stories	If the senior people cannot even solve it, it is quite tough on my side. - Engineer 99019 -
Previous Memorable Failures	I was very skeptical of myself because of the bad experience of not completing my Masters. And this one had a lot of money at stake. So I was not even sure of my decision and myself. - Engineer 48012 -
Person-Failure Identification	It's always a sense of why am I so… why didn't I say this, why didn't I speak up, why didn't I do better then, why didn't I do better in a meeting. I could have controlled the situation better. It's always those self-blaming kind of things you know. It's always blaming why didn't I do it and feeling in some way uselessness in front of your peers. You're supposed to protect them but you can't. That kind of feelings cross my mind at night. Powerless… - Engineer 19068 -
Avoiding Goal Orientation	It makes me feel that… nervous in the sense it's like, I keep have to tell myself that I cannot make the same mistake twice. It put me on the kind of guard, become very nervous in a way it's like… - Engineer 88116 -
Against Values	Unbearable for me, because I had to juggle resources, I had to be not very nice. Also unbearable for the people because they were now dealing with something that didn't really, that the deadlines didn't seem… Didn't seem like something that could be done. - Engineer 58152 -

Forces 2a – Ineffective Goal Commitment Self-Regulation Strategies

Interviewees were asked to recall the most painful goal attainment experience they had ever had. It needed to be an experience wherein they considered goal abandonment, but did not abandon the goal. However, despite the clear boundaries drawn up to guide interviewees in their choice of stories to share from their experience, a few interviewees persisted in sharing stories where they actually did abandon their goals. I kept these stories within the sample because they were improved the rigour of the study. They provided disconfirming stories which became the "exceptions which prove the rule".

What are confirming or disconfirming stories? And how do such stories improve the rigour of a qualitative study? "Confirmatory cases are additional examples that fit already emergent patterns; these cases confirm and elaborate the findings, adding richness, depth and credibility. Disconfirming cases are no less important at this point. These are examples that don't fit. They are a source of rival interpretations as well as a way of placing boundaries around confirmed findings. They 'may be exceptions that prove the rule' or exceptions that disconfirm and alter what appeared to be primary patterns" (Patton, 2002, p. 239). Patton (2002) further writes that such disconfirming cases are a means of testing variation in qualitative studies.

In the case of Study One's organization, stories of goal abandonment do not fit neatly into a study designed to clarify how people go about maintaining their levels of goal commitment. However, these exceptions were useful in that they were exceptions that proved the rule. These stories of goal abandonment supported the key role of

emotional energy availability by informing Study One's analysis of how some people approached their difficult goal attainment journeys with ineffective self-regulation strategies that resulted in even further depletion of their emotional energy availability, after the initial depletion caused by situational factors (which deplete emotional energy availability). In addition, these stories allowed me to examine even greater variation in goal commitment and emotional energy levels. In this section, I will present some of these stories to show how ineffective self-regulation strategies can result in goal abandonment.

Engineer 58292's job scope was inherently stressful in that his timelines were tight and the implications of error were serious. He said, "you have to react within that 6 hours, regardless of the.. Ok, the information usually, I mean, all come in bits and pieces. Within that 6 hours you have to translate everything into just one plan, and communicate to the [parent company]. And the management will, based on this plan to, sometimes, negotiate with the [parent company]. So this is the one and only plan. If you screw up… that's it". Even though he had been doing the job for two years already without major incident, he necessarily made the minor planning errors that were often caught out at the regular meetings he had with senior management (given that the plan was critical to the whole manufacturing plant). Whilst an earlier boss was encouraging and supportive (a situational factor that enhances emotional energy availability), he found herself publicly criticised by his new boss for the same type of errors (a situational factor that depletes emotional energy availability). "In terms of interpersonal relationship, I think the worst is actually the 2nd year, I think. To me, personally, is the 2nd year. Yeah…. But in terms of job scope it was just another round. I mean, to me, after so many cycles it was just another round of the planning cycle. But

in terms of interpersonal relationship, 2nd year, I mean, I did feel quite bad about the situation. I mean, I don't think the person did it on purpose. I, personally I think the person's nature is.. This is his nature. He's outspoken, he… But the thing is, I mean, you don't feel good. You don't feel good." Faced with such a combination of situational factors that depleted his emotional energy availability, he further aggravated his depletion by employing an ineffective self-regulation strategy. He identified himself with his minor failures at providing a perfect plan. In the analysis (see Table 5.5) this ineffective goal commitment self-regulation strategy is coded as Person-Failure Identification. This is when an individual decides that failing at something also means that he is himself a failure. Engineer 58292 began to think of himself as a failure, and sharing "Because, the thing is…. I'm not sure what I'm good.. I mean, which area I will do well". As a result, he decided to abandon his work goals "It makes me want to look out, in that sense. Whether is it … look out, in terms of within the company, or look out, outside of the company. But it makes you want to.. I mean, inclination wise, you feel like you want to get out of the job." The story ends with him asking for a lateral transfer into another job.

Given that the focus of Study One in both the sampling and the analytical stages was to surface information about effective goal commitment self-regulation, the themes relating to ineffective goal commitment self-regulation are sparse, but are summarized in Table 5.7 together with accompanying illustrative quotes.

Discussion

The main findings of this grounded theory study is that (1) changes in situational factors (such as high quality coworker relationships and workplace stressors) affects variations in emotional energy availability, (2) goal commitment self-regulation strategies (such as seeking positive inspiration and letting go of issues) also affect variations in emotional energy availability, and (3) in its turn, variations in emotional energy availability affects variations in goal commitment. Figure 5.2 summarizes these findings in a graphic format that is familiar to quantitative researchers, by showing that emotional energy availability mediates the relationships between (1) situational factors and, (2) self-regulatory strategies to goal commitment. Table 5.8 below summarizes the findings into four encompassing themes.

Table 5.8 Four Encompassing Themes

Situational Factors that Deplete	Situational Factors that Replenish	Self-Regulation Strategies that Deplete	Self-Regulation Strategies that Replenish
Encouraging Social Pressure	Discouraging Social Pressure	Seek Positive Inspiration	Seek Negative Inspiration
Encouraging Punishment	Discouraging Punishment	Letting Go	Not Letting Go
Encouraging Rewards	Discouraging Rewards	Effective Goal Orientation	Ineffective Goal Orientation
Encouraging Subordinates	Discouraging Subordinates	Drawing from Deeply Held Values and Beliefs	Mis-Matching Goal Characteristics with Deeply Held Values and Beliefs
Encouraging Supervisors	Discouraging Supervisors	Frame the Situation Positively	
Success	Failure	Take Time Out	
Encouraging Goal Characteristics	Discouraging Goal Characteristics	Seek Help	
Encouraging Family Characteristics	Discouraging Family Characteristics	Focus on Completion	
Encouraging Feedback	Discouraging Feedback		
Encouraging Goal Setting Characteristics	Discouraging Goal Setting Characteristics		
High Quality Coworker Relationships	Low Quality Coworker Relationships		
	Challenge Stressors		
	Hindrance Stressors		
	Complexity		
Justice	Injustice		
	Unavailability of Help		

Theoretical Contributions

This study contributes to theoretical thinking on goal commitment in two ways. Firstly, this study defines and clarifies the role that self-regulation strategies play in determining goal commitment. This is also an important theoretical contribution because neither Hollenbeck and Klein's (1987) nor Locke et al.'s (1988) theoretical frameworks sufficiently define the role of self-regulation strategies in determining goal commitment.

Secondly, it reveals that emotional energy availability is an important concept in explaining goal commitment. The cognitive nature of the expectancy theory of goal commitment - as with other motivation theories such as goal setting (Locke & Latham, 1990), control theory (Klein, 1989), resource allocation theory (Kanfer, 1990) and expectancy theory (Vroom, 1964) - seems incompatible with the study of emotion. This could explain "the relative paucity of theory examining the influence of affective constructs on motivational processes" (Ilies & Judge, 2005: 453) in general, and goal commitment in particular. This is thus an important contribution to our understanding of goal commitment and could form a basis for a new theoretical framework explaining goal commitment called the emotional energy model of goal commitment. See Figure 5.2.

Practical Implications

Extant research shows that constraining situational factors depress goal commitment (Klein & Kim, 1998; Locke et al., 1988), yet in practice, some people seem immune to the effects of constraining situational factors: Roger Bannister (Bannister, 1955), Erin Brockovich (Brockovich & Eliot, 2002), Professor James Brierley Smith

(Weinberg, 2001) and even the Little Engine that Could (Piper, 1930). There seems to be some notable exceptions to what has been documented in research. In making the above theoretical contributions, this study explains some notable exceptions to what research has documented. This study points to self-regulation strategies as an explanation for the notable exceptions to what has been documented in research. People who do not give up, know and employ self-regulation strategies to husband their levels of emotional energy availability sufficiently well to stay committed to their goals.

The findings of this study can thus serve to educate managers on the strategies that they might adopt and adapt in order to help their subordinates stay committed to assigned goals even when constraining situational factors become extremely daunting. Employees can themselves learn from the strategies highlighted as part of this study's findings and then use them to help encourage themselves when they are faced with daunting constraining situational factors.

Limitations and Future Research

Any research design comprises inherent limitations. This study has certain limitations that bear consideration. As with all attempts to elaborate theory from a limited sample, one cannot report results demonstrating statistical generalizability. However, although as a qualitative study my research lacks statistical generalizability, it can be used for "naturalistic generalization". In "naturalistic generalization", one generalizes findings to similar cases, without any statistical inference (Pratt et al., 2006; Stake, 1995). For example, my study examined personal experiences of goal attainment journeys characterized by challenging goals and changing situational factors. Such

experiences are fairly commonplace in contexts (O'Reilly & Pfeffer, 2000).

In addition, this study employs a constructivist approach (Suddaby, 2006) wherein the researcher is herself the research instrument. As such, this study was not conceived to be replicable. Its aim was to develop theory, not test it. Future research can use the positivist approach to test the validity of the emotional energy model of goal commitment. See Figure 5.2.

Chapter Conclusion

In this chapter, the findings of Study One have been presented. The findings are presented around the emotional energy model of goal commitment in Figure 5.1. These findings were presented using both "within-the-body-of-the-text-quotes" and "compartmentalized in-table quotes" (Pratt, 2008, p. 501). The findings were also presented using by Van Maanen's (1979) "theory-data separation in writing up ethnographies" (Pratt, 2008: 499) by separating "first-order concepts, which are from the informants' perspective, and second-order concepts, which are infused with theory" (Pratt, 2008: 499). An illustrative quote is given for each first-order concepts. The classification of first-order concepts into second-order concepts and third-order dimensions was also presented. Theme counts were not provided. Theme counts are not the usual manner of presenting grounded theory study results. Grounded theory research reports in Academy of Management Journal do not give theme counts and the practice is specifically cautioned against by Pratt (2008) in his article on reporting grounded theory studies published in Organizational Research Methods.

CHAPTER SIX: STUDY TWO'S MODEL AND METHOD

Chapter Introduction

The present Study Two examines the mediating role of emotional energy availability in the goal commitment nomological network. The antecedent factors chosen for inclusion in the model for Study Two are (1) challenge stressors, (2) hindrance stressors (Cavanaugh et al., 2000) and (3) quality of coworker exchange (Sherony & Green, 2002). In this chapter, the aim is to (1) briefly reprise the key definitions relevant to the model, (2) briefly reprise the contributions of Study Two, (3) develop the hypotheses relevant to the model to be tested, and (4) describe in detail the method of the study.

Research Question, Key Definitions and Research Contributions

Study Two's research question is "What role does emotional energy availability play in the goal commitment nomological network?" The key constructs in this research question are goal commitment and emotional energy availability. These are defined as follows.

Goal commitment is defined as "one's determination to reach a goal" (Locke & Latham, 1990). This definition implies the intention to extend effort toward goal attainment, persistence in pursuing that goal over time, and an unwillingness to lower or abandon that goal (Hollenbeck & Klein, 1987). As goal commitment levels drop,

people willingly abandon their goals.

Emotional energy availability is defined in Study One as feelings for work that provide information about the quantity of personal energy the self holds available for work goal attainment. In brief, emotions comprise both an energetic value (i.e., a high energy or a low energy emotion) and a hedonic tone (i.e., pleasant or unpleasant emotion) (Cropanzano et al., 2003; Watson et al., 1999). For example, (1) enthusiasm is a pleasant high energy emotion, (2) anger is an unpleasant high energy emotion, (3) serenity is a pleasant low energy emotion and (4) lethargy and sluggishness is an unpleasant low energy emotion.

Even though the existence of the energetic value of emotion has been acknowledged for a long time (Collins, 1993; Cropanzano et al., 2003; Larsen et al., 1986; Thayer, 1986), my literature review in Chapter Two of this dissertation revealed that emotion researchers have largely ignored the energetic value of emotion in their explorations, choosing instead to focus on valence (i.e., the pleasantness or unpleasantness of emotion). In addition, goal commitment researchers have tended to ignore emotion (and therefore also ignored its energetic value) in the explanation of goal commitment (Erez & Isen, 2002; Ilies & Judge, 2005).

As such, extant literature on emotion, and on goal commitment have not considered the influence of emotional energy availability on goal commitment. In the light of this gap in the literature, it is important to deductively examine the role that emotional energy availability plays in mediating the influence of situational factors on goal commitment. In addition, the findings of this study may throw into salience the utility of managing employee emotions for their energetic value instead of their

pleasant/unpleasant valence.

Given that emotional energy availability is a construct whose definition was developed and substantiated by the results of Study One, literature specific to emotional energy availability is unlikely to exist. Nonetheless, the literature review in Chapter Two argued the contributions of the present Study Two with reference to what is documented in the affect literature. However, let me briefly reprise here the conceptual definitions of affect and emotional energy availability, as well as how both may be distinguished from terms such as moods, emotions and dispositional affect.

The study of affect distinguishes between three different types of affective experience, with the term affect "encompassing all of the others" (Isen, 2004: 263) – mood, emotion and dispositional affect. Dispositional affect (also called trait affect) can be defined as a person's stable overall affective tendency (Heller, Judge, & Watson, 2002) that is part of one's personality. For example, some people are of more melancholic temperament than others, and they are so regardless of the situation they are in. Mood and emotion are called "state affect". State affect is the opposite of dispositional affect. The term "state affect" indicates that mood and emotion are transient affective experiences which are unstable over time, and responsive to the situation. In turn, the specific difference between moods and emotions is as follows: "emotions have an object of interest or a defining event that is part of the subjective experience itself. This is to say, emotions are always about something or someone. You're angry at your boss. You're proud of your performance. You're ashamed of your behavior. Moods, on the other hand, lack such an object or defining event. In this narrow sense, then, moods are affective experiences disconnected from their proximate

causes" (Cropanzano et al., 2003: 835).

In this section detailing the conceptual differences between affect, state affect, dispositional affect, emotions, moods and finally emotional energy availability, it is important to note the following three points. Firstly, emotional energy availability for work is not part of one's stable personality. It is thus not state affect. Secondly, emotional energy availability has a key referent – i.e., work. It is thus similar to emotions, because unlike moods, emotions have a key referent. Thirdly, emotional energy availability for work is different from emotions because it focuses exclusively on the energetic dimension of affect. Emotions are characterized by both energy and valence. Valence refers to the pleasantness versus unpleasantness of affect. See Barsade and Gibson (2007: 39) and Cropanzano et al. (2003).

Hypotheses Development

In his book entitled, "The biopsychology of mood and arousal", Thayer wrote "Thousands of times a day we are confronted with tasks that require resources to accomplish them, and in each case there is a momentary evaluation of the requirements of the task in relation to one's resources to meet it. This rapid evaluation

involves the instantaneous assessment of current mood [or emotional] states. Although the assessment occurs so quickly the person scarcely realizes it is occurring, nevertheless, an individual generally obtains information about the basic question, 'Do I have the energy to accomplish that task?' " (Thayer, 1989, p. 99), and if one does not have enough energy, then one abandons the task. In such a manner, Thayer alludes to the effects of the energetic dimension on goal commitment. The word "alludes" is used because the why and the how of the linkage to goal commitment were not clearly specified, and even the specific construct of goal commitment was not mentioned.

Whilst there has been no clear empirical test of the assertion that emotional energy availability mediates the relationship between antecedent factors and goal commitment, there exists some tangential evidence suggesting that this may be true. An experimental study (Erez & Isen, 2002) induced positive high energy affect (e.g., excitement) in subjects, and documented that it predicts all three components of expectancy motivation, i.e., valence (note that the term "valence" used in expectancy motivation is different from the term "valence" used in emotion research), instrumentality and expectancy (Vroom, 1964). Erez and Isen (2002) reasoned that goal commitment could be affected by positive high energy affect, such as excitement. This is because key elements from the expectancy theory of goal commitment (i.e., the attractiveness of goal attainment and the expectancy of goal attainment) are very similar to the Vroom's expectancy theory components (i.e., valence and expectancy) examined in Erez and Isen's (2002) study. Therefore Erez and Isen (2002), eminent affect researchers, called for future research to specifically examine the influence of affective constructs on goal commitment. This study aims to do just that by specifically examining how emotional energy availability influences goal commitment. Note

however, that Erez and Isen's (2002) study also did not explore the energetic value of emotions. As such, the present Study Two will build on and extend the findings and suggestions of Erez and Isen (2002).

Acting upon Erez and Isen's (2002) suggestion for future research, this correlational field study provides a direct test of whether affect relates to goal commitment by specifically examining whether emotional energy availability influences goal commitment. The key referent for "emotional energy availability" is work. When people feel enthusiastic, eager and excited about their work, they perceive high levels of emotional energy availability for work. When people feel reluctant, lethargic and unwilling vis-à-vis their work goals, they perceive low levels of emotional energy availability for work. Existing factor-analytic evidence and theoretical logic (Brief, Burke, George, Robinson, & Webster, 1988; Burke, Brief, George, Roberson, & Webster, 1989; Cropanzano et al., 2003; Saavedra & Earley, 1991; Saavedra & Kwun, 2000; Watson et al., 1999) suggest that low energy emotional states such as lethargy, are the polar opposites of high energy emotional states, such as excitement. Considering that researchers have noted that people invest as much effort into an endeavour as they think that they have energy to put in (Marks, 1977; Quinn & Dutton, 2005), it would seem that emotional energy availability is an important resource consideration when people are trying to determine whether or not it is worth the effort to stay committed to a goal. The following paragraphs will develop arguments for my stated prediction in Hypothesis 1 (from three different theoretical perspectives: (1) conservation of resources theory, (2) expectancy theory of goal commitment and (3) Kanfer's theory of resource allocation).

From the Perspective of Conservation of Resources Theory

Aside from the results of Study One, and some tangential empirical evidence described above, the conservation of resources theory (COR Theory) (Hobfoll, 2001) also provides a theoretical basis for expecting that emotional energy availability will relate to goal commitment. Hobfoll's (2001) conservation of resources theory (COR Theory) is centered on environmental and cognitive factors associated with resources, defined as those "objects, personal characteristics, conditions or energies that are valued in their own right or that are valued because they act as conduits to the achievement or protection of valued resources" (Hobfoll, 2001, p. 339). COR Theory puts resources into four categories. Objects are material possessions such as money, food and housing. Personal characteristics describe a person and are such as self-esteem, level of education, quantity of experience and career orientation. Conditions refer to desirable states such as happily married, comfortably retired and workplace seniority. Energies are resources such as time, money, knowledge and personal energy that are important in the acquisition of other kinds of resources (Hobfoll, 1998; Hobfoll & Lilly, 1993).

COR theory holds that everyone seeks to conserve the quantity and quality of their resources and to limit any circumstance that might endanger the quantity or quality of these resources. Therefore, the relative abundance or depletion of these resources will then determine whether the individual will continue to invest resources in an endeavour, or decide to conserve resources by withholding them from an endeavour. Of particular interest to the present study is the category of resources

labeled “energies”.

COR theory states that people need to invest resources in order to protect themselves against resource loss, recover from resource losses, and obtain more resources (Hobfoll, 2001). As levels of emotional energy available for work rise towards high energy feelings of enthousiasm and excitement, people perceive an abundance of emotional energy resources available for investment in work goal attainment. They are thus more likely to invest these resources in order to gain more resources and thus have the intention to extend effort toward work goal attainment i.e., have high goal commitment.

COR theory also states that those with depleted resources are likely to effectuate a defensive strategy to conserve resources (Hobfoll, 2001). One way to protect resources is to put in less effort (Halbesleben & Bowler, 2007). As levels of emotional energy available for work goal attainment drop towards low energy feelings of lethargy and reluctance to work, people perceive a depletion in emotional energy resources. As such, they are motivated to conserve their resources and have the intention to withhold effort from work goal attainment i.e., have low goal commitment.

In sum, higher levels of emotional energy availability (i.e., enthusiasm and excitement towards work) should be associated with higher goal commitment, whilst lower levels of emotional energy availability (i.e., lethargy and reluctance towards work) should be associated with lower goal commitment.

From the Perspective of Expectancy Theory of Goal Commitment

The expectancy of theory of goal commitment holds expectancy of goal attainment to be a proximal antecedent of goal commitment (Hollenbeck & Klein, 1987; Klein et al., 1999). Research has demonstrated that "beliefs in one's capability to mobilize … resources and courses of action needed to meet situational demands" relate positively to goal commitment (Brown, Cron, & Slocum, 1998; Earley, 1986; Wood & Bandura, 1989: 408) because it affects expectancy of goal attainment. Other things being equal, people are likely to be committed to a goal when they think they're likely to reach it (Klein et al., 1999; Locke, Shaw, Saari, & Latham, 1981; Mento, Cartledge, & Locke, 1980; Mento, Locke, & Klein, 1992).

It is reasonable to expect that a person who believes he/she has abundant resources available to invest in goal attainment, would tend to have higher expectations of goal attainment. Conversely, another who believes he has insufficient resources left to invest in goal attainment, would tend to have lower expectations of goal attainment. Low levels of emotional energy availability vis-à-vis work goals would inform an individual that he/she may have insufficient energetic resources to attain the goal. This gives rise to low goal commitment because expectancy of goal attainment is low. High levels of emotional energy availability vis-à-vis work goals would inform an individual that he/she has ample energetic resources to attain the goal. This gives rise to high goal commitment because expectancy of goal attainment is high.

From the Perspective of Kanfer's Resource Allocation Framework

Kanfer's (1987) resource allocation framework is another motivational theory with strong cognitive underpinnings that can help to explain the relationship between emotional energy availability and goal commitment. Similar to other expectancy theories of motivation, Kanfer's (1987) model holds that people put in personal resources (e.g., effort) to an endeavour [or goal] based on what they perceive the effort-utility function to be (Kanfer & Ackerman, 2004). The effort-utility function refers to the unattractiveness of varying levels of effort investment in an endeavor. In other words, this refers to the "anticipated costs of expending effort" (Kanfer, 1990: 148).

It stands to reason that when effort resources are scarce, they would be more costly, than when effort resources are present in great abundance. The costs of expending each unit of effort would be higher energy resource availabilities are low. Expending effort would be attractive in such a case. The costs of expending effort would be lower when energy resource availabilities are high. Expending effort would be unattractive in such a case. Viewed from Kanfer's resource allocation framework, it becomes unattractive to invest the same amount of effort when emotional energy availability is low, as compared to when emotional energy availability is high. Thus, the individual is more likely to withhold energetic resources from goal attainment when emotional energy availability is perceived to be low. Withholding energetic resources from goal attainment evidences low goal commitment. Viewed from Kanfer's resource allocation framework, it becomes attractive to invest the same amount of effort when emotional energy availability is high, as compared to when emotional energy availability is low. Thus, the individual is more likely to invest more energetic

resources in goal attainment when emotional energy availability is perceived to be high. Intending to invest more energetic resources in goal attainment evidences high goal commitment.

Hypothesis 1: *Emotional energy availability relates positively to goal commitment.*

Workplace Stressors and Emotional Energy Availability

Study One also found two categories of workplace stressors that correspond to those identified by recent developments in stress research - challenge stressors and hindrance stressors. Tables 6.1 and 6.2 show excerpts from Study One's interviews, that are coded as challenge stressors and hindrance stressors.

Challenge stressors are defined as those that are perceived as surmountable, and therefore, stimulate hope for personal growth or gain. Examples of challenge stressors are high workload, time pressures and heavy responsibility. These stressors are often perceived as stressful, but manageable. In organizations, coping well with these stressors, may lead to organizational rewards such as higher bonuses, valuable learning and promotions (Wallace et al., 2009). Hindrance stressors are defined as those perceived as insurmountable, and therefore do not stimulate any hope for personal growth or gain. Examples of hindrance stressors are organizational politics, role ambiguity and red tape. These stressors are often perceived as stressful and also insurmountable and a hindrance to an individual's efforts to achieve personal growth and gain (Wallace et al., 2009). See Tables 6.1 and 6.2 for excerpts from Study One's

interviews illustrating these workplace stressors.

Study One found that high levels of hindrance stressors and/or challenge stressors made people feel lethargic and sluggish. However, for a clearer picture of how stressors could relate to emotional energy availability, guidance can be sought from extant literature. Lepine, Lepine and Jackson (2004) argue that research has found positive relationships between exhaustion and stress arising from all forms of stressors (Westman & Eden, 1996). The authors argue that this is because exhaustion results from the desire to understand and cope with the demands of an ongoing situation causing heightened levels of arousal (Lepine et al., 2004); and these levels of arousal and information processing occur regardless of whether the demands are appraised as hindrance or challenge stressors. Lepine et al.'s (2004) results support this line of argumentation, finding that both challenge and hindrance stressors relate positively to emotional exhaustion, one of the three dimensions of burnout. Emotional exhaustion is defined as "a feeling that one's emotional resources are depleted" (Halbesleben, 2006, p. 1134). In view of the above reasoning, both challenge and hindrance stressors should ***deplete*** emotional energy availability. In this manner, workplace stressors (i.e., both challenge and hindrance stressors) should relate negatively to emotional energy availability. As such Hypotheses 2 and 3 are stated as follows.

Hypothesis 2: *Challenge stressors will relate negatively to emotional energy availability.*

Hypothesis 3: *Hindrance stressors will relate negatively to emotional energy availability.*

Table 6.1
Hindrance Stressors from Study One

1st Order Concepts	Excerpts from Interviews done in Study One	Hindrance Stressor Scale (Cavanaugh et al., 2000)
Organizational Politics	It's also how you view it. What you can see in the past is, you see people moving up not , ok some move up really move up because they are very good. Some move up because they are on very good terms with the big boss over there so they move up. - Engineer 28102 -	The degree to which politics rather than performance affects the assessment of my work goals.
Role Ambiguity	So it's like because I started the module first, that's why I don't have other modules where you can learn lessons of other people. People have tried on that path before and they will tell you, "You should do it this way" kind of thing. So it's like you are forging ahead on your own that kind of thing. - Engineer 28087 -	The inability to clearly understand what is expected of me in achieving my work goals.
Red Tape	In the whole two weeks, there's 20 problems. I think it's more than that, 20 to 30 problems they need to resolve. So every one problem if I were to feedback to them and they go and fix right away, I think we can clear the whole thing in one week. [But].. because of constant feeding back, no let's go and take a look. See the symptoms, redo the experiment for them to see… it take 3 weeks. - Engineer 10036 -	The amount of red tape I need to go through to achieve my work goals.
Not found in interviews	Not found in interviews	The lack of job security I have.

1st Order Concepts	Excerpts from Interviews done in Study One	Hindrance Stressor Scale (Cavanaugh et al., 2000)
Stalled career	Experience ah.. Like in this company, 7 years.. But not much progress lah.. Although I like my job lah, sometimes I also feel like, aiya, go and find another job lah.. To explore new things. You know what I mean? Cause if, if you talk to your colleagues, like stagnant already.. Because you're here 7 years, not much progress, still senior engineer. - Engineer 28242 -	The degree to which my career seems "stalled".

Table 6.2

Challenge Stressors from Study One

1st Order Themes	Excerpts from Interviews done in Study One	Challenge Stressor Scale (Cavanaugh et al., 2000)
Number of Assignments	So I had multiple things to handle at the same time. - Engineer 28048 -	The number of projects or assignments I have in my work goals.
Heavy Workload	The number of days working late is more than the number of working of going back on time… but at least 6, 7. Which is in the past when I first joined, it's like ok… probably only certain period of time I need to work late. But now, it's practically, so called during peak and non-peak, I got to work late. Not that I don't know why, its like continuous and continuous, and I say "When I can I have the downtime?" - Engineer 28102 -	The amount of time I spend at work in order to meet my work goals.
Time – Yes Time Pressure	It's a mixture of, the stress is mainly on the limited amount of time we have. We have to complete a lot of things in a short time. - Engineer 28082 -	The volume of work that must be accomplished in the allotted time to meet my work goals.
Pressures	It is quite difficult. Not say difficult but there's a lot of pressure because some people want fast. Management wants fast but when you go to the user, they will say, "No no no, I am still working…" - Engineer 38239 -	The pressures I experience in order to meet my work goals.
Amount of Responsibilities	No, but the impact is very huge… the impact is very huge… meaning those wafer processed out of the machine have to be scrapped. You know one wafer er… twenty five wafer equal to one Mercedes Benz… [sometimes] 5 to 10 lots [of 25 wafers] are hit. - Engineer 19208 -	The amount of responsibilities I have to shoulder in meeting my work goals.

Table 6.3
Quality of Coworker Relationships from Study One

1st Order Concepts	Excerpts from Interviews done in Study One	Quality of Coworker Exchange Scale (Sherony & Green, 2002)
Satisfied peers	(pause) maybe the process of going through the whole thing with them together, and its like teamwork and at the end of it, you will feel the appreciation shown by your teammate, some sort. - Engineer 29019 -	Do you usually know how satisfied they are with what you do?
Understanding problems and needs	Once a while when this situation happens, I'm talking about a couple of years ago, you see people tapping on your shoulders. If you go to the washroom and meet them, they will generally talk a little bit on this situation and say they disagree with it alright… but that's how it goes…. So they emphasize with me sometimes. - Engineer 19068 -	How well do they understand your job problems and needs?

1st Order Concepts	Excerpts from Interviews done in Study One	Quality of Coworker Exchange Scale (Sherony & Green, 2002)
Bail you out at their expense	It'll be the friends you made inside the army la, because these are the ones that been though and gone through the tests with you la. I would say that, compared to your normal friends outside army, the friendship would never put through the test. Like in the army when you're injured and everyone is carrying their own fair load of 20kg worth of equipment and if you fall and got injured, you know, your friends if they step forward and say come let's split the load we help you. This are what we call friendships that are being tested. - Engineer 28031 -	What are the chances that they would "bail you out" at their expense?
Not found	Not found	I have enough confidence in them that they would defend and justify my decisions if I am not around to defend myself.
Effective working relationship	The other factor is I feel that it's not a company problem. It is certain people's problem. And the reason why I have very good rapport with my engineers is that I still believe generally because there are a lot of people that can work well together, they happy together… that means able to work well collaboratively, cooperatively, productive in the way we conduct our business. - Engineer 28088 -	How would you characterize your working relationship with them?

1st Order Concepts	Excerpts from Interviews done in Study One	Quality of Coworker Exchange Scale (Sherony & Green, 2002)
Enjoyable relationships	Are there many? Well, the main motivating people are those who are friendly enough to, I mean, fun enough, not so dull. So it light up the situation, I mean in the sense, because, it's more of the working environment, so, it's more, if the people are quite lively, not so silent, they do talk, they do jokes, and I feel motivated about it. - Engineer 28019 -	Do you enjoy the time you spend with them?

Quality of coworker exchange may be defined as a relationship "between coworkers, who report to the same supervisor, that is characterized by mutual respect, trust, and obligation" (Sherony & Green, 2002, p. 543). Table 6.3 above shows excerpts from Study One's interviews which illustrate quality of coworker exchange. Study One found that when people enjoyed good relationships with their colleagues, they felt more enthusiastic about their work. However, research has not quantitatively tested this specific relationship.

Nonetheless, there is some tangential evidence that suggest that this relationship may be true. Using methods of social network analysis, Totterdell, Wall, Holman, Diamond, and Epitropaki (2004) found that the size and the density of employee social networks were related to employee enthusiasm and excitement for a change initiative. This does not surprise given that social networks provide people with regular doses of happy experiences (Cohen & Wills, 1985). These types of positive experiences might relate to wellbeing because they engender positive high energy pleasant affect (Cohen & Wills, 1985). In sum, the literature clearly documents that positive social experiences generate positive high energy feelings such as happiness and excitement.

Positive high energy feelings such as happiness and excitement comprise both positive valence and high energy. In this study, the specific focus is on emotional energy availability for work. This refers solely to the energetic component of emotion. Of interest therefore, is the notion of whether quality of coworker exchange can increase emotional energy available for work. The affect literature says little about

emotional energy availability. To explain the possible effects of emotional energy availability, one may draw upon Marks' (1977) theory of energy production. Marks' (1977) noted "the energy-producing element of social activity" and further argued that supportive and encouraging interpersonal relationships "may even create energy" for use in other activities (Marks, 1977, p. 926).

As such, people who experience high quality coworker relationships will have more emotional energy available for work. Conversely, those who experience low quality coworker relationships may not have access to the energy-producing element of social activity provided by supportive and encouraging interpersonal relationships. As such, after emotional energy availability is expended in the effort to attain goals, it is not replenished. Therefore, overall levels of emotional energy availability tend to be low. Indeed, Fernet, Gagne and Austin (2009) found that the lower the quality of coworker relationships, the higher the degree of emotional exhaustion. Emotional exhaustion is defined as a state wherein emotional resources are depleted and workers feel they have no more of themselves to give (Maslach & Jackson, 1981). In summary, the above argumentation suggests that quality of coworker relationships will have a positive relationship with emotional energy availability. Thus, Hypothesis 4 below is proposed. Hypotheses 1 to 4 are then summarized in Figure 6.1 below.

Hypothesis 4: *Quality of coworker relationship relates negatively to emotional energy availability.*

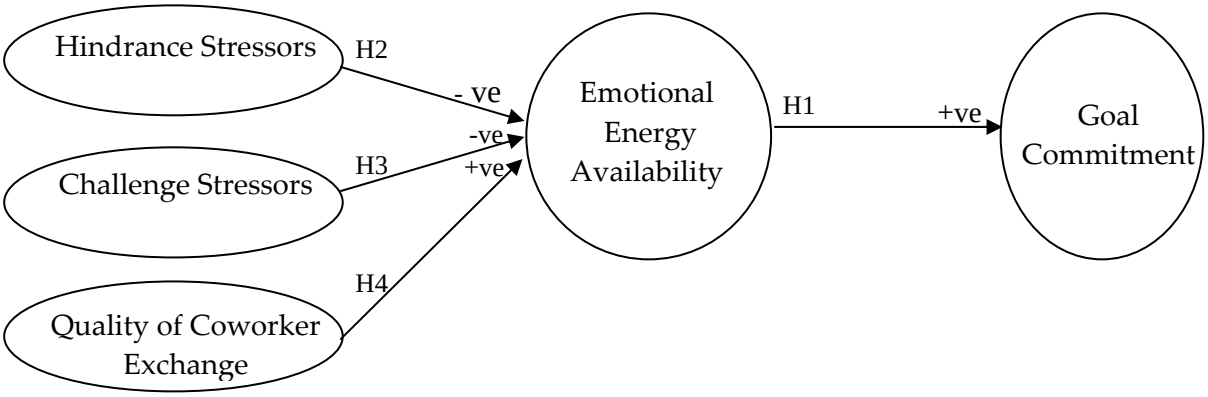


Figure 6.1 Conceptual Model

The Mediating Role of Emotional Energy Availability: Affective Events Theory

Hypotheses 1 to 4 above detail a conceptual model wherein emotional energy availability mediates the relationships between antecedent factors (challenge stressors, hindrance stressors and quality of coworker relationships) on the left hand side of the model and goal commitment on the right hand side of the model. See Figure 6.1 above. In this section, affective events theory will provide a basis upon which to develop hypotheses about the nature of this mediation: whether it is partial or full.

According to Weiss and Cropanzano's (1996) affective events theory (AET), the work environment gives rise to negative or positive events that subsequently stimulate emotional responses (Chattophadhyay, Finn, & Ashkanasy, 2010). Affective events are defined as something that happens to an employee in the course of work that sparks an immediate emotional response (Weiss & Cropanzano, 1996). They can be positive events in that they spark positive emotions, or they can be negative events in that they spark negative emotions. AET conceptualizes both causes and consequences of emotions at work (Fisher & Ashkanasy, 2000) Emotions are considered to be a

mediating mechanism through which positive or negative affective events impact job attitudes. AET suggests emotions flow from discrete affective events or occurrences. Situational factors found within the work environment predispose the more or less frequent occurrence of discrete events that give rise to specific emotions.

For instance, in the present Study Two, high quality coworker interactions would stimulate momentary positive emotions (joy, and happiness) which, according to AET, would in turn affect job attitudes such as job satisfaction and goal commitment. Indeed, Rodell and Judge (2009) argue that both challenge and hindrance stressors, are excellent examples of affective experiences that may stimulate emotional reactions. And in turn, these emotional responses determine outcomes. Rodell and Judge (2009) found that anger and anxiety ***fully mediated*** the relationships between both types of workplace stressors and outcomes. The outcomes examined in Rodell and Judge's (2009) study were counterproductive work behaviours and citizenship behaviours. Rodell and Judge's (2009) results support the notion that emotions fully mediate the relationship between situational factors and outcomes. Rodell and Judge's (2009) results suggest that emotional energy availability too (the energetic dimension of emotions), may fully mediate the relationships between situational factors (i.e., hindrance stressors, challenge stressors, quality of coworker exchange) and outcome (i.e., goal commitment).

In the light of both AET and Rodell and Judge's (2009) results, one expects that emotional energy availability fully mediates the relationship between (1) hindrance stressors and goal commitment, (2) challenge stressors and goal commitment, (3) quality of coworker relationships and goal commitment. As such, Hypotheses 5, 6 and 7 are proposed below.

Hypothesis 5: *Emotional energy availability fully mediates the relationship between hindrance stressors and goal commitment.*

Hypothesis 6: *Emotional energy availability fully mediates the relationship between challenge stressors and goal commitment.*

Hypothesis 7: *Emotional energy availability fully mediates the relationship between quality of coworker relationships and goal commitment.*

Method

Sampling Frame

Choice of Organization. The high tech engineering organization chosen is a suitable research site for the following reasons. Firstly, consistent with what has been documented about the nature of engineering work (Gregersen & Dyer, 2002; Leonardi et al., 2009), engineers work in teams to solve engineering problems. As such, engineers are well-positioned to inform this study about quality of coworker relationships. Secondly, the organization practices an annual goal setting exercise. As such, the engineers from the chosen organisation are well-positioned to inform the field about goal commitment. Thirdly, as in any modern organization, it is not completely devoid of workplace stressors, and hence its employees would be able to report on their experience of workplace stressors. Fourthly, it is also reasonable to think that the employees in this organization, as in employees elsewhere, would be able to give an account of their personal levels of emotional energy availability.

Survey Administration and Collection. The data for my study was assembled from a survey administered to 608 employees working in a high tech engineering

organization. Access to the organization was provided by the CEO. The survey was anonymous. A survey packet containing a self-addressed return envelope was distributed to each target respondent via the Human Resources Department, together with the Participant Information Sheet and the survey form. Following the recommendations of Rogelberg and Stanton (2007), The following steps were taken to encourage a higher response rate. The survey was publicized by printing posters for the HR Department to distribute to all departments for display on department notice boards and elevators. Appendix 1 contains this poster. The poster was also disseminated via email.

To give target respondents a sense that each was personally invited to participate in the survey, the survey was distributed by the HR Department in a personalized envelope to every single target respondent. Each personalized envelope contained a Participant Information Sheet (see Appendix 4). This ensured that even people who did not have easy access to computers would have ample opportunity to participate. The HR Department distributed the survey via internal mail to the workstation of every target respondent. This prevented incidences of lost surveys due to outdated home addresses. Three weeks after, the HR Department sent out an email reminder to all the target respondents. This email reminded them that they had a received a survey packet, and that answering it responsibly would help the organization improve working conditions for employees. The survey was kept short and required only about 5 minutes to fill out.

Responses. Surveys were sent out to 608 people. 487 surveys were returned. This represents a response rate of 80.1%. Of the surveys returned, 21 were not used because they contained missing data. The final dataset numbered 466 cases and represented

76.6% of the target respondents. 466 cases is an adequate sample size because, according to Schumacker & Lomax's (2004) examination of published studies using structural equation modeling to analyze data, "many articles used from 250 to 500 subjects" (p. 50).

Given that participation in the survey was voluntary, there was a need to examine the data for possible response biases. Table 6.4 below shows the demographic profiles of the target population versus the sample collected. Table 6.4 shows that the sample collected does not differ greatly from the target population on marital status and gender profiles. However, the sample collected seems to have less representation from respondents who are 24 years old or younger. This response bias may be due to the manner in which respondents were encouraged to participate. It was communicated that the results of the survey would help the organisation improve working conditions. Those aged 24 and below would necessarily be very new to the organisation. As such, they may not have developed a very strong commitment to the organisation such that they would be moved by the reasons (i.e., help the organisation improve working conditions) to do the survey, and to do it properly and well. Alternatively, they may have thought that they were too new to the organisation to be able to fill out the survey informatively.

Table 6.4
Demographic Profiles of the Target Population versus the Sample Collected

	Target Population	Sample
Marital Status		
Single	52%	52.8%
Married or Living With a Partner	48%	47.2%
Gender		
Male	73.4%	73.4%
Female	26.6%	26.6%
Age		
24 or less	19.6%	10.3%
25 to 34	53.5%	64.4%
35 to 44	23.8%	22.3%
45 to 54	2.8%	2.6%
55 and above	0.3%	0.4%

Table 6.5
The Reported Cronbach Alphas of the Measures Used

	Construct	Cronbach Alpha	Reported in
1.	Emotional Energy Availability	-	Not reported in the literature
2.	Quality of coworker exchange	0.72	Sherony & Green (2002)
3.	Hindrance Stress	0.72	Cavanaugh et al. (2000)
4.	Challenge Stress	0.89	Cavanaugh et al. (2000)
5.	Goal Commitment	0.75	Klein et al. (2001)

Hindrance stressors were assessed by using all five items from Cavanaugh et al. (2000)'s measures of hindrance stressors. An example of an item from Cavanaugh et al. (2000) is "The degree to which politics rather than performance affects the assessment of my work goals". These items were rated on a five point Likert scale anchored from "No stress" to "A great deal of stress". Refer to Table 6.6 below for a complete list of all the items used. The cronbach alphas for all measures reported in the literature are detailed in Table 6.5 above.

Table 6.6
Hindrance Stressors Survey Items and Anchors

	No Stress	Little Stress	Some Stress	Considerable Stress	A Great Deal of Stress
1. The degree to which politics rather than performance affects the assessment of my work goals.	1	2	3	4	5
2. The inability to clearly understand what is expected of me in achieving my work goals.	1	2	3	4	5
3. The amount of red tape I need to go through to achieve my work goals.	1	2	3	4	5
4. The lack of job security I have.	1	2	3	4	5
5. The degree to which my career seems "stalled".	1	2	3	4	5

Challenge stressors were assessed using all five items from Cavanaugh et al. (2000)'s measures of challenge stressors An example of a challenge stressor item from Cavanaugh et al. (2000) reads as "The amount of time I spend at work in order to meet my work goals". These items were rated on a five point Likert scale anchored from "No stress" to "A great deal of stress". Refer to Table 6.7 below for a complete list of all the items used. The cronbach alphas reported in the literature for all measures, are detailed in Table 6.5 above.

Table 6.7
Challenge Stressors Items and Anchors

	No Stress	Little Stress	Some Stress	Considerable Stress	A Great Deal of Stress
1. The number of projects or assignments I have in my work goals.	1	2	3	4	5
2. The amount of time I spend at work in order to meet my work goals.	1	2	3	4	5
3. The volume of work that must be accomplished in the allotted time to meet my work goals.	1	2	3	4	5
4. The pressures I experience in order to meet my work goals.	1	2	3	4	5
5. The amount of responsibilities I have to shoulder in meeting my work goals.	1	2	3	4	5

Quality of coworker relationships was assessed by using all six CWX items from Sherony & Green (2002). Ratings are on a five point scale, which each have different anchors. See Table 6.8 below for details on the different anchors. An example of an item reads as "Do you usually know how satisfied your coworkers are with you?" The cronbach alphas reported in the literature for all measures, are detailed in Table 6.5 above.

Table 6.8
Quality of Coworker Relationships Items and Anchors

Items	1	2	3	4	5
1. Do you usually know how satisfied they are with what you do?	Rarely	Occasionally	Sometimes	Fairly Often	Very often
2. How well do they understand your job problems and needs?	Not a bit	A little	A fair amount	Quite a bit	A great deal
3. What are the chances that they would "bail you out" at their expense?	None	Small	Moderate	High	Very high
4. I have enough confidence in them that they would defend and justify my decisions if I am not around to defend myself.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
5. How would you characterize your working relationship with them?	Extremely ineffective	Worse than average	Average	Better than average	Extremely effective
6. Do you enjoy the time you spend with them?	Not a bit	A little	A fair amount	Quite a bit	A great deal

Emotional energy availability was assessed with six items written from the findings of Study One. See Table 6.9 below for the list of items and anchors. Two examples of items read as "I feel excited about my work" and "I feel unwilling to get on with my work". Ratings are on a five point scale ranging from "Not at all" to "Very much". These items were pilot-tested with 3 executives from the HR Department and 3 members of the senior management team including the CEO. They proposed no changes to the items.

Table 6.9
Emotional Energy Availability Items and Anchors

	Not at All	A Little	Quite	Much	Very Much
1. I feel excited about my work.	1	2	3	4	5
2. I feel enthusiastic about my work.	1	2	3	4	5
3. I feel eager to get on with my work.	1	2	3	4	5
4. I feel lethargic about my work.	1	2	3	4	5
5. I feel reluctant to put effort into my work.	1	2	3	4	5
6. I feel unwilling to get on with my work	1	2	3	4	5

Goal commitment was assessed with the 5 items from the nine-item scale identified by Klein et al. (2001) to be the most robust. See Table 6.10 below for the list of items and anchors. An example of an item reads "I don't care if I achieve my work goals or not", scored on a five point Likert scale anchored from Strongly Disagree to Strongly Agree. The cronbach alphas reported in the literature for all measures, are detailed in Table 6.5 above.

Table 6.10
Goal Commitment Items and Anchors

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. It's hard to take my work goals seriously.	1	2	3	4	5
2. I don't care if I achieve my work goals or not.	1	2	3	4	5
3. I am strongly committed to pursuing my work goals.	1	2	3	4	5
4. It wouldn't take much to make me abandon my work goals.	1	2	3	4	5
5. I think my goals are good work goals to shoot for.	1	2	3	4	5

Note that in this study, both dependent and independent variables will be taken from the same source. To prevent spurious relationships arising from same source bias (or common method bias), Podsakoff, MacKenzie, Lee and Podsakoff (2003) suggest that one "obtain measures of the predictor and criterion variables from different sources". However, this was not possible to do because of ethical considerations. It was not possible to capture predictor and criterion variables from different sources and still maintain the anonymity of the respondents vis-à-vis their employer.

As such, another remedy for same source bias was effectuated i.e., "partialling out an unrelated 'marker variable' as a surrogate for method variance. A 'marker variable' that is theoretically unrelated to the constructs of interest is included in the study" (Podsakoff et al., 2003, p. 887). This marker variable is a 4-item measure created

to assess the opinion of the target respondents about whether children (aged 7 and 8) who take exams would learn less well.

Table 6.11
Marker Variable Items and Anchors

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Children in the first 2 years of primary school learn less well when they have to sit for exams.	1	2	3	4	5
2. Exams given to children in the first 2 years of primary school are unhelpful to the child's learning.	1	2	3	4	5
3. Exams interfere with children's learning in the first 2 years of primary school.	1	2	3	4	5
4. The natural curiosity of a child in the first 2 years of primary school is stifled by exams.	1	2	3	4	5

These items were piloted with three executives from the HR Department and three members of the senior management team. Qualitative feedback was gathered and used to improve the items to make them unambiguous and meaningful to the target respondents. These items will be scored on a five point Likert scale anchored from Strongly Disagree to Strongly Agree. In addition, demographic variables such as age, gender and marital status were included as part of the survey in order to ascertain whether the sample collected approximated the demographic profile of the target sample. See Table 6.12 below.

Table 6.12
Demographic Questions

Age: (In years as at March 2010)	Age: □ 24 years old and below, □ 25 – 34 years old, □ 35 – 44 years old, □ 45 – 54 years old, □ 55 years old and above	
Marital Status (Tick the correct option)	☐ Single	☐ Married/Living with a partner
Gender (Tick the correct option)	☐ Male	☐ Female

Chapter Conclusion

To summarize, the research question for Study Two is "What role does emotional energy availability play in the goal commitment nomological network?" To answer this question, three antecedent constructs of emotional energy availability and goal commitment were selected for positivist testing.

Next, from the lenses of expectancy theory of goal commitment (Klein et al., 1999), conservation of resources theory (Hobfoll, 2001) and Kanfer's resource allocation framework (Kanfer, 1990), it was theoretically reasonable to expect that emotional energy availability would relate positively goal commitment. Through the lenses of affective events theory, it was theoretically reasonable to expect that challenge stressors, hindrance stressors and quality of coworker relationships would each give rise discrete

events in the workplace that would affect emotional energy availability; and through emotional energy availability they would affect goal commitment. In the next chapter, Study Two's data analytic strategies and its results will be presented and discussed.

CHAPTER SEVEN: STUDY TWO ANALYSIS AND RESULTS

Chapter Introduction

In this chapter, the data analytic strategies for Study Two will be presented. This chapter will first present how the measurement model was explored and confirmed (i.e., exploratory and confirmatory factor analyses). The criteria for deleting problematic items will be detailed. Next, the steps used to test the structural equation model using LISREL will also be presented, together with an account of how one interprets the various fit indices in order to assess how well the hypothesized model fits the data. Lastly, the results of the data analysis will be presented. One particular finding was unexpected. A plausible explanation for the surprising finding will be presented in the discussion.

Factor Analyses

A combination of exploratory and confirmatory factor analyses was performed on the data to assess the validity of the above constructs in the study. First, a principal component factor analysis with varimax rotation was done using all the items in the model in order to examine the factor structure and loadings of the constructs. The initial results yielded six factors with eigenvalues above one. Items that did not cleanly load on a single factor (cross-loading greater than 0.40 or differential of cross-loading and factor loading less than 0.20) and/or failed to load onto the expected factors, and/or

had poor factor loadings (less than 0.40) were dropped. One item was dropped from the hindrance stressors scale. One item was dropped from the marker variable's scale.

The exploratory factor analysis in SPSS generated the results depicted in Table 7.1 below. The initial results yielded six factors with eigenvalues above one. Except for Item 3 of the hindrance stressors scale, there were no problems with cross-loading. Problematic cross-loading was assessed with the following criteria: (1) the item loaded on another factor at greater than 0.40, (2) the differential of cross-loading and factor loading was 0.20 and (3) the item loaded at less than 0.50 on the correct factor. Item 3 of the hindrance stressors scale loaded onto the same scale as the challenge stressor items at 0.44. Item 3 of the hindrance stressor scale also had a differential of cross-loading and factor loading of 0.20. As such, it was dropped from further analyses. Item 4 of the marker variable scale loaded at less than 0.50 on the correct scale. Thus, it too was dropped from further analyses.

Table 7.1
Factor Loadings for the EFA Analysis

Constructs and Items	Factor Loadings	
Goal Commitment		
Item 1	0.67	
Item 2	0.76	
Item 3	0.77	
Item 4	0.60	
Item 5	0.61	
Hindrance Stressors		
Item 1		0.75
Item 2		0.72
Item 3	0.44	0.63
Item 4		0.70
Item 5		0.74
Challenge Stressors		
CS1	0.83	
CS2	0.83	
CS3	0.86	

Constructs and Items	Factor Loadings				
CS4	0.87				
CS5	0.87				
Quality of coworker relationships					
CWX1		0.65			
CWX2		0.74			
CWX3		0.72			
CWX4		0.73			
CWX5		0.72			
CWX6		0.70			
Emotional Energy Availability					
E1			0.83		
E2			0.84		
E3			0.82		
E4R				0.71	
E5R				0.85	
E6R				0.83	
Marker Variable					
CmM1					0.84
CmM2					0.89
CmM3					0.84
CmM4					0.49

Given that emotional energy availability was assessed using three positively worded items and three negatively worded items, they loaded onto two separate factors in the exploratory factor analysis. Research widely documents this phenomenon as a method artifact caused by positively worded and negatively worded items (Barnette, 2000; Benson, 1987; Knight, Chisholm, Marsh, & Godfrey, 1988; Pilotte & Gable, 1990) – i.e., three items of the emotional energy availability scale are phrased positively, whilst the remaining three are phrased negatively. This is necessarily so because the first three items of the scale articulate positively valenced high energy emotions; whilst the last three items of the scale articulate negatively valenced low energy emotions. The valence dimension and the energetic dimension are confounded

within the same items. The covariance between the first three items and the last three items may be considered systematic error (Byrne, 1998, p. 147) attributable to emotional valence. It was necessary to partial out the systematic errors due to positive valence in the first three items, and negative valence in the last three items respectively. Hence, in the next step, when performing confirmatory factor analyses of all the six constructs with LISREL 8.8, (Jöreskog & Sörbom, 1996) correlated error terms for the first three emotional energy availability items with each other, were specified; and next, correlated error terms for the last three emotional energy availability items with each other, were also specified. This effectively partials out the systematic error due to negative valence in the last three items; and it also partials out the systematic error due to positive valence in the first three items – leaving the energetic dimension to be estimated in the final structural equation model.

This manner of specifying the correlated error terms is not usual when estimating structural equation models. Indeed, (Byrne, 1998) wrote "the specification of correlated error terms for purposes of achieving a better fitting model is not an acceptable practice". However, she continues to write that where there is "a strong, substantive, rational, empirical rationale or both" then it should be done, and she herself (in her own work) specified the error correlations between two sets of items on the Maslach Burnout Inventory (Byrne, 1998, p. 150). In the case of the emotional energy availability scale, it is clear that there is a logical reason to freely estimate the error covariances between the first three items with each other, and the last three items with each other because negative and positive emotional valence were confounded in items that were intended to only measure only high and low energy. Figure 7.1 below illustrates the model specified in LISREL 8.8 (Jöreskog & Sörbom, 1996).

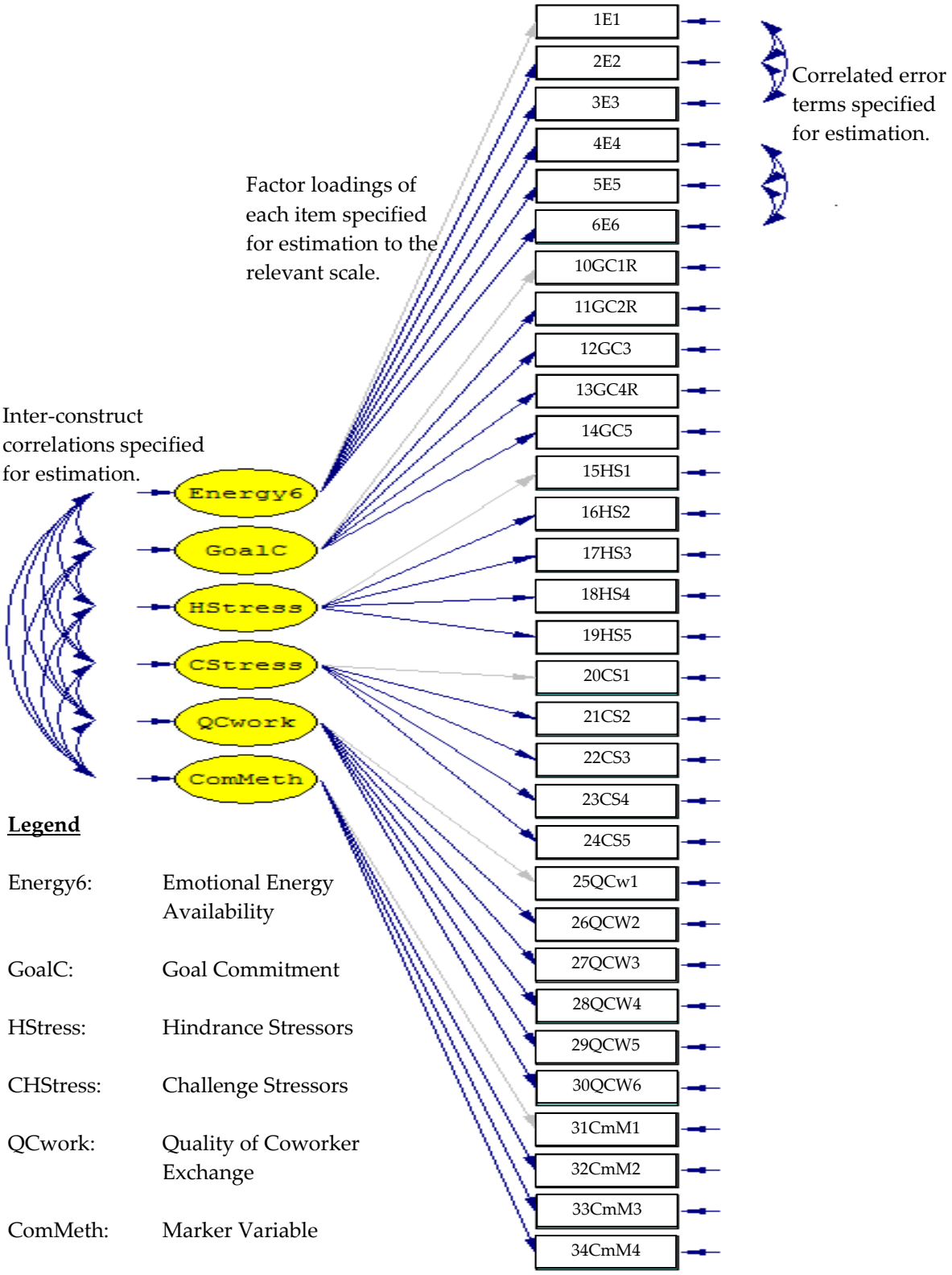


Figure 7.1 Specified Confirmatory Factor Analysis Model

Following Hatcher (1998) and Byrne (1998), several indices of model fit were used to assess the fit of the confirmatory factor analysis model. These include (1) the chi-square goodness-of-fit statistic, (2) the root-mean-square error of approximation (RMSEA), (3) the goodness-of-fit index (GFI), (4) the adjusted goodness of fit index (AGFI), (5) the comparative fit index (CFI) and (6) the standardized root mean square residual (SRMR). In the paragraphs below, a detailed explanation of each of the above structural equation modelling indices will be offered.

Chi-Square Goodness of Fit Statistic

The chi-square goodness of fit statistic tests whether the discrepancy between the unrestricted sample covariance matrix, and the restricted covariance matrix implied by the model is significant. A non-significant chi-square indicates good fit to the data since it suggests that there is no significant discrepancy between the covariance matrix implied by the model and the sample covariance matrix (Kelloway, 1998: 25). However, the chi-square goodness of fit statistic is sensitive to sample size. In the case of the present study, the sample size is 644. Given such a large sample, even small discrepancies between the covariance matrix implied by the model and the sample covariance matrix will be significant. Since no theoretically modeled covariance matrix will fit exactly to the sample data, such significant but small differences indicated by the chi-square may not necessarily indicate that the model is not good. Hence, it is necessary for me to look at other fit indices to ascertain if my model fits the data well.

Root Mean Square Error of Approximation

The RMSEA is commonly regarded as the one of the most informative fit indices. It focuses on the amount of discrepancy between the covariance matrix implied by the model and the population covariance matrix (if this were available), but reports this discrepancy per degree of freedom. It takes into account the error of approximation in the population and asks the question "How well would the model, with unknown but optimally chosen parameter values, fit the population covariance matrix if it were available?" (Byrne, 1998: 112). By reporting the discrepancy per degree of freedom, the RMSEA takes into account model complexity. Values less than 0.05 are indicative of good fit, between 0.05 and under 0.08 of reasonable fit, between 0.08 and 0.10 of mediocre fit and >0.10 of poor fit (Byrne, 1998). LISREL also reports the 90% confidence interval around the RMSEA value. As long as the upper bound of this confidence interval does not exceed 0.08, one can conclude that the model fits reasonably well to the data.

Goodness of Fit Index

The goodness-of-fit index (GFI) indicates the relevant amount of variances and covariances accounted for by the model. It is based on the ratio of the sum of squared differences between the sample covariance matrix and the hypothesized model's covariance matrix, to the sample's variances. It answers the question, "What percentage of the variance and covariance in the sample data is predicted by the hypothesized model?" (Schumacker & Lomax, 2004). The adjusted goodness-of-fit (AGFI) index is adjusted for the degrees of freedom of a model relative to the number

of variables. Both the GFI and AGFI range "from 0 to 1, with values exceeding 0.9 indicating a good fit to the data." (Kelloway, 1998: 27).

Normed Fit Index

The normed fit index (NFI) indicates the percentage of improvement in fit over the baseline model, or the independence model, i.e., the model specifying no relationships between the variables composing the model. Thus, an NFI of 0.90 means that the hypothesized model is 90% better fitting than the independence model. This index tends to underestimate model fit in small samples. "Addressing evidence that the NFI has shown a tendency to underestimate fit in small samples, Bentler (1990) revised the NFI to take sample size into account, and proposed the Comparative Fit Index (CFI)" (Byrne, 1998: 117). Yet another index in this family is the NNFI, which is like the CFI but accounts for model complexity. This NNFI index however is unnormed and its value can extend beyond the range of 0 and one. This makes it difficult to assess model fit. In this study, CFI has been chosen, instead of the NFI, nor the NNFI, following Bentler's (1990) suggestion that of the three indices in this family, the CFI should be the index of choice. Values for the CFI range from zero to one and indicate how much better the hypothesized model is in comparison to the independence model. Values exceeding 0.90 demonstrate good fit to the data.

Standardized Root Mean Square Residual

The standardized root mean square residual (SRMR) is the average value of the standardized residuals derived from fitting the variance-covariance matrix of the hypothesized model to the variance-covariance matrix of the sample. If the model fit is good, the fitted residuals should be small. Values not exceeding 0.05 are considered a good fit.

Results of the Confirmatory Factor Analysis

The resultant indices of the confirmatory factor analysis (x^2 = 953.05, df = 361, p < .00; GFI = 0.88, AGFI = 0.85, RMSEA = 0.059, CFI = 0.96, SRMR = 0.056) indicated a good fit. This means that the measurement model is robust enough for analyzing the conceptual model. Table 7.2 below summarizes the fit indices of the confirmatory factor analysis model, and compares it to what is documented as the cut-off levels of good fit (Byrne, 1998; Diamantopoulos, 2000; Kelloway, 1998). Table 7.3 below summarizes the factor loadings from the CFA analysis.

Table 7.2
The CFA Model's Fit Indices and Assessment of Good Fit for Each Index.

Fit Index	What is Considered a Good Fit Index	Resultant Fit Index of the CFA Model	Assessment of the CFA Model Fit
Chi-Square Goodness-of-Fit Statistic	P < 0.01	953.05 with 361 degrees of freedom (p = 0.0)	Good
Root-Mean-Square Error of Approximation (RMSEA)	<0.10	0.059	Reasonable
Goodness-of-Fit Index (GFI)	> 0.90	0.88	Reasonable
Adjusted Goodness of Fit Index (AGFI),	> 0.90	0.85	Reasonable
Comparative Fit Index (CFI)	> 0.90	0.96	Good
Standardized Root Mean Square Residual (SRMR)	< 0.050	0.056	Reasonable

Table 7.3
CFA Factor Loadings (all factor loadings are significant)

Constructs and Items	CFA Factor Loadings
Goal Commitment	
CS1	0.71
CS2	0.78
CS3	0.65
CS4	0.60
CS5	0.53
Hindrance Stressors	
HS1	0.71
HS2	0.72
HS4	0.68
HS5	0.66
Challenge Stressors	
CS1	0.84
CS2	0.86
CS3	0.90

Constructs and Items	CFA Factor Loadings		
CS4	0.88		
CS5	0.83		
Quality of coworker relationships			
DCWX1		0.51	
DCWX2		0.60	
DCWX3		0.58	
DCWX4		0.74	
DCWX5		0.80	
DCWX6		0.76	
Emotional Energy Availability			
E1			0.63
E2			0.62
E3			0.62
E4R			0.60
E5R			0.57
E6R			0.57
Marker Variable			
CmM1			0.74
CmM2			0.94
CmM3			0.77

Structural Equation Model Analysis

This dissertation's author used structural equation modeling (SEM), implemented in LISREL (Jöreskog & Sörbom, 1996), to test the hypothesized relationships among the variables by considering all the relationships among the key variables simultaneously in estimating the parameters. Following Anderson and Gerbing's (1988) two step approach to model testing, this dissertation's suthor used SEM to fit a series of nested models to the data. This manner of proceeding ensures that the Models 1 to 5 are nested models. Another term for nested models is hierarchical models. "Two path models are hierarchical if one is the subset of the other. For example, if a path is dropped from Model A to form Model B, the two models are hierarchically related (i.e., B is nested under A). There are two contexts in which hierarchical models are usually compared, model trimming and model building"

(Kline, 1998, p. 131). In model trimming, one begins with a just-identified model (i.e., a model is specified such that the degrees of freedom are zero) and then one drops the paths to be estimated one by one. In model building, one begins with a plausible over-identified model (i.e., a model is specified such that the degrees of freedom are not zero), and one adds paths one by one (Kline, 1998). Models can be trimmed or built according to two standards, theoretical or empirical. The theoretical approach to model trimming / building begins by specifying the theoretically developed model representing the hypotheses developed for the study. To trim, one drops paths to be estimated. To build, one adds paths to be estimated. For Study Two, the model building strategy used started by specifying the basic hypothesized model, and then proceeded to path addition.

Model 1 was a fully mediated model in that emotional energy availability fully mediates the relationships between (1) workplace stressors and goal commitment, and (2) high quality coworker relationships and goal commitment (see Figure 7.2). Model 2 was a partially mediated model in that a direct path from challenge stressors to goal commitment was added (see Figure 7.3). Model 3 was a partially mediated model in which yet another direct path, from hindrance stressors to goal commitment was added (see Figure 7.4). Model 4 was a partially mediated model in that yet another direct path, from quality of coworker relationships to goal commitment was added (see Figure 7.5). Model 5 was a partially mediated model in that yet another direct path, from the marker variable to goal commitment was added (see Figure 7.6).

In specifying the model parameters, all the exogeneous variables in the model (challenge stressors, hindrance-related stress, high quality coworker relationships) were allowed to covary (Hatcher, 1998). This reflects the reality that the various

measures possess some degree of correlations between themselves. See Table 7.4 below for the correlation table of all the measures in the study. In order to determine the best fitting model amongst all the models, one examines the change in the chi-square goodness of fit statistic. For every change in degrees of freedom (i.e., every time one adds a path for estimation, one reduces the degrees of freedom by one) an improvement of fit is seen by a reduction of the chi-square value (Kline, 1998).

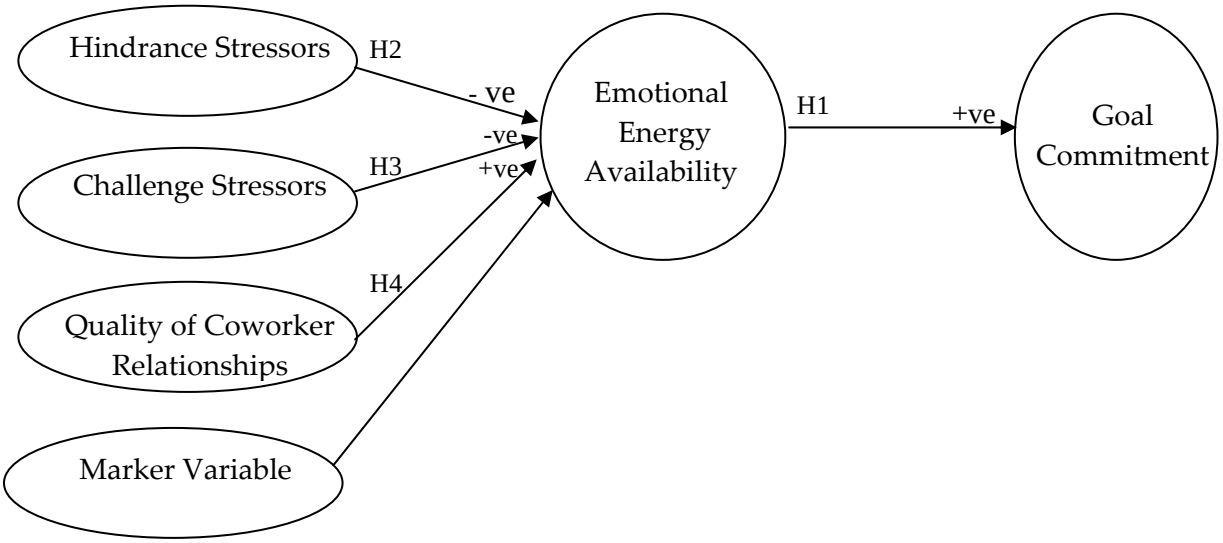


Figure 7.2 Model 1 (fully mediated)

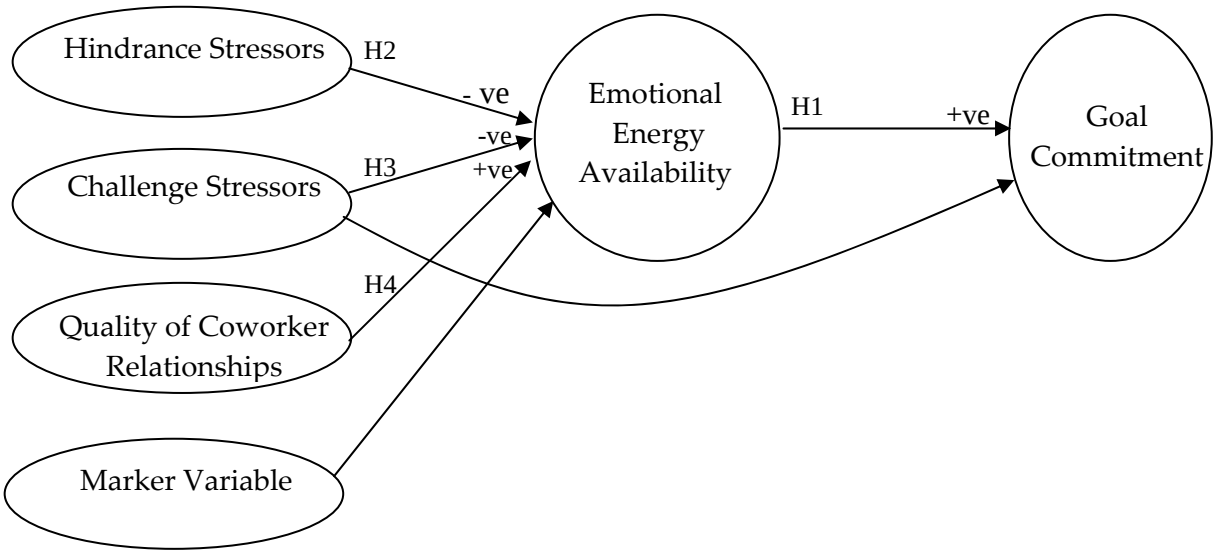


Figure 7.3 Model 2 (direct path from challenge stressors to goal commitment added)

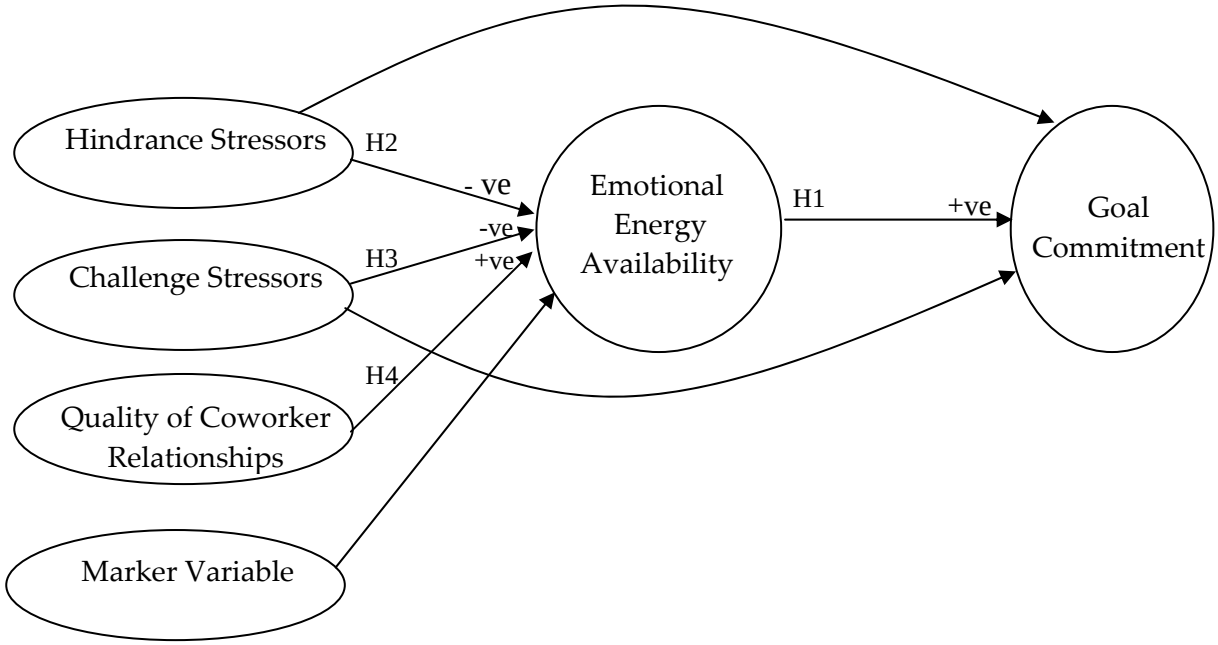


Figure 7.4 Model 3 (direct path from hindrance stressors to goal commitment added)

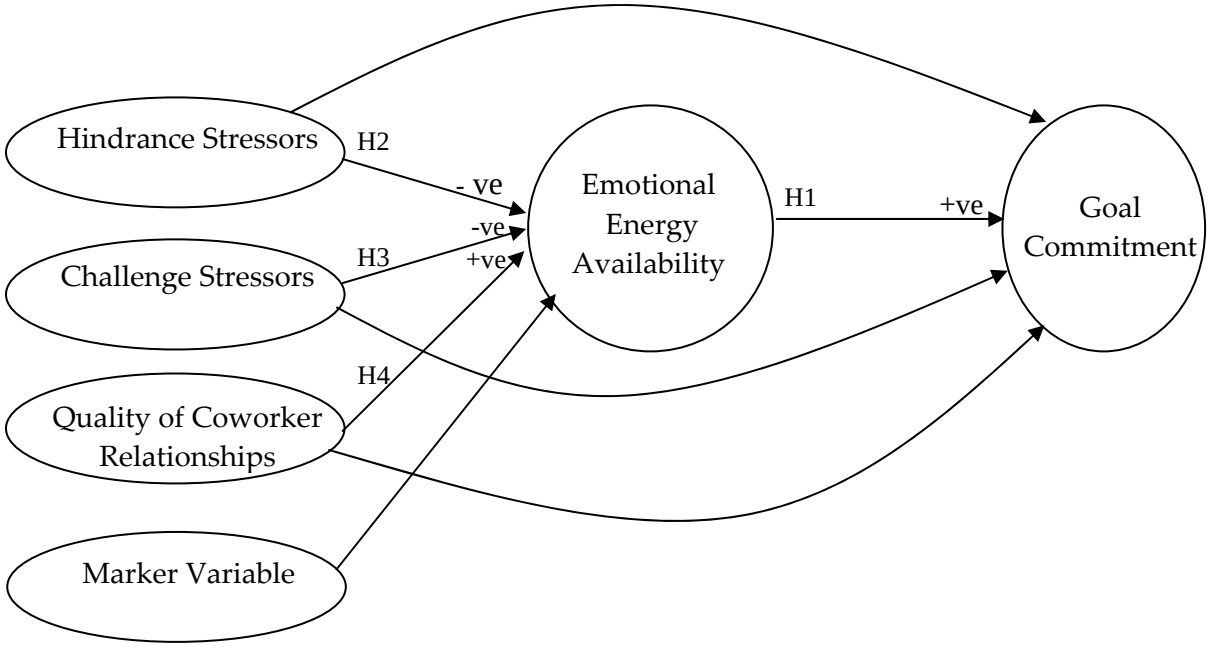


Figure 7.5 Model 4 (direct path from quality of coworker relationships added)

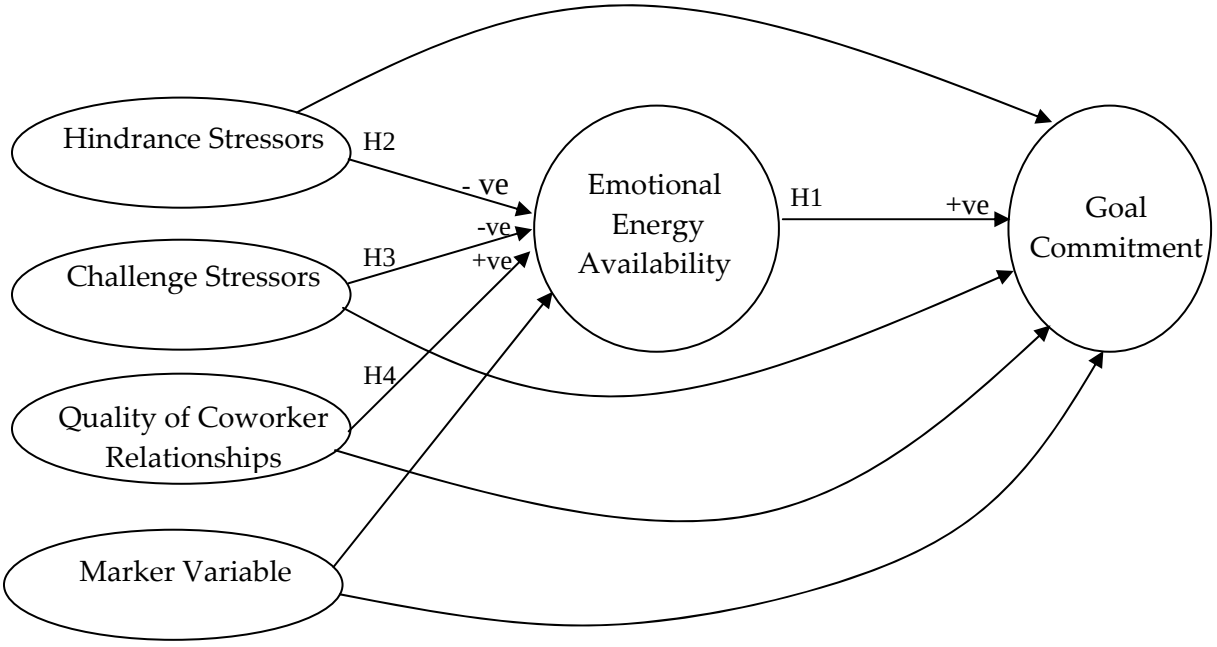


Figure 7.6 Model 5 (direct path from marker variable to goal commitment added)

Results

Table 7.4 below presents the means, standard deviations and correlations of the variables in the study. The SEM results for Model 1, the basic hypothesized model, suggested that this model fitted the data well, with all fit indices meeting the criteria for good fit (x2 = 963.31, df = 360, p < .00; GFI = 0.87, AGFI = 0.85, RMSEA = 0.060, CFI = 0.96, SRMR = 0.055, AIC = 1113.31). Next, Model 2 was fitted to the data. The SEM results for Model 2, the basic hypothesized model, suggested that this model fit the data better than Model 1; and that the improvement of fit was of statistical significance (x2 = 952.27, df = 359, p < .00; GFI = 0.88, AGFI = 0.85, RMSEA = 0.060, CFI = 0.96, SRMR = 0.053, AIC = 1104.27).

That the improvement in fit is of statistical significance may be seen from comparing the chi-square goodness of fit indices of both models. Specifying an additional path from challenge stressors to goal commitment (see Figure 7.3) improves the chi-square goodness of fit index by 11.04 for a corresponding change in one degree of freedom. Reading off the table of percentiles of the chi-square distribution, it may be seen that for a change in one degree of freedom specified in the model (1) a reduction in chi-square of 3.84 is significant at $p < 0.05$, (2) a reduction in chi-square of 6.63 is significant at $p < 0.01$. Since the chi-square goodness of fit index dropped by 11.04 (i.e., more than the 6.63 required for $p < 0.01$), the improvement in fit between Model 1 and Model 2 is significant at $p < 0.01$. One concludes therefore that Model 2 is the better fitting model.

With the addition of further paths in Models 3, 4 and 5, there was no statistically significant improvement in the chi-square goodness of fit statistic (see

Table 7.5 below). Table 7.5 summarizes the fit indices of all the models fitted to the data, as well as the corresponding change in chi-square value and the significance level of the change. As such, Model 2 remains the best fitting and most parsimonious model for the data.

To be sure of the above conclusion, the Model AIC was examined. The Model AIC is a fit index that reflects the discrepancy between model-implied and sample covariance matrices. The Model AIC is not interpreted for a single model but is used to compare models. The lower AIC reflects the better-fitting model. Unlike model chi-square, AIC may be used to compare non-hierarchical as well as hierarchical (nested) models based on the same dataset, whereas model chi-square difference is used only for the latter. Between two AIC measures, the lower one reflects the model with the better fit (Byrne, 1998; Diamantopoulos, 2000; Garson, 2008). The model AIC of Model 2 (AIC = 1104.27) is the lowest of all the five models, indicating that it has the best fit. Next the hypotheses of Study Two will be examined against the results shown by Model 2. See Figures 7.7 and 7.8. Figure 7.7 is the chart produced by LISREL and Figure 7.7 is the same chart presented in a more conventional form.

In addition, due to the correlational nature of the data, it was decided to rule out possible reverse causal effects for the hypothesized model. SEM was used to fit an additional non-nested model specifying a path from goal commitment to energy (instead of from energy to goal commitment, as depicted in Model 1). Table 7.5 lists the fit indices for this reverse causal effects model with Model 6. Since this is a non-nested model, the only relevant comparative index is the Model AIC. Model 6's Model AIC is the highest of all the models (AIC = 1135.60), indicating that Model 6 fits the data poorest of all the models. As such, reverse causality is ruled out.

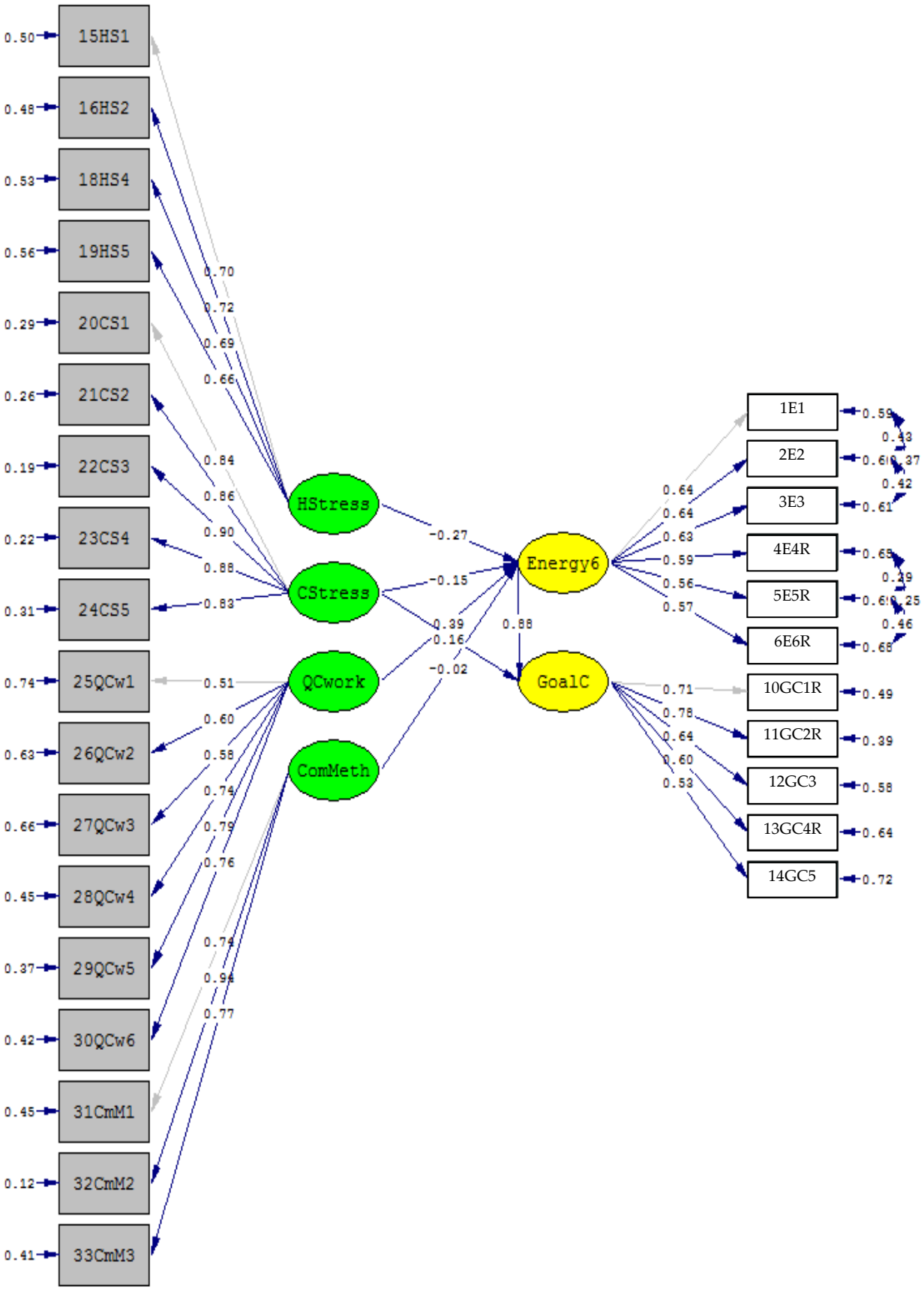


Figure 7.7 Standardized Parameter Estimates for Model 2 from LISREL

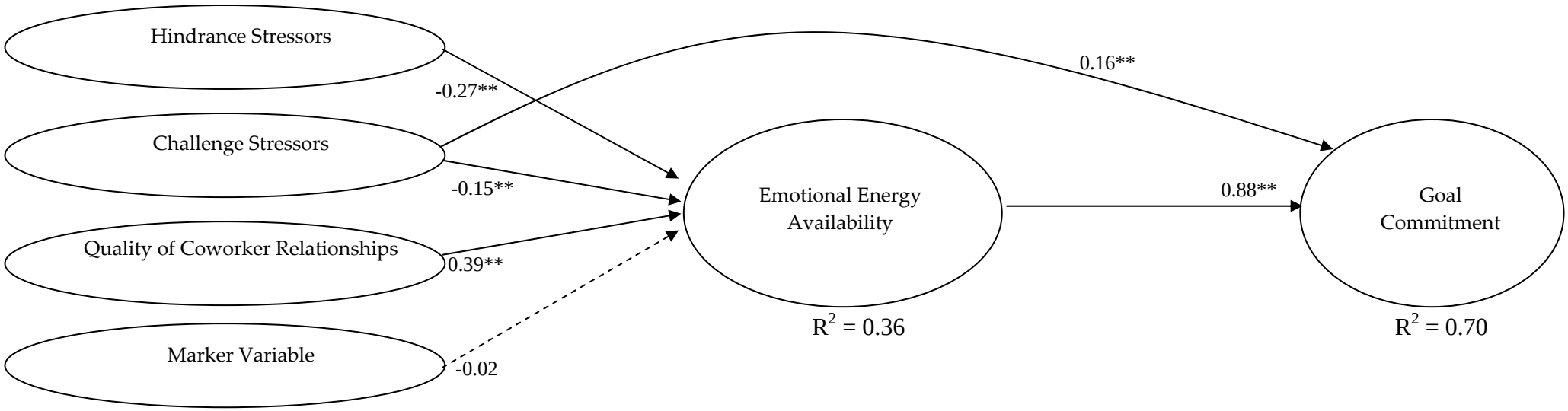


Figure 7.8 Standardized Parameter Estimates for Model 2 in Conventional Graphic Representation
Broken lines indicate paths that were not statistically significant. Ovals indicate latent variables.
** $p < .01$

Table 7.4

Means, standard deviations, correlations and Cronbach Alphas

		M	SD	1	2	3	4	5	6	7	8	9
1.	Goal Commitment	4.09	0.60	(0.78)								
2.	Emotional Energy Availability	3.57	0.64	0.59**	(0.86)							
3.	Hindrance Stressors	2.58	0.84	-0.23**	-0.33**	(0.79)						
4.	Challenge Stressors	3.06	0.86	-0.12*	-0.24**	0.43**	(0.94)					
5.	Quality of Coworker Exchange	3.37	0.63	0.29**	0.31**	-0.16**	-0.09	(0.83)				
6.	Marker Variable	4.22	0.53	-0.02	-0.06	0.06	0.10*	-0.03	(0.85)			
7.	Age	2.18	0.66	0.09	0.09*	0.08	-0.05	0.12*	0.07	(NA)		
8.	Gender[a]	NA	NA	-0.07	-0.13**	0.01	0.08	-0.18**	0.01	-0.18**	(NA)	
9.	Marital Status[b]	NA	NA	0.11*	0.12**	0.08	0.02	0.09	0.12*	0.55**	-0.03	(NA)

Notes:

N = 466 for all variables. The values in parentheses are Cronbach alphas.

[a]1= male, 2 = female

[b]1 = single, 2 = married or in a relationship

*p<.05, two-tailed **p<.01, two-tailed

NA = Not Applicable

Table 7.5
Fit indices for hypothesized and nested alternative models

	df	x^2	Δdf	Δx^2	RMSEA	SRMR	GFI	AGFI	CFI	AIC
Model 1: Hypothesized Model	360	963.31			0.060	0.055	0.87	0.85	0.96	1113.31
Model 2: Partially Mediated Model (Challenge Stressors to Goal Commitment)	359	952.27			0.060	0.053	0.88	0.85	0.96	1104.27
Model 3: Partially Mediated Model (Challenge Stressors + Hindrance Stressors to Goal Commitment)	358	950.35			0.060	0.053	0.88	0.85	0.96	1104.35
Model 4 Partially Mediated Model (Challenge Stressors + Hindrance Stressors + Quality of Coworker Support to Goal Commitment)	357	950.67			0.060	0.053	0.88	0.85	0.96	1106.67
Model 5: Partially Mediated Model (Challenge Stressors + Hindrance Stressors + Quality of Coworker Support + Marker Variable to Goal Commitment)	356	950.30			0.060	0.053	0.88	0.85	0.96	1108.30
Model 6: Reverse causality model	360	985.60			0.061	0.061	0.87	0.85	0.95	1135.60
From Model 1 to Model 2			1	11.04**						
From Model 2 to Model 3			1	1.92^{ns}						

	df	x^2	Δdf	Δx^2	RMSEA	SRMR	GFI	AGFI	CFI	AIC
From Model 3 – Model 4			1	-0.32^{ns}						
From Model 4 – Model 5			1	0.37^{ns}						
From Model 2 – Model 4 (in total, 3 paths freed for estimation)			3	1.97^{ns}						

Nota bene: ^{ns} = $p > .05$, and ** = $p < .01$

Table 7.6
Summary of the Findings for Study Two's Hypotheses

	Hypothesis	Results
1.	Emotional energy availability relates positively to goal commitment.	Supported
2.	Challenge stressors will relate negatively to emotional energy availability.	Supported
3.	Hindrance stressors will relate negatively to emotional energy availability.	Supported
4.	Quality of coworker relationship relates positively to emotional energy availability.	Supported
5.	Emotional energy availability fully mediates the relationship between hindrance stressors and goal commitment.	Supported
6.	Emotional energy availability fully mediates the relationship between challenge stressors and goal commitment.	Not supported
7.	Emotional energy availability fully mediates the relationship between quality of coworker relationships and goal commitment.	Supported

Table 7.6 above summarizes the findings of Study Two. Hypotheses 1 to 4 are supported. The path coefficient of emotional energy availability to goal commitment was positive and significant ($\beta = 0.88$, $t = 9.27$, $p < .01$). The path coefficient of hindrance stressors to emotional energy availability was negative and significant ($\beta = -0.27$, $t = -3.88$, $p < .01$). The path coefficient of challenge stressors to emotional energy availability was negative and significant ($\beta = -0.15$, $t = -3.88$, $p < .01$). The path coefficient of quality of coworker relationships to emotional energy availability was positive and significant ($\beta = 0.39$, $t = 5.87$, $p < .01$).

Of the three mediation hypotheses, Hypotheses 5 and 7 predicted that emotional energy availability would have a full mediation role. Hypotheses 5 and 7 were supported because Model 2, the model best fitting the data does not have direct paths from (1) hindrance stressors to goal commitment, and (2) quality of coworker relationships to goal commitment. However, Hypothesis 6 was not supported because, the direct path from challenge stressors to goal commitment was positive and significant ($\beta = 0.16$, $t = 2.91$, $p < .01$). This result indicates that emotional energy availability does not fully mediate the relationship between challenge stressors and hindrance stressors. This result is a surprising one. It is all the more surprising in that the direction of the relationship appears to be positive. This surprising finding will be addressed in the next section – Discussion.

Lastly, the SEM model explains a large percentage of the variance in goal commitment (i.e., 65%), and a considerable percentage of the variance in emotional energy availability (i.e., 33%).

Discussion

It is useful to note that the structural equation model tested against the data explains 65% of the variance in goal commitment. This is a substantial amount of variance explained by a single model. Such a large amount of variance explained by a single model is unusual in social science research (Whitley, 2002) and speaks well of the model tested. In addition to this encouraging result, Study Two's findings present other interesting features for discussion in this section.

Emotional Energy Availability

Following the premises of the conservation of resources theory (Hobfoll, 2001), this study conceptualized affect as a resource (i.e., emotional energy availability). In this study then, it was found that affect as a resource (i.e., emotional energy availability) relates to goal commitment. As such, this study supports Hobfoll's (2001) premise that emotions can be a resource that can be cognitively evaluated.

In addition, the finding that emotional energy availability relates to goal commitment also contributes to another important motivational theory (i.e., the resource allocation framework (Kanfer, 1990)). It does so by expanding this theory's definition of resources. The resource allocation framework, having evolved from the rationalist perspective, has tended to limit the definition of resources to cognitive resources (Kanfer et al., 1994). Rationalist perspectives tend to dismiss emotion as irrational and therefore beyond the ambit of systematic rational analysis. This is the position taken by even very recent publications (Gino & Schweitzer, 2008; Isen, 2004:

264; Scott et al., 2009). By conceptualizing affect as a resource (i.e., emotional energy availability), it becomes possible to analyze it systematically and rationally. Hence, the results of Study Two clarify the manner in which emotions can inform the rationalist view of human motivation.

In conceptualizing affect as a resource (i.e., emotional energy availability) and studying its effects on goal commitment, the present study also contributes to affect literature. In particular, it contributes to the stream of affect research that examines situated cognition (Schwarz, 2006). The situated cognition perspective (Schwarz, 2002) holds that "people's cognition [is] responsive … to the immediate social and physical environment… This situated nature of cognition" (Schwarz, 2006: 20) processes feelings as a source of immediate information, i.e., the feelings-as-information model of affective states (Gohm & Clore, 2002; Schwarz, 1990). The feelings-as-information model notes that feeling states make people aware of whether a current situation is problematic, and that this awareness motivates them to act. The results of the present study suggests that feelings provide information that goes beyond whether or not a situation is problematic or benign as was previously theorized (Gohm & Clore, 2002). Feelings also provide information about the quantity of energy resources one possesses for investment in goal attainment. In addition, Study Two extends the work of affect researchers, Erez and Isen (2002) by providing evidence to support Erez and Isen's (2002) assertion that affect "may also influence goal commitment" (Erez & Isen, 2002: 1065).

Finally, the results of this study support the tenets of Affective Events Theory (Weiss & Cropanzano, 1996) by finding that features of the work environment (such as high quality coworker relationships, challenge stressors and hindrance stressors)

impact work-related attitudes such as goal commitment, through the mediating effects of emotional energy availability.

Quality of Coworker Relationships with Emotional Energy Availability

The results of this study also show that emotional energy availability for work fully mediates the relationships between high quality coworker relationships and goal commitment. As such, this study suggests some support for Marks' (1977) notion of "the energy-producing element of social activity" and that supportive and encouraging interpersonal relationships (such as high quality coworker relationships) "may even create energy" for use in other activities (Marks, 1977, p. 926) such as work goal attainment.

Hindrance and Challenge Stressors

The results of this study show that hindrance stressors and challenge stressors have similarly negative relationships with emotional energy availability. This is consistent with the literature which documents that both hindrance stressors and challenge stressors lead to an increase in emotional exhaustion (Lepine et al., 2004). Emotional exhaustion differs from emotional energy availability in that emotional exhaustion conceptualizes only the low energy states (Maslach & Jackson, 1981).

However, the results of Study Two also suggest that emotional energy availability only partially mediates the relationship between challenge stressors and

goal commitment, instead of the full mediation as suggested by affective events theory and the results of Rodell and Judge's (2009) study. Recall that Rodell and Judge (2009) found that emotions such as anger and anxiety fully mediate the relationship between situational factors and outcomes. This gave cause to expect that emotional energy availability would fully mediate the relationship between situational factors and outcomes. In view of both theoretical reasoning (AET) and previous tangential results (Rodell & Judge, 2009), the finding that emotional energy availability partially, instead of fully mediates the relationship between challenge stressors and goal commitment, is unexpected. That which is even more unexpected is that challenge stressors' relationship to goal commitment is negative when the pathway goes through emotional energy availability; and it is positive when the pathway goes direct to goal commitment. It would seem that the relationship between challenge stressors and goal commitment is both negative (when mediated by emotional energy availability) and positive (when direct). This unexpected result requires some explanation.

Lazarus' cognitive-transactional stress theory (Lazarus & Folkman, 1984) may shed some light on this unexpected result. Lazarus' cognitive-transactional stress theory (Lazarus & Folkman, 1984) holds that once a primary cognitive appraisal of a situation has concluded that a stressor is present, a secondary cognitive appraisal is done to evaluate and choose coping strategies. Given that challenge stressors "are perceived as effectively under the control of the employee (i.e., perceived as manageable)" (Wallace et al., 2009, p. 255), secondary appraisals assessing possible coping strategies may result in "an active problem-solving style of behavioral coping (e.g., increasing effort intended to meet the demands of the situation)" (Lepine et al., 2004, p. 885). In this manner, challenge stressors may relate to goal commitment not

only through the depletion of emotional energy availability (because one uses up emotional energy in "elevated levels of arousal and information processing" (Lepine et al., 2004, p. 884)); but also through cognitive pathways of planning and strategy development towards goal attainment. Planning and development of strategies have been shown to increase commitment to a goal (Chong & Chong, 2002; Chong & Johnson, 2007). Hence, if challenge stressors stimulate planning and strategy development, challenge stressors would relate positively to goal commitment via that the pathway of those cognitive processes. Such cognitive activity as planning and strategy development, are unmeasured in Study Two. The final model therefore shows a direct path from challenge stressors to goal commitment. See Figure 7.8.

Conversely, Lepine (2005) argued that in the case of hindrance stressors, which are "potentially stressful demands typically perceived as beyond the control of the employee (i.e., perceived as unmanageable) so that they might thwart opportunity for personal growth, further secondary appraisal triggers "an emotional style of coping" (Lepine, 2005, p. 765). By triggering an emotional style of coping, hindrance stressors relate negatively to goal commitment through emotional pathways such as emotional energy availability.

Limitations and Future Research Directions

Additional research is needed to address the limitations of this study and to advance the field's understanding of the role affect plays in motivation. Firstly, this study's failure to measure cognitive activity such as planning and strategy development towards goal attainment, limits the conclusions one can draw from the

unexpected result described herein above. In view of such an unexpected result (i.e., that challenge stressors relate negatively to goal commitment through the mediating effects of emotional energy availability; but simultaneously, also relate positively and directly to goal commitment), it may be worthwhile to examine in future research, the following possibility. Challenge stressors may relate positively to goal commitment through the mediating effects of goal planning and strategy development (Chong & Chong, 2002; Chong & Johnson, 2007).

Secondly, this study is limited in that it was based on a cross-sectional research design. It is thus difficult to determine the precise causal directions amongst the variables studied. Supplemental studies using longitudinal designs within a field context are needed for a more robust determination of causality.

Thirdly, this study also limited in that it uses self-report measures from the same respondent across its independent and dependent variables. As such, the results of the study are prone to same source bias. However, care has been taken to mitigate the effects of this by including a marker variable in the model for the purpose of statistically partialling out the effects of same source bias, thus ensuring that the statistical relationships in the model are not spurious (Podsakoff et al., 2003).

Fourthly, even whilst this study draws deeply upon the expectancy theory of goal commitment, it is limited in that neither expectancy nor valence, are measured in the present study. As such, whilst this study extends the findings of Erez and Isen (2002) concerning the relationship between affect and goal commitment, it has not offered a specific test of affect's influence on goal commitment through the mediating effects of valence, instrumentality and expectancy. In future, one could develop a study

wherein valence, instrumentality and expectancy are measured along with situational factors, affect and goal commitment in the same study.

Fifthly, this study is also limited in that it does not examine how emotional energy availability relates to important organizational outcomes such as organisational citizenship behaviour (OCB) and turnover. Given that affect has been shown to influence OCB and turnover (Ilies et al., 2006), a research design to explore the patterns of relationships between emotional energy availability, goal commitment and OCB would be further illuminating, worthwhile and further underline the importance of studying emotional energy availability.

Fifthly, in examining the relationships that challenge and hindrance stressors have with emotional energy availability, this study focused only on high energy positively valenced emotions (e.g., enthousiasm and excitement), and their polar opposite, low energy negatively valenced emotions (e.g., lethargy and unwillingness). This study is limited in that it did not measure high energy negatively valenced emotions (e.g., anger and anxiety), and their polar opposite, low energy positively valenced emotions (e.g., peace and serenity). As such, this study could not test another important theoretical premise important in stress research and previously argued by Lepine and colleagues (Lepine et al., 2004; Lepine et al., 2005; Podsakoff et al., 2007) - that hindrance stressors trigger negative emotions such as anger and hostility. Future research to further clarify the effects of workplace stressors on emotions could examine this relationship.

Finally, whilst Lazarus cognitive-transactional stress theory (Lazarus & Folkman, 1984) offers a plausible theoretical explanation for the surprising partial

mediation finding, there remains the possibility that such a result is specific to the sample collected (since both extant theory and previous tangential research suggest full mediation instead of partial). It would be wise to replicate this study in another sample from a different target population, in order to obtain further confirmation that emotional energy availability partially instead of fully mediates the relationship between challenge stressors and goal commitment.

Practical Implications

This study brings into salience the practical importance of attending to how people feel at work (Seo & Barrett, 2007). The results of this study suggest that managers should manage employee emotions in order to manage goal attainment. Organizations should pay attention to employees' experience, and the regulation of moods and emotions. This would enhance the positive outcomes (such as goal commitment) arising from these feelings. Such an outcome is deemed positive and desirable because individual goal commitment relates to individual performance (Hollenbeck et al., 1989b; Klein et al., 1999).

The results also suggest that where workplace stressors co-exist alongside the requirement to attain work goals, the experience of high quality coworker relationships can help people maintain their commitment to their work goals. This has the following practical implications. More often than not, goal setting in organizations is administrated by management-by-objectives systems (O'Reilly & Pfeffer, 2000). These focus especially on challenging and specific goals without considering the situational factors that could constrain or help goal attainment. The results of this study inform practice of the importance to manage also the situational factors that define the goal

attainment process. Specifically, practicing managers may try to reduce workplace stressors whilst increasing the quality of coworker relationships in order that employees might stay committed to the goals they have been assigned.

Chapter Conclusion

This chapter has presented the data analytic strategies as well as the results for Study Two. An exploratory factor analysis was performed to identify poorly performing items in the survey. Having eliminated two poorly performing items, a confirmatory factor analysis was done to ascertain whether the theoretical measurement model fit the data well. Having confirmed the measurement model, structural equation modelling was done to test the hypotheses. The results supported six of the seven hypotheses developed for Study Two. Hypothesis 6 was not supported in that the relationship between challenge stressors and goal commitment is only partially mediated by emotional energy availability, rather than fully mediated, as previously hypothesized. This surprising result points to a possible direction for future research. Studies examining the twin premises that (1) hindrance stressors influence goal commitment through emotional pathways, whilst (2) challenge stressors influence goal commitment through cognitive pathways, may help to explain why hindrance and challenge stressors are not similarly mediated by emotional energy availability.

CHAPTER EIGHT: DISSERTATION CONCLUSION

The Research Questions and Their Answers

Goal commitment predicts performance (Hollenbeck & Klein, 1987; Hollenbeck et al., 1989b) and thus studying it will help the field better understand the relationship between an individual's work goals and his goal performance. Even whilst research documents a negative relationship between constraining situational factors and goal commitment (Klein & Kim, 1998), there are myriad real life instances of people who persist at their goals despite constraining situational factors. Such real life examples of high goal commitment in the face of constraining situational factors are documented in the lay literature, some of which has endured over multiple decades (Bannister, 1955; Brockovich & Eliot, 2002; Piper, 1930; Weinberg, 2001), and still hold appeal today. The question of how such people go about maintaining their levels of goal commitment is an intriguing one that few till now have attempted to answer.

Perhaps the question of how some people manage to not give up (despite facing great odds) is rarely explored because it is not easy to gain access to a very specific type of organisation wherein people are given seemingly impossible goals. Only in such an organisation can one can find a high concentration of real life experiences, enough to inform the domain about how people stay committed to work goals that look impossible, given the constraining situational factors therein. And thus, only with access to such an organisation can a researcher ask and answer the question "How do people self-regulate goal commitment?" This dissertation's author has been fortunate to have gained access to just such an organisation.

This dissertation answers the twin questions - (1) "What goal commitment self-regulation strategies do people use?" (2) "How do these goal commitment self-regulation strategies work to influence goal commitment?" In effect, Study One alone suffices to answer both questions. Study One documents a taxonomy of goal commitment self-regulation strategies which people use in vivo to regulate their goal commitment. This answers Question 1 (the "what" question). Study One also documents the emotional energy availability model of goal commitment, which models how both goal commitment self-regulation strategies and situational factors influence goal commitment through the mediating effects of emotional energy availability. This answers Question 2 (the "how" question). Study Two was included as a positivist test to further examine the mediating role of emotional energy availability in the goal commitment nomological network. Therefore, one concludes that this dissertation's research questions have been answered.

Limitations

However, as with all research, this work has its limitations. Foremost among these is Study Two's failure to explore the emotional energy availability model of goal commitment using measures of goal commitment self-regulation strategies. The test of the mediating properties of emotional energy availability only explored situational factors such as challenge stressors, hindrance stressors and quality of coworker exchange. Goal commitment self-regulation strategies had been left out from the positivist test in Study Two, because no validated measures at present exist for those. Study Two was already piloting the previously unvalidated measures of emotional energy availability. It was feared that examining goal commitment self-regulation

strategies (using unvalidated measures) together with emotional energy availability (using also unvalidated measures) would greatly affect the rigour of the positivist test of the mediation hypothesis.

A grounded theory study is characterized by its richness. Testing every element surfaced in a grounded theory study demands a research program that is far wider than the scope of a PhD dissertation. In the end, in an effort to scope a dissertation of reasonable length and substance, a choice was made to focus on positivistically testing the "how" (i.e., the mediation hypothesis) instead of the "what" (i.e., the taxonomy of goal commitment self-regulation strategies). Testing the mediation hypothesis was assessed to be of greater research impact because hitherto, theories explaining goal commitment have focused on cognitive explanations (i.e., expectancy theory of goal commitment (Hollenbeck & Klein, 1987)). A theory that explains goal commitment through emotional states is novel in the domain of goal commitment research. Nonetheless, despite the above-mentioned reasons, a key limitation of this work is its failure to afford a positivist test of the set of goal commitment self-regulation strategies surfaced in Study One. However, this limitation is easily overcome in future research. This is detailed in a later section.

Another limitation of this work lies in the failure of Study Two to extend the positivist test to a key organisational outcome such as job performance. Even though goal commitment's influence on performance has been well documented, the status of emotional energy availability as an important construct would be better served had Study Two's structural equation model included job performance evaluations rated by supervisors. However, this could not be done without compromising the anonymity of the employees.

Next, this research is also limited in that Study Two employed a cross-sectional survey research design. It is thus difficult to determine the precise causal directions amongst the variables studied, and whatever causal directions proposed, are based on logic.

Further, this work is also limited in that it uses self-report measures from the same respondent across its independent and dependent variables. As such, the results of the study are prone to same source bias. However, care has been taken to mitigate the effects of this by using the statistical techniques prescribed by Podsakoff et al. (2003).

Further, in examining the relationships that challenge and hindrance stressors have with emotional energy availability, this study focused only on high energy positively valenced emotions (e.g., enthousiasm and excitement), and their polar opposite, low energy negatively valenced emotions (e.g., lethargy and unwillingness). This study is limited in that it did not measure high energy negatively valenced emotions (e.g., anger and anxiety), and their polar opposite, low energy positively valenced emotions (e.g., peace and serenity). As such, this work fails to test another very important theoretical premise in stress research. This premise has been argued multiple times, though never tested, by Lepine and colleagues (Lepine et al., 2004; Lepine et al., 2005; Podsakoff et al., 2007) - that hindrance stressors trigger negative emotions such as anger and hostility. However, this particular limitation needs to be viewed in the light of this dissertation's central topic, which is goal commitment, and not workplace stressors.

Finally, even though in Chapter Seven, it was explained how Lazarus cognitive-transactional stress theory (Lazarus & Folkman, 1984) offers a plausible theoretical explanation for the unexpected partial mediation finding, there remains the possibility that such a result is due to some artefact of the sample collected (especially since both extant theory i.e., AET (Weiss & Cropanzano, 1996) and previous tangential research (Rodell & Judge, 2009) suggest full mediation instead of partial).

Research Contributions

This dissertation contributes to theoretical thinking on goal commitment in two ways. Firstly, this dissertation defines and clarifies the role that self-regulation strategies play in determining goal commitment. This is also an important theoretical contribution because neither Hollenbeck and Klein's (1987) nor Locke et al.'s (1988) theoretical frameworks sufficiently define the role of self-regulation strategies in determining goal commitment. Secondly, this dissertation contributes to the literature, a new theory explaining goal commitment - the emotional energy availability model of goal commitment. In so doing, it clarifies the role that emotions play in the explanation of goal commitment. This is an important contribution to motivation research because "developed within the rationalist perspective, traditional theories of work motivation consist of cognitive explanations of action… The cognitive nature of these theories has made the integration of affect into motivation theory difficult, which explains the relative paucity of theory and research examining the influence of affective constructs on motivational processes" (Ilies & Judge, 2005: 453) such as goal commitment.

Following the premises of the conservation of resources theory (Hobfoll, 2001), this dissertation conceptualized affect as a resource (i.e., emotional energy availability). This dissertation found that affect as a resource (i.e., emotional energy availability) relates to goal commitment. As such, this dissertation makes a contribution by supporting Hobfoll's (1989) premise that emotions can be a resource that can be cognitively assessed and found to be available or wanting. This premise has not been specifically put to the test even though Hobfoll developed his reasoning quite long ago in the 1980s.

In addition, this dissertation found that emotional energy availability (a resource) relates to goal commitment. This contributes to another influential motivational theory (i.e., the resource allocation framework (Kanfer, 1990)) by expanding this theory's definition of resources. The resource allocation framework has tended to limit the definition of resources to cognitive resources (Kanfer et al., 1994) because it has its origins in the rationalist perspective of human behaviour. Rationalist perspectives tend to dismiss emotion as irrational and therefore beyond the ambit of systematic rational analysis. This position is taken by even very recent publications (Gino & Schweitzer, 2008; Isen, 2004: 264; Scott et al., 2009). However, this dissertation has conceptualized affect as a resource (i.e., emotional energy availability). Once viewed as a resource, it becomes possible to analyze emotional energy availability systematically and rationally. Hence, the results of Study Two clarify the manner in which emotions can inform the rationalist view of human motivation.

This dissertation also contributes to the work of researchers who examine the affect-as-information model (Foo et al., 2009; Seo et al., 2009). These researchers take the theoretical perspective that affect provides information that may be cognitively

processed (Gohm & Clore, 2002; Schwarz, 2006; Schwarz & Clore, 1983). However, the affect-as-information model is used to explain emotional valence, instead of emotional activation. In other words, researchers frequently explain that how pleasantly or unpleasantly people feel gives them information about how good or bad a particular situation is. This information is then cognitively processed by individuals to evaluate next action steps. For example, Seo et al. (2009) argued that people experiencing more pleasant feelings will more likely conclude that particular outcomes are more attractive than those experiencing less pleasant feelings. As another example, Foo et al. (2009) argued that "negative affect signals that things are not going well … and positive affect signals that all is going well" (Foo et al., 2009, p. 1086). In this dissertation, emotions have been conceptualized as a resource. The exploration focuses on emotional energy availability. As such, it can now be envisaged that affect can provide information other than the desirability or undesirability of a particular situation, or its attractiveness. Affect can now provide information about the quantity of resources still available for investment in attaining work goals. Hence, this dissertation's Study Two expands the meaning of "information" in the affect-as-information model.

In addition, this dissertation extends the work of affect researchers, Erez and Isen (2002) in the specific research direction they suggested in their research paper. This dissertation implemented Erez and Isen's (2002) suggestion to explore the notion that affect "may also influence goal commitment" (Erez & Isen, 2002: 1065). This dissertation's results show support for Erez and Isen's (2002) assertion that affect "may also influence goal commitment" (Erez & Isen, 2002: 1065).

Furthermore, this research is a timely test of Thayer's (1989) theoretical logic that cognition and emotional arousal influence each other. Thayer (1989) writes that

"Although the evidence is limited, there is little doubt that cognitive stimuli affect energetic arousal… News that one has won a lottery prize, for example, would likely result in feelings of energy and vigor… I believe however that there is a much more basic way in which energetic arousal and cognitive factors interact. This has to do with ongoing judgments about one's immediate capability to accomplish various tasks. Thousands of times a day we are confronted with tasks that require resources to accomplish them, and in each case there is a momentary evaluation of the requirements of the task in relation to one's resources to meet it. This rapid evaluation involves an instantaneous assessment of current [affective] states. Although the assessment occurs so quickly the person scarcely realizes it is occurring, nevertheless, an individual generally obtains information about the basic question. 'Do I [feel that I] have the energy to accomplish the task?'" (p. 98). This research affords a positivist test of Thayer's (1989) logic. Though the theoretical argumentation was offered long ago, none have specifically tested it in relation to goal commitment.

The results of this dissertation also support the tenets of Affective Events Theory. Affective Events Theory holds that features of the work environment impact work-related attitudes through the mediating effects of emotion (Weiss & Cropanzano, 1996). This research found that features of the work environment (such as high quality coworker relationships, challenge stressors and hindrance stressors) impact work-related attitudes such as goal commitment, through the mediating effects of emotional energy availability.

Next, it is good to note that in the goal commitment literature, the concept of social influence on goal commitment has traditionally been viewed "with respect to (a) others' performance, (b) others' goals and (c) others' goal commitment" (Hollenbeck &

Klein, 1987: 216; Klein et al., 1999; Klein & Wright, 1994). In other words, social influence affects goal commitment by creating interpersonal competition. This is a narrow definition of social influence. The results of this dissertation suggest that the influence of the social context on goal commitment may reach beyond the traditional narrow view of social influence as only a competitive influence. Social influence may also be viewed with respect to "the energy-producing element of social activity" (Marks, 1977), wherein supportive and encouraging interpersonal relationships "create energy" for use in goal pursuits (Marks, 1977:926). This essay contributes to the literature on goal commitment by broadening the notion of social influence (traditionally defined in the literature "with respect to (a) others' performance, (b) others' goals and (c) others' goal commitment" (Hollenbeck & Klein, 1987: 216; Klein et al., 1999; Klein & Wright, 1994)) to include the quality of social relationships at work, which produce energy that may be channeled into goal pursuits.

Additionally, this research extends the work of Tse and Dasborough (2008) on quality of coworker relationships. Tse and Dasborough (2008) found that the quality of relationships between people at work influenced their emotional valence. This research extends the work of Tse and Dasborough (2008) by specifically finding that quality of coworker relationships influences emotional activation (specifically, emotional energy availability for work) instead of emotional valence.

Next, the structural equation model in Study Two employed a simple but innovative technique to partial out the variance due to emotional valence (i.e., pleasantness versus unpleasantness of emotions) from the measurement model (leaving only the variance attributable to the energetic dimension of emotion for path estimation in the eventual structural equation model). This simple innovation lay in

freeing the error covariances between all the items with negative valence (Byrne, 1998); and between all the items with positive valence. Freeing error covariances between items is generally frowned upon unless there is good theoretical reason to do so (Byrne, 1998). Since emotion words frequently are tinged with both valence and energy, there was a strong theoretical reason to free the error covariances between similarly valenced items in order to partial out the systematic error due to valence. One knows of few studies that even sample the low energy half of the emotion circumplex (Gino & Schweitzer, 2008; Scott & Judge, 2006; Seo & Barrett, 2007; Seo et al., 2009; Sonnentag et al., 2008; Totterdell et al., 2004; Zohar et al., 2003). One knows of no study that having measured high and low energy emotions, attempted to partial out emotional valence in order to allow the structural equation model to solely to estimate the effects of the energetic dimension of emotion alone. This study contributes to research on emotion by pioneering the use of this statistical technique (of freeing error covariances between similarly valenced emotion items) in emotion research. This makes it easier for emotion researchers thenceforth, to study the energetic dimension of emotion. As such, this research also makes a notable methodological contribution.

Both extant theoretical reasoning (AET) and previous tangential results from Rodell and Judge's (2009) research suggest that emotional energy availability should fully mediate the relationship between challenge stressors and emotional energy availability. However, the results of this dissertation suggest that emotional energy availability partially, instead of fully mediates the relationship between challenge stressors and goal commitment. This is an unexpected result. However, that which is even more unexpected is that challenge stressors' relationship to goal commitment is negative when the pathway goes through emotional energy availability; and it is

positive when the pathway goes direct to goal commitment. See Figure 7.8. It would seem, from the results of this dissertation, that the relationship between challenge stressors and goal commitment is both negative (when mediated by emotional energy availability) and positive (when direct). See Figure 7.8. As explained in greater detail in Chapter Seven, this unexpected result suggests the novel but plausible notion that challenge stressors may relate negatively to goal commitment not only through the depletion of emotional energy availability (i.e., emotional coping strategies), but also may simultaneously relate positively to goal commitment through cognitive pathways of planning and strategy development towards goal attainment (i.e., active coping strategies stimulated by cognitive processes).

Future Research Directions

Future research can embark on the long effort to develop, pilot and fully validate measures of goal commitment self-regulation strategies. These measures of goal commitment self-regulation strategies could be tested alongside existing measures of emotion regulation (Ehring, Tuschen-Caffier, Schnülle, Fischer, & Gross, 2010; Gross & John, 2003) in order to assess discriminant validity (i.e., whether goal commitment self-regulation strategies differentiate themselves from emotion regulation (Whitley, 2002)). This is because both types of measures are theorized to regulate emotion, and there is a possibility, even if unlikely, that they are closely enough related that they measure the same thing. To demonstrate how unlikely this is, Table 8.1 summarises the items from Gross and John's (2003) emotional regulation questionnaire, alongside the goal commitment self-regulation strategies surfaced in Study One.

Table 8.1
Comparison of Items Measuring Emotional Self-Regulation and Study One's Goal Commitment Self-Regulation Strategies

Gross and John's (2003) Emotional Regulation Questionnaire Items	Goal Commitment Self-Regulation Strategies
When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.	Success Stories
I keep my emotions to myself.	Previous Memorable Successes
When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	Role Model
When I am feeling positive emotions, I am careful not to express them.	Person-Failure Separation
When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	Possible Failure Pre-Acceptance
I control my emotions by not expressing them.	Failure Acceptance
When I want to feel more positive emotion, I change the way I'm thinking about the situation.	Selective Forgetfulness
I control my emotions by changing the way I think about the situation I'm in.	Forgiveness
When I am feeling negative emotions, I make sure not to express them.	Learning Goal Orientation
When I want to feel less negative emotion, I change the way I'm thinking about the situation.	Effort Goal Orientation
	Proving Goal Orientation
	Personal Beliefs
	Personal Values
	Towards Congruence with Self-Concept
	Understanding the Others' Viewpoints

Gross and John's (2003) Emotional Regulation Questionnaire Items	Goal Commitment Self-Regulation Strategies
	Lesson Learnt Rest Enjoyable Distractions Spousal Companionship Family Companionship Instrumental Companionship Intellectual Companionship Get it Over With Goal Focus Invested Effort

The measures of goal commitment self-regulation strategies should also be validated for their predictive validity by an examination of how well it predicts job performance through the mediating effects of goal commitment. Only when such a validation study has been successfully implemented and the measures proven to be robust, would it be appropriate to apply a positivist test of the "what" (i.e., the goal commitment self-regulation strategies) and the "how" (i.e., the mediating role of emotional energy availability between goal commitment self-regulation strategies and goal commitment) in the same model. Clearly, this is enough work for a research program spanning some years.

Future research could also replicate with extension the findings of this dissertation by examining emotional energy availability's effects on job performance (Williams & Anderson, 1991). This would serve to extend our knowledge about the energetic dimension of emotion, hitherto neglected (as shown in Chapter Two's literature review) by even emotion researchers themselves. The study of emotional energy availability holds much promise in that goal commitment is but one of the outcomes it could predict. Energy resources being a fundamental resource (Hobfoll, 1988, 1989; Hobfoll, Lilly, & Jackson, 1991; Thayer, 1989) required to fund every aspect of human activity, the hitherto neglected energetic aspect of emotions could well predict outcomes as varied as organizational commitment (Allen & Meyer, 1990), organizational citizenship behaviors (Lepine, Erez, & Johnson, 2002; Smith, Organ, & Near, 1983) and turnover. As such, future research could examine the effects of emotional energy availability on all these outcomes as well.

Furthermore, both extant theory i.e., AET (Weiss & Cropanzano, 1996) and previous tangential research (Rodell & Judge, 2009) suggest that emotional energy availability fully mediates the relationship between challenge stressors and goal commitment. However, this research found that the relationship is only partially mediated. As such, it may be wise to replicate this study using another sample from a different target population, in order to ascertain whether the partial mediation found in the present research is an artefact of the research sample, or generally true across different populations.

Related to the point above about further testing the notion of emotional energy availability's partial mediation of the relationship between challenge stressors and goal commitment, Chapter Seven made clear that the direct and positive relationship

between challenge stressors and goal commitment could be due to how challenge stressors may result in "an active problem-solving style of behavioral coping" (Lepine et al., 2004, p. 885). In this manner, challenge stressors may relate to goal commitment through cognitive pathways of planning and strategy development towards goal attainment (Chong & Chong, 2002; Chong & Johnson, 2007). Such cognitive activity as planning and strategy development, are unmeasured in Study Two. As such, this research found direct and positive path from challenge stressors to goal commitment. See Figure 7.8. The notion that this direct and positive path from challenge stressors to goal commitment could be mediated by cognitive activity, is an intriguing one and worth testing in future research.

Lastly, Study One's model depicts the variation of emotional energy availability and goal commitment over time. To test the premise that emotional energy and goal commitment vary over time in response to challenge and hindrance stressors, future research could employ experience sampling methodology wherein participants are asked to fill out daily surveys over a period of time. This would replicate and extend the research of Rodell and Judge (2009) who used experience sampling methodology to explore how specific discrete emotions (namely, attentiveness, anxiety and anger) mediated the relationships between workplace stressors (namely challenge and hindrance stressors) and outcomes (namely organizational citizenship behaviors and counterproductive behaviors).

Strengths

This research has strengths. Firstly, it is methodologically robust because it has approached the study of goal commitment from two very different, and thus complementary research approaches. Study One builds grounded theory using the constructivist approach. As such, it draws upon the collective wisdom of lay knowledge (Guba & Lincoln, 1994) to inform science, and ensures that theory development is grounded in empirical data. Study Two tests theory. Study Two adheres to the quality standards of a good positivist study by employing measures that have been used by other researchers to test a theory that was developed herein, thereby adding to knowledge as a body of context-free generalizations i.e., laws or principles that hold true across every real-life situation (Neuman, 2000).

Secondly, this research has had the serendipitous advantage of access to a rare and unusual organisation which sets seemingly impossible goals amidst highly constraining situational factors. In such an organisation, one can find a density of data about how people self-regulate their goal commitment levels. This is because goal commitment self-regulation strategies will only be activated in situations where situational factors are highly constraining and goals begin to look like they cannot be achieved. In addition, the majority of the goals set for employees in this organisation are achieved. Employees of Study One's organisation have somehow been socialized to the use of effective goal commitment self-regulation strategies in order not to give up somewhere along their goal attainment journeys. Therefore, in this organisation, one would have the opportunity to observe these goal commitment self-regulation strategies in vivo. In summary, to answer the research question, one needed to purposefully sample (Passmore & Baker, 2005) an organisation such as that of Study

One. Such organisations are rare occurrences. A strength of this research lies in its access to just such an organisation.

Thirdly, in its positivist test, this research took care to use well-validated measures of robust constructs already found in the literature, and that were also closely mirrored in Study One's data. This ensured that the theory developed in Study One was tested according to accepted standards of positivist rigour.

Fourthly, in its constructivist exploration, this research followed closely the prescribed steps for rigorous constructivist research. Multiple coders independently coded, and a consensus was sought before the codes were entered into the software. Appropriately iterative interviewing, sampling and coding strategies were employed, as required by the prescribed steps of the grounded theory research method. In addition, the entire coding effort was repeated in order that the final coding scheme might be retroactively applied to earlier interviews as well. The effort was long and involved but it ensured the rigour of the constructivist research.

Practical Contributions

At the close of this dissertation, it is appropriate to examine its beginnings. The initial inspiration for the research topic came in part from a famous study done by Stanford researchers (and in part from having had serendipitous access to an organization where people believe that impossible goals are the right ones to set). Researchers from Stanford University, James C. Collins and Jerry I. Porras published in 1994 a bestselling hardcover book entitled "Built to Last". This book was the culmination of a year long research project involving both the authors and a large team of research assistants. The book documented the findings of a qualitative research project that aimed to identify the "distinguishing characteristics of the world's most enduring and successful corporations" (Collins & Porras, 1994, p. xxviii). The authors documented that the world's most enduring and successful corporations had the habit of setting "big hairy audacious goals" or BHAGS. Companies such as WalMart, Boeing and Procter & Gamble were scrutinized and it was reported that all three successful and enduring companies set BHAGS. Collins and Porras also reported that "Wal-Mart has had a similar pattern of audacious BHAGs, beginning as far back as Sam Walton's first five-and-dime store in 1945, for which his first goal was to 'make my little Newport store the best, most profitable variety store in Arkansas within five years.' To achieve this goal required more than tripling the sales volume from $72,000 per year to $250,000 per year. The store attained this goal, becoming the biggest, most profitable store in Arkansas and in the surrounding five states... Walton continued to set similarly audacious goals for his organisation. In 1977, he set the Big Hairy Audacious Goal of becoming a $1 billion dollar company in four years (a more than doubling of the company's size… In 1990… Sam Walton set a new target: to double the number of

stores and increase sales volume per square foot by 60 percent by the year 2000" (Collins & Porras, 1994, p. 98).

It takes only a little bit more reasoning to realise that when Big Hairy Audacious super-ordinate goals are set to drive organisational performance, divisions, departments and even individuals all the way down the line will each have BHAGS to each contend with. This is best illustrated with yet another excerpt from Collins and Porras (1994). "In 1919, for example, P&G set the goal to reach a point where it could provide steady employment for its workers by revolutionizing the distribution system, bypassing wholesalers, and going straight to retailers. (Wholesalers ordered large quantities and then, like a snake digesting a large meal, would lie dormant for months, thus forcing P&G into hire-and-fire swings of high and slack demand.)" (Collins & Porras, 1994, p. 103) The internal debate on the 1919 P&G BHAG raged as follows.

> *"We would need to increase the number of accounts from 20,000 to over 400,000," complained the accountants. "Do you realise what that will do to our accounting costs?"*
>
> *"We'd have to open hundreds of warehouses around the country," the distribution team pointed out. "We'd have to hire trucking companies all over the United States to deliver to the retail stores."*
>
> *"Will the wholesalers become so furious when their P&G business is taken away that they'll start to boycott and refuse to sell anything to stores that deal directly with P&G?" asked some managers. "That could ruin us."*
>
> *"How can P&G possibly build a sales staff large enough to visit every little grocery store in America?" asked the sales people. "The sales division would have to be bigger than the U.S. Army!"*
>
> *Excerpted from Collins and Porras (1994, p. 103)*

Collins and Porras (1994) research suggests that organisations thrive when individuals take on and stay committed to seemingly impossible goals (i.e., BHAGs) despite multiple constraining situational factors (i.e., despite great odds). Nonetheless, the research literature on goal commitment documented that (1) when goals look impossible (i.e., look to be too difficult (Hollenbeck et al., 1989a)); and (2) the odds are great (i.e., situational factors are highly constraining) then goal commitment drops. Yet, companies like Wal-Mart and P&G have their present day success in large part because they set BHAGS (i.e., seemingly impossible goals) and stayed committed to them despite the odds (i.e., highly constraining situational factors). Collins and Porras' (1994) suggestion to set BHAGs is easy enough to implement. The real challenge is in how to stay committed to those goals throughout the time needed to achieve them (and despite highly constraining situational factors). Collins and Porras' (1994) research did not specifically clarify how organisations and individuals might contrive to stay committed to BHAGs (i.e., seemingly impossible goals). Neither was there any research literature documenting how one might contrive to stay committed to BHAGs (i.e., seemingly impossible goals).

As such, this dissertation's research question and associated findings give practical guidance on how organisations might help employees stay committed to BHAGs, and how individuals might contrive to themselves stay committed to BHAGs. Study One documents a set of goal commitment self-regulation strategies for individuals to use to regulate their own goal commitment levels. Study One also documents a set of situational factors that organisations might refer to in order to refashion their work environments in ways that would help employees to stay committed to BHAGs.

Given that the modern-day organisation evolves and competes in highly challenging markets, companies need to constantly reinvent themselves with new BHAGs to survive and thrive. Indeed, Johnson, Christensen and Kagermann (2008) write in the Harvard Business Review that "in these tough economic times, some CEOs are already looking to business model innovation to address permanent shifts in their market landscapes" (Johnson et al., 2008, p. 52). Permanent shifts in market landscapes are wrought by companies such as Wal-Mart, which entered the market with their BHAGs and pioneering business models to revolutionise industry (Johnson et al., 2008). Having revolutionised industry in the past, the Wal-Mart of today is however beset by problems too, which require new BHAGs to resolve. "Wal-Mart's slowing growth in the U.S. is a consequence of, among other things, a saturated market, its customers' limited disposable incomes, and intense competition from rivals such as Target and Costco. Wal-Mart also faces resistance to imports, criticism about the wages and benefits it offers employees, and charges that illegal aliens work in its stores. All this has generated unfavourable publicity and strengthened people's opposition to Wal-Mart's opening stores in urban areas. Compounding the challenge, some of the company's advantages have turned into disadvantages. For instance, Wal-Mart's large market share in some product categories makes it tough to grow same-store sales rapidly. Its low-cost sourcing practices have rendered it vulnerable to the health and safety concerns that surround products made in China." (Camillus, 2008, p. 100). It appears that even companies such as Wal-Mart, which themselves caused permanent shifts in the way their industry competes, are themselves besieged by the shifts they had initially brought about, and even Wal-Mart would need to achieve new BHAGs to move forwards.

Indeed, on the day these words are being written, The Straits Times (the newspaper with the widest circulation in Singapore) reported that Steve Jobs (the CEO of Apple, another company which had previously caused a permanent shift in both the computing and the music industry with its introduction of iPod, iPAD and iTunes) had lashed out publicly at competitors' in a fit of ill humour, because "supply and production bottlenecks kept iPADs from store shelves" ("Job blasts rivals as iPAD sales disappoint", 2010) and thus the company sold 4.19 million iPADs instead of their BHAG of 5 million. As a result, Apple share prices suffered a 6% drop, Apple's largest single day drop since 2008. Clearly, not meeting a BHAG hurts a company.

Set against the backdrop of a modern competitive environment such as that described above, where competition is tough and markets are dynamic, companies will need to set highly challenging goals for their employees to meet in highly constraining situations. However, whilst it is easy to set highly challenging goals, it is more difficult to ensure that employees stay committed to such goals in highly constraining situations, and Chapter Two's literature review shows that extant research and theory has little to say on how organisations and individuals can go about maintaining their levels of goal commitment. The emotional energy availability model of goal commitment steps neatly into this gap by informing the business community of how (1) organisations can help enhance employee goal commitment by designing the work environment to include situational factors which enhance emotional energy availability (and through emotional energy availability, enhances goal commitment); and (2) how individuals might themselves regulate their own levels of goal commitment by first regulating their levels of emotional energy availability.

In summary therefore, the results of this dissertation not only makes theoretical and empirical contributions to research, but will also be useful to organisations who want to mobilise and enthuse staff to achieve BHAGs (Big Hairy Audacious Goals) despite great odds.

References

Alge, B. J., Wiethoff, C., & Klein, H. J. (2003). When does the medium matter? Knowledge-building experiences and opportunities in decision-making teams. *Organizational Behavior & Human Decision Processes, 91*(1), 26.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology, 63*, 1-18.

Allen, N. J., & Meyer, J. P. (1996). Affective, continuance and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior, 49*, 252-276.

Alreck, P. L., & Settle, R. B. (1995). *The survey research handbook* (2nd ed.). New York: McGraw-Hill.

Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and creativity at work. *Administrative Science Quarterly, 50*, 367-403.

Anand, N., Gardner, H. K., & Morris, T. (2007). Knowledge-based innovation: Emergence and embedding of new practice areas in management consulting firms. *Academy of Management Journal, 50*, 406-428.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*, 411-423.

Ashby, F. G., Isen, A. M., & Turken, A. (1998). A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review, 106*, 529-550.

Ashkanasy, N. M. (2003). Emotions in organizations: A multulevel perspective. In F. Dansereau & F. J. Yammarino (Eds.), *Research in multi-level issues: Multi-level issues in organizational behavior and strategy* (Vol. 2, pp. 9-54). Oxford, UK: Elsevier Science.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1991). Social-cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*, 248-287.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freedman and Company.

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goals revisited. *Journal of Applied Psychology, 88*, 97-99.

Bannister, R. (1955). *The four-minute mile*. New York: Lyons Press.

Barclay, L. J., & Skarlicki, D. P. (2009). Healing the wounds of organizational injustice: Examining the benefits of expressive writing. *Journal of Applied Psychology, 94*, 511-523.

Barclay, L. J., Skarlicki, D. P., & Pugh, S. D. (2005). Exploring the Role of Emotions in Injustice Perceptions and Retaliation. *Journal of Applied Psychology, 90*(4), 629-643.

Barnette, J. J. (2000). Effects of stem and likert response option reversals on survey internal consistency: If you feel the need, there is a better alternative to using those negatively worded items. *Educational and Psychological Measurement, 60*, 361-370.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations. *Academy of Management Perspectives, 21*, 36-59.

Bartlett, K. R. (2005). Survey research in organizations. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco: Berrett-Koehler Publishers Inc.

Bates, R. A. (2005). Multivariate research methods. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco, CA: Berrett-Koehler Publishers Inc.

Beal, D. J., Trougakos, J. P., Weiss, H. M., & Green, S. G. (2006). Episodic processes in emotional labor: Perceptions of affective delivery and regulation strategies. *Journal of Applied Psychology, 91*(5), 1053-1065.

Beal, D. J., Weiss, H. M., & Barros, E. (2005). An episodic process model of affective influences on performance. *Journal of Applied Psychology, 90*, 1054-1068.

Bem, D. J. (1988). Putting persons back in context. In A. Bolger, G. Caspi & M. Moorehouse (Eds.), *Persons in context: Developmental processes* (pp. 203-216). New York: Cambridge University Press.

Benson, J. (1987). Detecting item bias in affective scales. *Educational and Psychological Measurement, 47*, 55-67.

Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin, 107*, 238-246.

Berg, B. L. (2007). *Qualitative research methods for the social sciences*. Boston, MA: Pearson Education.

Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology, 92*, 1357-1367.

Bono, J. E., & Judge, T. A. (2003). Self-concordance at work: understanding the motivational effects of transformational leaders. *Academy of Management Journal, 46*, 554-561.

Brett, J. M., Olekalns, M., Friedman, R., Goates, N., Anderson, C., & Lisco, C. C. (2007). Sticks and stones: Language, face and online dispute resolution. *Academy of Management Journal, 50*, 85-99.

Brief, A. P., Burke, M. J., George, J. M., Robinson, B. S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress. *Journal of Applied Psychology, 73*, 193-198.

Brief, A. P., & George, J. M. (1995). Psychological stress and the workplace: A brief comment on Lazarus' outlook. In R. Crandall & P. L. Perrewé (Eds.), *Occupational stress: A handbook* (pp. 15-20). Washington D.C.: CRC Press.

Briner, R. B. K., T. (2005). Psychological research into the experience of emotion at work: Definitely older, but are we any wiser? In N. M. Ashkanasy, C. E. J. Härtel & W. J. Zerbe (Eds.), *Research on emotion in organizations* (Vol. 1, pp. 289-315). Oxford: Elsevier.

Brockovich, E., & Eliot, M. (2002). *Take it from me*. New York: McGraw Hill.

Brown, S. P., Cron, W. L., & Slocum, J. W. (1998). Effects of trait competitiveness and perceived intra-organizational competition on salesperson goal setting and performance. *Journal of Marketing, 62*, 88-98.

Burke, M. J., Brief, A. P., George, J. M., Roberson, L., & Webster, J. (1989). Measuring affect at work: confirmatory analyses of competing mood structures with conceptual linkage to cortical regulatory systems. *Journal of Personality and Social Psychology, 57*, 1091-1102.

Burns, T. F. (1980). Getting rowdy with the boys. *Journal of Drug Issues, 80*, 273-286.

Byrne, B. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS.* Mahwah, NJ: Lawrence Erlbaum Associates.

Camillus, J. C. (2008). Strategy as a Wicked Problem. *Harvard Business Review, 86*(5), 98-106.

Carver, C. S., Johnson, S. L., & Joormann, J. (2008). Serotonergic Function, Two-Mode Models of Self-Regulation, and Vulnerability to Depression: What Depression Has in Common With Impulsive Aggression. *Psychological Bulletin, 134*(6), 912-943.

Carver, C. S., & Scheier, M. F. (2000). Autonomy and self-regulation. *Psychological Inquiry, 11*, 284-291.

Caspi, A., & Bem, D. J. (1990). Personality continuity and change across the life course. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 549-575). New York: Guilford Press.

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology, 85*, 65-74.

Chattophadhyay, P., Finn, Q., & Ashkanasy, N. M. (2010). Affective responses to professional dissimilarity: a matter of status. *Academy of Management Journal, 53*, 808-826.

Chong, V. K., & Chong, K. M. (2002). Budget Goal Commitment and Informational Effects of Budget Participation on Performance: A Structural Equation Modeling Approach. *Behavioral Research in Accounting, 14*, 65.

Chong, V. K., & Johnson, D. M. (2007). Testing a model of the antecedents and consequences of budgetary participation on job performance. *Accounting & Business Research, 37*(1), 3-19.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.

Cole, M. S., Bruch, H., & Vogel, B. (2005). Development and validation of a measure of organizational energy. *Academy of Management Proceedings*, V1-V6.

Cole, M. S., Bruch, H., & Vogel, B. (2006). Emotion as mediators of the relations between perceived supervisor support and psychological hardiness on employee cynicism. *Journal of Organizational Behavior, 27*(4), 463-484.

Cole, M. S., Walter, F., & Bruch, H. (2008). Affective mechanisms linking dysfunctional behavior to performance in work teams: A moderated mediation study. *Journal of Applied Psychology, 93*(5), 945-958.

Collins, J. C., & Porras, J. I. (1994). *Built to last*. New York: HarperBusiness.

Collins, R. (1993). Emotional energy as the common denominator of rational action. *Rationality and Society, 5*, 203-230.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.

Cortina, J. M. (2010). Book review: Strategies of qualitative inquiry. *Organizational Research Methods, 13*, 395-396.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Cropanzano, R., Weiss, H. M., Hale, J. M. S., & Reb, J. (2003). The structure of affect: Reconsidering the relationship between negative and positive affectivity. *Journal of Management, 29*, 831-857.

Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior & Human Decision Processes, 69*, 117-132.

Cryder, C. E., Lerner, J. S., Gross, J. J., & Ronald, E. D. (2008). Misery is not miserly: Sad and self-focused individuals spend more. *Psychological Science, 19*, 525-530.

Cynkar, A. (2007). Whole workplace health. *Monitor on Psychology, 38*, 28-31.

D'Cruz, C. A. (1999). *Managing technology and innovation in electronics wafer fabricationwith a TQM perspective.* Paper presented at the Portland International Conference onManagement of Engineering and Technology, Portland, OR.

Davis, M. A. (2009). Understanding the relationship between mood and creativity: A meta-analysis. *Organizational Behavior & Human Decision Processes, 108*, 25-38.

Denzin, N. K., & Lincoln, Y. S. (1994). *The Handbook of Qualitative Research*. Thousand Oaks, CA: Sage Publications.

Diamantopoulos, A. (2000). *Introducing LISREL: A guide for the uninitiated*. Thousand Oaks, CA: Sage.

Diefendorff, J. M., & Lord, R. G. (2003). The Volitional and Strategic Effects of Planning on Task Performance and Goal Commitment. *Human Performance, 16*(4), 365.

Dimaggio, P. J. (1995). Comments on "What theory is not." *Administrative Science Quarterly, 40*, 391-397.

Dose, J. J. (1999). The relationship between work values similarity and teamâ€“member and leaderâ€“member exchange relationships. *Group Dynamics: Theory, Research, and Practice, 3*(1), 20-32.

Earley, C. P. (1986). Supervisors and shop stewards as sources of contextual information in goal setting: A comparison of the U.S. with England. *Journal of Applied Psychology, 71*, 111-117.

Easterby-Smith. (2008). Working with pluralism: Determining quality in qualitative research. *Organizational Research Methods, 11*, 419-429.

Ehring, T., Tuschen-Caffier, B., Schnülle, J., Fischer, S., & Gross, J. J. (2010). Emotion regulation and vulnerability to depression: Spontaneous versus instructed use of emotion suppression and reappraisal. . *Emotion, 10*, 563-572.

Eisenhardt, K., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*, 25-32.

Elliot, A. J., & Harakiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social psychology, 70*, 461-475.

Elliot, E. S., & Dweck, C. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5-12.

Erez, A., & Isen, A. M. (2002). The influence of positive affect on the components of expectancy motivation. *Journal of Applied Psychology, 87*, 1055-1067.

Erez, A., Misangyi, V. F., Johnson, D. E., & Lepine, M. A. (2008). Stirring the hearts of followers: Charismatic leadership as the transferal of affect. *Journal of Applied Psychology, 93*, 602-615.

Estrada, C. A., Isen, A. M., & Young, M. J. (1997). Positive affect facilitates integration of information and decreases anchoring in reasoning among physicians. *Organizational Behavior & Human Decision Processes, 72*, 117-135.

Feldman Barrett, L. F. (1998). Discrete emotions or dimensions? The role of valence focus and arousal focus. *Cognition and Emotion, 12*, 576-599.

Fernet, C., Gagne, M., & Austin, S. (2009). When does quality of relationships with coworkers predict burnout over time? The moderating role of work motivation [Electronic Version]. *Journal of Organizational Behavior*, 9999, N/A.

Fisher, C. D., & Ashkanasy, N. M. (2000). The emerging role of emotions in work life: an introduction. *Journal of Organizational Behavior, 21*(2), 123-129.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social psychology, 50*, 992-1003.

Fong, C. T. (2006). The effects of emotional ambivalence on creativity. *Academy of Management Journal, 49*, 1016-1030.

Foo, M.-D., Uy, M. A., & Baron, R. A. (2009). How Do Feelings Influence Effort? An Empirical Study of Entrepreneurs' Affect and Venture Effort. *Journal of Applied Psychology, 94*(4), 1086-1094.

Ford, L. R., & Seers, A. (2006). Relational leadership and team climates: Pitting differentiation versus agreement. *Leadership Quarterly, 17*(3), 258-270.

Frank, W., & Heike, B. (2008). The positive group affect spiral: a dynamic model of the emergence of positive affective similarity in work groups. *Journal of Organizational Behavior, 29*(2), 239-261.

Garson, G. D. (2008, 24 April 2008). Structural Equation Modeling.

George, J. M. (1991). State or trait: Effects of positive mood on prosocial behaviors at work. *Journal of Applied Psychology, 74*, 299-307.

Gino, F., & Schweitzer, M. E. (2008). Blinded by anger or feeling the love: How emotions influence advice taking. *Journal of Applied Psychology, 93*(5), 1165-1173.

Gioia, D. A., & Thomas, J. B. (1996). Identity, image and issue interpretation: Sense-making during strategic change in academia. *Administrative Science Quarterly, 41*, 370-403.

Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine-Athestor.

Gohm, C., & Clore, G. L. (2002). Affect as information: An individual differences approach. In L. F. Barrett & P. Salovey (Eds.), *The Wisdom in Feeling: Psychological Processes in Emotional Intelligence* (pp. 89-113). New York: Guilford Press.

Golden, T. D. (2006). The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior, 27*(3), 319-340.

Gooty, J., Gavin, M., & Ashkanasy, N. M. (2009). Emotions research in OB: The challenges that lie ahead. *Journal of Organizational Behavior, 30*, 833-838.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of Leader-Member Exchange (LMX) Theory of Leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly, 6*, 219-247.

Gregersen, H. B., & Dyer, J. H. (2002). Lockheed Martin Chairman and CEO Vance Coffman on achieving mission success. *Academy of Management Executive, 16*(31-40).

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348-362.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.

Guthrie, J. P., & Hollensbe, E. C. (2004). Group Incentives and Performance: A Study of Spontaneous Goal Setting, Goal Choice and Commitment. *Journal of Management, 30*(2), 263.

Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology, 91*, 1134-1145.

Halbesleben, J. R. B., & Bowler, W. M. (2007). Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology, 92*, 93-106.

Hansen, C. D. (2005). Grounded theory research methods. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco, CA: Berrett-Koehler Publisher Inc.

Hatcher, L. (1998). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling* (3rd ed.). Cary, NC: SAS Institute.

Hecht, T. D., Allen, N. J., Klammer, J. D., & Kelly, E. C. (2002). Group beliefs, ability, and performance: The potency of group potency. *Group Dynamics: Theory, Research, and Practice, 6*, 143-152.

Heller, D., Judge, T. A., & Watson, D. (2002). The confounding role of personality and trait affectivity in the relationship between job and life satisfaction. *Journal of Organizational Behavior, 23*, 815-835.

Higgins, E. T. (1998). *Promotion and prevention: Regulatory focus as a motivational principle* (Vol. 30). New York: Academic Press.

Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist, 55*, 1230-1243.

Hinkin, T. R. (2005). Scale development principles and practices. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco, CA: Berrett-Koehler Publishers Inc.

Hinklin, T. R. (2005). Scale development principles and practices. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco: Berrett-Koehler Publishers Inc.

Hinsz, V. B., & Jundt, D. (2005). Exploring individual differences in a goal setting situation using the motivational trait questionnaire. *Journal of Applied Social Psychology, 35*, 551-571.

Hinsz, V. B., & Nickell, G. S. (2004). Positive reactions to working in groups in a study of group and individual goal decision making. *Group Dynamics: Theory, Research, and Practice, 8*, 253-264.

Hobfoll, S. E. (1988). *The ecology of stress*. New York: Hemisphere Publishing Corporation.

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524.

Hobfoll, S. E. (1998). *Stress, culture and community: The Psychology and philsophy of stress*. New York: Plenum Press.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review, 50*, 337-421.

Hobfoll, S. E., & Lilly, R. S. (1993). Resource conservation as a strategy for community psychology. *Journal of Community Psychology, 21*, 128-148.

Hobfoll, S. E., Lilly, R. S., & Jackson, A. P. (1991). Conservation of resources and the self. In O. F. Veiel & U. Baumann (Eds.), *The meaning and measurement of social support: Taking stock of 20 years of research*. Washington D.C.: Hemisphere.

Hollenbeck, J. R., & Klein, H. J. (1987). Goal commitment and the goal setting process: Problems, prospects, and proposals for future research. *Journal of Applied Psychology, 72*, 212-220.

Hollenbeck, J. R., Klein, H. J., O'Leary, A. M., & Wright, P. M. (1989a). Investigation of the construct validity of a self-report measure of goal commitment. *Journal of Applied Psychology, 74*, 951-956.

Hollenbeck, J. R., Williams, C. R., & Klein, H. J. (1989b). An empirical examination of the antecedents of commitment to difficult goals. *Journal of Applied Psychology, 74*, 18-23.

Hough, J. R., & White, M. A. (2003). Environmental dynamism and strategic decision-making rationality: An examination at decision level. *Strategic Management Journal, 24*, 481-489.

Houser-Marko, L., & Sheldon, K. M. (2006). Motivating behavioral persistence: The self-as-doer construct. *Personality and Social Psychology Bulletin, 32*, 1037-1049.

Huy, Q. N. (2002). Emotional Balancing of Organizational Continuity and Radical Change: The Contribution of Middle Managers. *Administrative Science Quarterly, 47*, 31-69.

Idson, L. C., Liberman, N., & Higgins, E. T. (2000). Distinguishing gains from non-losses and losses from non-gains: A regulatory focus perspective on hedonic intensity. *Journal of Experimental Social Psychology, 36*, 252-274.

Ilies, R., & Judge, T. A. (2005). Goal regulation across time: The effects of feedback and affect. *Journal of Applied Psychology, 90*, 453-467.

Ilies, R., Scott, B. A., & Judge, T. A. (2006). The interactive effects of personal traits and experienced states on intraindividual patterns of citizenship behaviors. *Academy of Management Journal, 49*, 561-565.

Ilies, R., Wagner, D. T., & Morgeson, F. P. (2007). Explaining affective linkages in teams: Individual differences in susceptibility to contagion and individualism-collectivism. *Journal of Applied Psychology, 92*(4), 1140-1148.

Ingledew, D. K., Wray, J. L., Markland, D., & Hardy, L. (2005). Work-related goal perceptions and affective well-being. *Journal of Health Psychology, 10*, 101-122.

Isen, A. M. (1999). On the relationship between affect and creative problem-solving. In S. Russ (Ed.), *Affect, creative experience and psychological adjustment*. Philadelphia: Taylor & Francis.

Isen, A. M. (2000). Positive affect and decision-making. In M. Lewis & J. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 417-435). New York: Guilford.

Isen, A. M. (2004). Some perspectives on positive feelings and emotions: Positive affect facilitates thinking and problem solving. In A. S. R. Manstead, N. Frijda & A. Fischer (Eds.), *Feelings and Emotions*. Cambridge: Cambridge University Press.

Isen, A. M., & Labroo, A. A. (2003). Some ways in which positive affect facilitates decision making and judgment. In S. L. Schneider & J. Shanteau (Eds.), *Emerging perspectives in judgment and decision research. Cambridge series on judgment and decision-making*. New York: Cambridge University Press.

Isen, A. M., & Reeve, J. (2005). The influence of positive affect on intrinsic and extrinsic motivation: Facilitating enjoyment of play, responsible work behavior and self-control. *Motivation and Emotion, 29*, 297-325.

Isen, A. M., Shalker, T. E., Clark, M., & Karp, L. (1978). Affect, accessibility of material in memory and behavior: A cognitive loop? *Journal of Personality and Social psychology, 36*, 1-12.

Job blasts rivals as iPAD sales disappoint. (2010, 20 October). *The Straits Times*, p. B18.

Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing Your Business Model. (cover story). *Harvard Business Review*, *86*(12), 50-59.

Jöreskog, K., & Sörbom, D. (1996). *LISREL 8: User's Reference Guide*. Chicago, IL: Scientific Software International, Inc.

Judge, T. A., Scott, B. A., & Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *Journal of Applied Psychology, 91*(1), 126-138.

Kalnbach, L. R., & Hinsz, V. B. (1999). A conceptualization and test of the influences of individual differences in goal setting situations. *Journal of Applied Social Psychology, 29*, 1354-1378.

Kamdar, D., & Van Dyne, L. (2007). The joint effects of personality and workplace social exchange relationships in predicting task performance and citizenship performance. *Journal of Applied Psychology, 92*(5), 1286-1298.

Kanfer, R. (1987). Task-specific motivation: An integrative approach to issues of measurement, mechanisms, processes, and determinants. *Journal of Social and Clinical Psychology, 5*, 237-264.

Kanfer, R. (1990). Motivational theory and industrial-organizational psychology. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 75-170): Consulting Psychologists Press.

Kanfer, R., & Ackerman, P. L. (2004). AGING, ADULT DEVELOPMENT, AND WORK MOTIVATION. *Academy of Management Review, 29*, 440-458.

Kanfer, R., Ackerman, P. L., Murtha, T. C., Dugdale, B., & Nelson, L. (1994). Goal setting, Conditions of practice, and task performance: A resource allocation perspective. *Journal of Applied Psychology, 79*, 826-835.

Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Thousand Oaks, CA: Sage.

Kiefer, T. (2005). Feeling bad: antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior, 26*, 875-897.

Klein, H. J. (1989). An integrated control systems theory of human motivation. *Academy of Management Review, 14*, 150-172.

Klein, H. J., & Kim, J. S. (1998). A field study of the influence of situational constraints, leader-member exchange, and goal commitment on performance. *Academy of Management Journal, 41*, 88-95.

Klein, H. J., & Lee, S. (2006). The Effects of Personality on Learning: The Mediating Role of Goal Setting. *Human Performance, 19*(1), 43-66.

Klein, H. J., Wesson, M. J., Hollenbeck, J. R., & Alge, B. J. (1999). Goal commitment and the goal-setting process: Conceptual clarification and empirical synthesis. *Journal of Applied Psychology, 84*, 885-896.

Klein, H. J., Wesson, M. J., Hollenbeck, J. R., Wright, P. M., & Deshon, R. P. (2001). The assessment of goal commitment: a measurement model meta-analysis. *Organizational Behavior and Human Decision Processes, 85*, 32-55.

Klein, H. J., & Wright, P. M. (1994). Antecedents of goal commitment: An empirical examination of personal and situational factors. *Journal of Applied Social Psychology, 94*, 95-114.

Kline, R. B. (1998). *Principles and practice of structural equation modeling.* New York: The Guilford Press.

Knight, R. G., Chisholm, B. J., Marsh, N. V., & Godfrey, H. P. (1988). Some normative, reliability and factor analytic data for the revised UCLA Loneliness Scale. *Journal of Clinical Psychology, 44*, 203-206.

Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2006). Where is the "me" among the "we"? Identity work and the search for optimal balance. *Academy of Management Journal, 49*, 1031-1057.

Langan-Fox, J., Code, S., & Gray, R. (2002). Supporting employee participation: Attitudes and perceptions in trainees, employees and teams. *Group Processes and Intergroup Relations, 5*, 53-82.

Langens, T. A., & Schmalt, H. D. (2002). Emotional consequences of positive day dreaming: The moderating role of fear of failure. *Personality and Social Psychology Bulletin, 28*, 2725-2735.

Larsen, R. J., & Diener, E. (1992). Promises and problems with the circumplex model of emotion. In M. S. Clark (Ed.), *Review of personality and social psychology: Emotion* (Vol. 13, pp. 25-59). Newbury Park, CA: Sage.

Larsen, R. J., Diener, E., & Emmons, R. A. (1986). Affect intensity and reactions to life events. *Journal of Personality and Social Psychology, 51*, 803-814.

Lawler, E. E., & Porter, L. W. (1967). Antecedent attitudes of effective managerial performance. *Organizational Behavior & Human Performance, 2*, 122-142.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

Lee, A., & Sternthal, B. (1999). The effects of positive mood on memory. *Journal of Consumer Research, 26*, 115.

Leonardi, P. M., Jackson, M. H., & Diwan, A. (2009). The enactment-externalization dialectic: rationalization and the persistence of counterproductive technology design practices in student engineering. *Academy of Management Journal, 52*, 400-420.

Lepine, J. A. (2005). Adaptation of teams in response to unforeseen change: Effects of goal difficulty and team composition in terms of cognitive ability and goal orientation. *Journal of Applied Psychology, 90*, 1153-1167.

Lepine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology, 87*, 52-65.

Lepine, J. A., Lepine, M. A., & Jackson, C. L. (2004). Challenge and hindrance stress: Relationship with exhaustion, motivation to learn, and learning performance. *Journal of Applied Psychology, 89*, 883-891.

Lepine, J. A., Podsakoff, N. P., & Lepine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal, 48*, 704-775.

Lewin, K. (1951). *Field theory in social science: Selected theoretical papers*. New York: Harper & Brothers.

Li, A., & Butler, A. B. (2004). The effects of participation in goal setting and goal rationales on goal commitment: An exploration of justice mediators. *Journal of Business & Psychology, 19*(1), 37-52.

Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology, 85*(3), 407-416.

Liu, H., Fung, R. Y. K., & Jiang, Z. (2005). Modelling of semiconductor wafer fabrication systems by extended object-oriented Petri nets. *International Journal of Production Research, 43*, 471-495.

Livingstone, B. A., & Judge, T. A. (2008). Emotional responses to work–family conflict: An examination of gender role orientation among working men and women. *Journal of Applied Psychology, 93*, 207-216.

Locke, E. A. (1968). Toward a theory of task motivation and incentives. *Organizational Behavior and Human Performance, 3*, 157-189.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.

Locke, E. A., Latham, G. P., & Erez, M. (1988). The determinants of goal commitment. *Academy of Management Review, 1*, 23-39.

Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, B. W. (1981). Goal setting and task performance: 1969-1980. *Psychological Bulletin, 90*, 125-152.

Locke, K. (1996). A funny thing happened! The management of consumer emotions in service encounters. *Organization Science, 7*, 40-59.

Lord, R. G., Diefendorff, J. M., Schmidt, A. M., & Hall, R. J. (2010). Self-regulation at work. *Annual Review of Psychology, 61*, 543-568.

Love, M. S., & Forret, M. (2008). Exchange Relationships at Work: An Examination of the Relationship Between Team-Member Exchange and Supervisor Reports of Organizational Citizenship Behavior. *Journal of Leadership & Organizational Studies (Sage Publications Inc.), 14*(4), 342-352.

MacKay, D. (2001). The 10 greatest performances in the history of athletics. *The Observer*.

Magni, M., & Pennarola, F. (2008). Intra-organizational relationships and technology acceptance. *International Journal of Information Management, 28*(6), 517-523.

Maitlis, S., & Ozcelik, H. (2004). Toxic decision processes: A study of emotion and organizational decision making. *Organization Science, 15*, 375-393.

Major, D. A., Kozlowski, S. W. J., Chao, G. T., & Gardner, P. D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. *Journal of Applied Psychology, 80*(3), 418-431.

Marks, S. R. (1977). Multiple Roles and Role Strain: Some Notes on Human Energy, Time and Commitment. *American Sociological Review, 42*(6), 921-936.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior, 2*, 99-113.

McIllvaine, R., & Bagga, A. (1999). Directions in contamination control. *Semiconductor International, 22*, 185-189.

McNair, D. M., Lorr, M., & Droppleman, L. F. (1981). *Profile of mood states manual*. San Diego, CA: Educational and Industrial Testing Services.

Meindl, J. R. (1990). On leadership: An alternative to the conventional wisdom. *Research in Organizational Behavior, 12*, 159-203.

Meindl, J. R., & Erhlich, S. B. (1988). *Developing a romance of leadership scale*. Paper presented at the Eastern Academy of Management Meetings, Washington, DC.

Melton, R. J. (1995). The role of positive affect in syllogism performance. *Personality and Social Psychology Bulletin, 21*, 788-794.

Mento, A. J., Cartledge, N. D., & Locke, E. A. (1980). Maryland vs Michigan vs Minnesota: Another look at the relationship between expectancy and goal difficulty to task performance. *Organizational Behavior and Human Performance, 25*, 419-440.

Mento, A. J., Locke, E. A., & Klein, H. J. (1992). Relationship of goal level to valence and instrumentality. *Journal of Applied Psychology, 77*, 395-405.

Michel, A., & Wortham, S. (2009). *Bullish on uncertainty: How organizational cultures transform participants*. New York: Cambridge University Press.

Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis: A sourcebook of new methods*. Newbury Park, CA: SAGE Publications.

Miner, J. B. (2005). *Organizational behavior 1: Essential theories of motivation and leadership*. London, England: M.E.Sharpe.

Mulkay, M. (1979). *Science and the sociology of knowledge*. London: George Allen and Unwin.

Narahari, Y., & Khan, L. M. (1996). Performance analysis of scheduling policies in re-entrant manufacturing systems. *Computers and Operations Research, 23*, 37-51.

Neuman, W. L. (2000). *Social research methods*. Needham Heights, MA: Allyn & Bacon.

O'Reilly, C. A., & Pfeffer, J. (2000). *Hidden value: How great companies achieve extraordinary results with ordinary people*. Boston: Harvard Business School Press.

Oettingen, G., Mayer, D., Sevincer, A. T., Stephens, E. J., Pak, H., & Hagenah, M. (2009). Mental contrasting and goal commitment: The mediating role of energization. *Personality and Social Psychology Bulletin, 35*, 608-622.

Oettingen, G., Pak, H., & Schnetter, K. (2001). Self-regulation of goal setting: Turning free fantasies about the future Into binding goals. *Journal of Personality and Social Psychology, 80*, 736-753.

Passmore, D. L., & Baker, R. M. (2005). Sampling strategies and power analysis. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry* (1st ed.). San Francisco, CA: Berrett-Koehler Publishers Inc.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Pentland, B. T. (1999). Building process theory with narrative: From description to explanation. *Academy of Management Review, 24*, 711-724.

Peters, L. H., O'Connor, E. J., & Eulberg, J. R. (1985). Sources, consequences and future considerations. In K. Rowland & G. Ferris (Eds.), *Research in personnel and human resources management* (Vol. 3, pp. 79-113). Greenwich, CT: JAI Press.

Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal, 49*(2), 327-340.

Pilotte, W. J., & Gable, R. K. (1990). The impact of positive and negative item stems on the validity of a computer anxiety scale. *Educational and Psychological Measurement, 50*, 603-610.

Piper, W. (1930). *The little engine that could*. New York: Platt & Munk.

Podsakoff, N. P., Lepine, J. A., & Lepine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology, 92*, 438-454.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879-903.

Pratt, M. G. (2008). Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier North-American journals. *Organizational Research Methods, 11*, 481-509.

Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. (2006). Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal, 49*, 239-262.

Quick, J. C., Quick, J. D., Nelson, D. L., & Hurell, J. J. (1997). *Preventative stress management in organizations*. Washington, DC: American Psychological Association.

Quinn, R. W., & Dutton, J. E. (2005). Co-ordination as energy in conversation. *Academy of Management Review, 30*, 36-57.

Raelin, J. A. (2007). Towards an epistemology of practice. *Academy of Management Learning and Education, 6*, 495-519.

Richardson, G. P. (1991). *Feedback thought: In social science and systems theory*. Philadelphia: University of Pennsylvania Press.

Rodell, J. B., & Judge, T. A. (2009). Can "Good" Stressors Spark "Bad" Behaviors? The Mediating Role of Emotions in Links of Challenge and Hindrance Stressors With Citizenship and Counterproductive Behaviors. *Journal of Applied Psychology, 94*, 1438-1451.

Rogelberg, S., & Stanton, J. (2007). Understanding and dealing with organizational survey nonresponse. *Organizational Research Methods*, 195-209.

Rubin, H. J., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: SAGE Publications.

Ruona, W. E. A. (2005). Analyzing qualitative data. In R. A. Swanson & F. E. I. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*. San Francisco, CA: Berrett-Koehler Publishers Inc.

Rupp, D. E., & Spencer, S. (2006). When customers lash out: The effects of customer interactional injustice on emotional labor and the mediating role of discrete emotions. *Journal of Applied Psychology, 91*(4), 971-978.

Saavedra, R., & Earley, P. C. (1991). Choice of task and goal under conditions of general and specific affective inducement. *Motivation and Emotion, 15*, 45-65.

Saavedra, R., & Kwun, S. K. (2000). Affective states in job characteristics theory. *Journal of Organizational Behavior, 21*, 131-146.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum.

Schutz, A. (1967). Collected papers. In M. Natanson (Ed.), (Vol. 1). The Hague: Martinus Nijhoff.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage Publications.

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructivism. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: sage.

Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cogntion: Foundations of social behavior* (pp. 527-561). New York: Guilford.

Schwarz, N. (2002). Situated cognition and the wisdom of feelings: Cognitive tuning. In L. F. Barrett & P. Salovey (Eds.), *The Wisdom of Feelings* (pp. 144-166). New York: Guilford.

Schwarz, N. (2006). Feelings, fit, and funny effects: A situated cognition perspective. *Journal of Marketing Research, 43*, 20-23.

Schwarz, N., Bless, H., & Bohner, G. (1991). Response scales as frames of reference: The impact of frequency range on diagnostic judgments. *Applied Cognitive Psychology, 5*, 37-49.

Schwarz, N., & Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology, 45*, 513-523.

Scott, B. A., Colquitt, J. A., & Paddock, E. L. (2009). An actor-focused model of justice rule adherence and violation: The role of managerial motives and discretion. *Journal of Applied Psychology, 3*, 756-769.

Scott, B. A., & Judge, T. A. (2006). Insomnia, emotions, and job satisfaction: A multilevel study. *Journal of Management, 32*, 622-645.

Seale, C. (1999). *The quality of qualitative research*. London: SAGE Publications.

Seers, A. (1989). Team-Member Exchange Quality: A New Construct for Role-Making Research. *Organizational Behavior & Human Decision Processes, 43*(1), 118.

Seers, A., Petty, M. M., & Cashman, J. F. (1995). Team-member exchange under team and traditional management. *Group & Organization Management, 20*(1), 18-38.

Seijts, G. H., & Latham, B. W. (2000). The effects of goal setting and group size on performance in a social dilemma. *Canadian Journal of Behavioural Science, 32*, 104-116.

Selye, H. (1976). *Stress of life*. New York: McGraw Hill.
Selye, H. (1982). History and present status of the stress concept. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress* (pp. 7-17). New York: Free Press.
Seo, M., & Barrett, L. F. (2007). Being emotional during decision-making - good or bad? An empirical investigation. *Academy of Management Journal, 50*, 923-940.
Seo, M., Bartunek, J. M., & Barrett, F. L. (2009). The role of affective experience in work motivation: Test of a conceptual model [Electronic Version]. *Journal of Organizational Behavior*, 9999, n/a from http://dx.doi.org/10.1002/job.655
Seo, M., & Ilies, R. (2009). The role of self-efficacy, goal, and affect in dynamic motivational self-regulation. *Organizational Behavior & Human Decision Processes, 109*, 120-133.
Seo, M., & Ilies, R. (In Press). The role of self-efficacy, goal, and affect in dynamic motivational self-regulation. *Organizational Behavior & Human Decision Processes*.
Shah, J., Higgins, E. T., & Friedman, R. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social psychology, 74*, 285-293.
Sherony, K. M., & Green, S. G. (2002). Coworker exchange:Relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology, 87*, 542-548.
Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal, 50*, 20-24.
Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68*, 653-663.
Sonnentag, S., Binnewies, C., & Mojza, E. J. (2008). "Did you have a nice evening?" A day-level study on recovery experiences, sleep, and affect. *Journal of Applied Psychology, 93*, 674-684.
Spencer, S., & Rupp, D. E. (2009). Angry, guilty, and conflicted: Injustice toward coworkers heightens emotional labor through cognitive and emotional mechanisms. *Journal of Applied Psychology, 94*(2), 429-444.
Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: a meta-analysis. *Psychological Bulletin, 124*, 240-261.
Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
Staw, B. M., & Bell, N. E. (1986). The dispositional approach to job attitudes: a lifetime longitudinal test. *Administrative Science Quarterly, 31*, 56-77.
Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research*. Newbury Park, CA: SAGE Publications.
Suddaby, R. (2006). From the editors: What grounded theory is not. *Academy of Management Journal, 49*, 633-642.
Sue-Chan, C., & Ong, M. (2002a). Goal assignment and performance: Assess the mediating roles of goal commitment and self-efficacy and the moderating role of power distance. *Organizational Behavior and Human Decision Processes, 89*, 1140-1161.
Sue-Chan, C., & Ong, M. (2002b). Goal assignment and performance: Assessing the mediating roles of goal commitment and self-efficacy and the moderating role of power distance. *Organizational Behavior & Human Decision Processes, 89*(2), 1140.
Teigen, K. H. (1994). Yerkes-Dodson: A law for all seasons. *Theory and Psychology, 4*, 525-547.
Thayer. (1986). Activation-Deactivation Adjective Checklist: Current overview and structural analysis. *Psychological Reports, 58*, 607-614.
Thayer, R. E. (1967). Measurement of activation through self-report. *Psychological Reports, 20*, 663-678.

Thayer, R. E. (1987). Energy, tiredness and tension effects of a sugar snack vs. moderate exercise. *Journal of Personality and Social Psychology, 52*, 119-125.

Thayer, R. E. (1989). *The biopsychology of mood and arousal*. New York: Oxford University Press.

Totterdell, P., Wall, T., Holman, D., Diamond, H., & Epitropaki, O. (2004). Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology, 89*, 854-867.

Tse, H. H. M., & Dasborough, M. T. (2008). A Study of Exchange and Emotions in Team Member Relationships. *Group & Organization Management, 33*(2), 194-215.

Tse, H. H. M., Dasborough, M. T., & Ashkanasy, N. M. (2008). A multi-level analysis of team climate and interpersonal exchange relationships at work. *Leadership Quarterly, 19*(2), 195-211.

Uzsoy, R., Lee, C. Y., & Martin-Vega, L. A. (1992). A review of production planning and scheduling models in the semiconductor industry. Part I: System characteristics, performance evaluation and production planning. *IIEE Transactions on Scheduling and Logistics, 24*, 47-60.

V-Villamial, F. D., & Rivera, D. E. (2000). Multi-layer optimization and scheduling using model predictive control: application to re-entrant semiconductor manufacturing lines. *Computers and Industrial Engineering, 24*, 2009-2021.

Van Maanen, J. (1979). The fact of fiction in organizational ethnography. *Administrative Science Quarterly, 43*, 539-550.

Vancouver, J. B. (2000). Self-regulation in industrial/organizational psychology: A tale of two paradigms. In M. Boekarts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of Self-Regulation*. San Diego, CA: Academic Press.

Vancouver, J. B. (2005). The depth of history and explanation as benefit and bane for psychological control theories. *Journal of Applied Psychology, 90*, 38-52.

Vancouver, J. B., Thompson, C. M., & Williams, A. A. (2001). The changing signs in the relationships among self-efficacy, personal goals and performance. *Journal of Applied Psychology, 86*, 605-620.

Vancouver, J. B. T., C.M., Tischner, E. C., & Putka, D. J. (2002). Two studies examining the negative effect of self-efficacy on performance. *Journal of Applied Psychology, 87*, 506-516.

VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement, 8*, 995-1015.

Vandewalle, D., Cron, W. L., & Slocum, J. W. (2001). The role of goal orientation following performance feedback. *Journal of Applied Psychology, 86*, 629-640.

Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.

Wallace, J. C., Edwards, B. D., Arnold, T., & Frazier, M. L. (2009). Work stressors, role-based performance, and the moderating influence of organizational support. *Journal of Applied Psychology, 94*, 254-262.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience negative emotional states. *Psychological Bulletin, 96*(465-490).

Watson, D., Clark, R. E., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology, 76*, 820-838.

Webb, R. A. (2004). Managers' Commitment to the Goals Contained in a Strategic Performance Measurement System. *Contemporary Accounting Research, 21*(4), 925-958.

Wech, B. A., Kennedy, K. N., & Deeter-Schmelz, D. R. (2009). A multi-level analysis of customer contact teams. *Journal of Services Marketing, 23*(6), 436-448.

Weinberg, S. (2001). *A fish caught in time*. New York: Harper Paperbacks.

Weiss, H. M., & Cropanzano, R. (Eds.). (1996). *An affective events approach to job satisfaction* (Vol. 18). Greenwich, CT: JAI Press.

Wentzel, K. (2002). The Influence of Fairness Perceptions and Goal Commitment on Managers' Performance in a Budget Setting. *Behavioral Research in Accounting, 14*, 247.

Westman, M., & Eden, D. (1996). Excessive role demand and subsequent role performance. *Journal of Organizational Behavior, 13*, 519-529.

Whitley, B. E. (2002). *Principles of research in behavioral science* (2 ed.). New York: McGraw Hill.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*, 601-617.

Williams, L. J., & Anderson, S. E. (1994). An alternative approach to method effects by using latent variable models: Applications in organizational behavior research. *Journal of Applied Psychology, 79*, 323-331.

Wong, K. F. E., Yik, M., & Kwong, J. Y. Y. (2006). Understanding the emotional aspects of escalation of commitment: The role of negative affect. *Journal of Applied Psychology, 91*(2), 282-297.

Wood, R. E., & Bandura, A. (1989). Impact on conceptions of ability on self-regulatory mechanisms and complex decision-making. *Journal of Personality and Social Psychology, 56*, 407-415.

Wu, D. S., Erkoc, M., & Karabuk, S. (2005). Managing capacity Iin the high-tech industry: A review of literature. *The Engineering Economist, 50*, 125-158.

Wu, M.-C., Chang, W.-J., & Chiou, C.-W. (2006). Product-mix decision in a mixed-yield wafer fabrication scenario. *International Journal of Advanced Manufacturing Technology, 29*, 746-752.

Wu, S., Levitas, E., & Priem, R. L. (2005). CEO tenure and company invention under differing levels of technological dynamism. *Academy of Management Journal, 2005*, 859-873.

Wundt, W. (1897). *Outline of psychology*. Leipzig: Wilhelm Engleman.

Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit formation. *Journal of Comparative Neurology and Psychology, 18*, 459-482.

Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). London: Sage.

Zohar, D., Tzischinski, O., & Epstein, R. (2003). Effects of Energy Availability on Immediate and Delayed Emotional Reactions to Work Events. *Journal of Applied Psychology, 88*(6), 1082-1093.

APPENDICES

APPENDIX 1:
A Study of Work Stressors and Goal Commitment



The modern work environment can be stressful. XXXX organization is aware that many engineers work in highly challenging contexts. The organization has therefore entered into a research partnership with Ms Kay Ren Tse, a PhD Candidate with the University of South Australia.



This collaboration has a dual purpose. Ms Kay will be studying the impact of workplace stressors on goal commitment and this will form the subject of her PhD dissertation. Ms Kay will interpret the same set of data collected to enlighten the organization on the types of work stressors prevalent in each department. We hope to bring practical solutions to the stress problem faced by our engineers.



The survey will be anonymous. Every engineer will receive a survey packet with instructions and a self-addressed return envelope. We hope many of you will choose to fill out this survey honestly and responsibly so that we can bring accurate solutions to the stress situation. Whilst participation is hoped for and encouraged, you are at liberty to refuse to participate by simply not returning the survey using the return address envelope. The survey is anonymous. Thus, we will not track who has returned the survey.

When the going gets TOUGH!

This research project has been approved by the UniSA Human Research Ethics Committee, and is a PhD project at the University of South Australia.

APPENDIX 2

Interview Schedule for Study One

From Interview 1 to 10

Describe in detail a goal attainment experience that was so challenging that you almost gave up; but you did not, and you eventually attained the goal.

Additional Question from Interviews 11 to 43

"How did that make you feel about what you were doing?"

Additional Question from Interviews 44 to 50

"What did this mean for your energy levels?"

Appendix 3:
Questionnaire for Study Two


University of South Australia

Questionnaire

Instructions
Circle only ONE option for each of every item.

Section 1a

Think of the time since you started reporting to your current supervisor. Rate how well you agree with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
6. It's hard to take my work goals seriously.	1	2	3	4	5
7. I don't care if I achieve my work goals or not.	1	2	3	4	5
8. I am strongly committed to pursuing my work goals.	1	2	3	4	5
9. It wouldn't take much to make me abandon my work goals.	1	2	3	4	5
10. I think my goals are good work goals to shoot for.	1	2	3	4	5

Section 1b

Think of the time since you started reporting to your current supervisor. Rate how well you agree with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
5. Children in the first 2 years of primary school learn less well when they have to sit for exams	1	2	3	4	5
6. Exams given to children in the first 2 years of primary school are unhelpful to the child's learning	1	2	3	4	5
7. The natural curiosity of a child in the first 2 years of primary school is stifled by exams	1	2	3	4	5
8. Exams interfere with children's learning in the first 2 years of primary school	1	2	3	4	5

Section 2a

Since you started reporting to your current supervisor:

	Not at All	A Little	Quite	Much	Very Much
7. I feel excited about my work.	1	2	3	4	5
8. I feel enthusiastic about my work.	1	2	3	4	5
9. I feel eager to get on with my work.	1	2	3	4	5
10. I feel lethargic about my work.	1	2	3	4	5
11. I feel reluctant to put effort into my work.	1	2	3	4	5
12. I feel unwilling to get on with my work	1	2	3	4	5

Section 2b

Rate how much stress each of the following has been causing you since you started reporting to your current supervisor:

	No Stress	Little Stress	Some Stress	Considerable Stress	A Great Deal of Stress
6. The degree to which politics rather than performance affects the assessment of my work goals.	**1**	**2**	**3**	**4**	**5**
7. The inability to clearly understand what is expected of me in achieving my work goals.	**1**	**2**	**3**	**4**	**5**
8. The amount of red tape I need to go through to achieve my work goals.	**1**	**2**	**3**	**4**	**5**
9. The lack of job security I have.	**1**	**2**	**3**	**4**	**5**
10. The degree to which my career seems "stalled".	**1**	**2**	**3**	**4**	**5**

Section 2c

Rate how much stress each of the following has been causing you since you started reporting to your current supervisor:

	No Stress	Little Stress	Some Stress	Considerable Stress	A Great Deal of Stress
6. The number of projects or assignments I have in my work goals.	1	2	3	4	5
7. The amount of time I spend at work in order to meet my work goals.	1	2	3	4	5
8. The volume of work that must be accomplished in the allotted time to meet my work goals.	1	2	3	4	5
9. The pressures I experience in order to meet my work goals.	1	2	3	4	5
10. The amount of responsibilities I have to shoulder in meeting my work goals.	1	2	3	4	5

Section 3

Think of the co-workers (excluding your boss and/or your subordinates) with whom you work closely in your department:

Items	1	2	3	4	5
7. Do you usually know how satisfied they are with what you do?	Rarely	Occasionally	Sometimes	Fairly Often	Very often
8. How well do they understand your job problems and needs?	Not a bit	A little	A fair amount	Quite a bit	A great deal
9. What are the chances that they would "bail you out" at their expense?	None	Small	Moderate	High	Very high
10. I have enough confidence in them that they would defend and justify my decisions if I am not around to defend myself.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
11. How would you characterize your working relationship with them?	Extremely ineffective	Worse than average	Average	Better than average	Extremely effective
12. Do you enjoy the time you spend with them?	Not a bit	A little	A fair amount	Quite a bit	A great deal

Instructions
Fill out the following personal information.

Age: (In years as at March 2010)	Age: □ 24 years old and below, □ 25 – 34 years old, □ 35 – 44 years old, □ 45 – 54 years old, □ 55 years old and above	
Marital Status (Tick the correct option)	☐ Single	☐ Married/Living with a partner
Gender (Tick the correct option)	☐ Male	☐ Female

APPENDIX 4

University of South Australia

International Graduate School of Business
Division of Business

A RESEARCH STUDY ON WORK STRESSORS AND GOAL COMMITMENT:
Participant Information Sheet

- Ms Kay Ren Tse (the researcher) may be reached at
    - Tel: 6365 9021
    - Email: KAYRY001@students.unisa.edu.au
    - Her highest academic qualification is a Masters degree

- Dr Leonie Hallo (Ms Kay's supervising professor) may be reached at
    - Tel: 61 882 711 597
    - Email: Leonie.hallo@unisa.edu.au

Please be invited to voluntarily participate in this research study. Your participation will help the field of industrial/organizational psychology to gain a further understanding into how workplace stressors affect people's goal commitment. To participate in this study, simply fill out the enclosed survey carefully, and mail it back to me, Ms Kay Ren Tse, in the self-addressed and franked return envelope. The survey will need 5 – 10 minutes to complete. You can refuse to participate by not sending back the survey.

The survey is anonymous. There will be no records of specific personal information. This being an anonymous survey, you will not risk any adverse consequences to your person. However, once the aggregate findings about stress levels are reported to your organization, improvements may be wrought to your work environment.

The non-identifiable information collected on hard copy will be entered into an electronic spreadsheet. The information collected and the electronic spreadsheet will be kept for 5 years in a locked drawer accessible only to Ms Kay Ren Tse. This locked drawer is at the researcher's home. A copy of the data will be stored with the International Graduate School of Business, University of South Australia.

The University of South Australia's Human Research Ethics Committee has reviewed this study. Should you wish to discuss the project with someone not

directly involved, in particular in relation to matters concerning policies, information about the conduct of the study, or your rights as a participant, please contact…

Ms Vicki Allen, Executive Officer
Human Research Ethics Committee
University of South Australia
GPO BOX 2471
Adelaide SA 5000
Email: Vicki.Allen@unisa.edu.au
Tel: +61 8 8302 3118

The results of this study will be summarized and reported in an aggregated form. A summary of the research results will be placed in your organization's secure intranet portal for your reference. This is an anonymous survey. As such, you participate at no risk at all to yourself. However, inaccurate responses to the survey may result in inappropriate improvements being made to your work environment. All records containing personal information will remain confidential and no information which could lead to identification of any individual will be released

APPENDIX 5

Consent Form for Study One

There was none. Participant rights were verbally communicated in the first 15 minutes of the interview.

Consent Form for Study One

Not applicable. This study uses only a survey.