The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

University of Cape Town

UNIVERSITY OF CAPE TOWN

COMMITMENT TO ORGANISATIONAL CHANGE: THE CASE OF INFORMATION SYSTEM INNOVATION

MATTHIAS SCHNEIDER

SCHMAT007

A dissertation submitted in partial fulfilment of the requirements for the award of the Degree of Master of Business Science in Organisational Psychology

Faculty of Commerce

University of Cape Town

2005

COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

Signature:... Signed by candidate Date: 24-05-2006

ABSTRACT

This study tested the generalisability of the *Commitment to Organisational Change* construct (Herscovitch & Meyer, 2002) in the context of an information system change within a non-Western environment. The sample comprised 106 employees (70% response rate) of a large Namibian organisation and responses were analysed using STATISTICA 7.0. Results suggest that the construct comprises three dimensions and can indeed be generalised to apply to an information system innovation change. *Affective* and *Normative Commitment to Organisational Change* were both positively related to *Compliance*, *Co-operation* and *Championing*, whilst *Continuance Commitment to Organisational Change* was negatively related, or unrelated. *Commitment to Organisational Change* was not a better predictor of behavioural support than *Organisational Commitment*. Interestingly, *Change Significance* and *Change Impact* both play an important role in predicting behavioural support for information system change. Implications for theory and practice are discussed and recommendations for future research are made.

University of Cape Town

TABLE OF CONTENTS

	Page
ABSTRACT	**ii**
TABLE OF CONTENTS	**iii**
TABLES	**v**
APPENDICES	**vi**
ACKNOWLEDGEMENTS	**vii**
CHAPTER 1: INTRODUCTION	**1**
Structure of the Dissertation	**3**
CHAPTER 2: LITERATURE REVIEW	**4**
Research Area 1: Organisational Change Research	**4**
Traditional Research Approaches and the Role of Commitment	*4*
Employee Reactions to Organisational Change	*7*
Limitations and Contributions of previous Studies	*13*
Research Area 2: Commitment Research	**15**
Early Conceptualisations of Commitment	*15*
Multi-dimensionality of Commitment	*17*
Multiple Foci of Commitment	*18*
General Model of Commitment	*19*
Summary of Commitment to Organisational Change Research	**23**
Research Questions, Objectives and Hypotheses	**24**
Research Questions	*24*
Research Objectives	*24*
Research Hypotheses	*25*
CHAPTER 3: METHOD	**26**
Research Design	**26**
Epistemological Stance	*26*
Time Dimension	*26*
Survey Design	*27*
Procedure	**27**
Data Collection	*27*
Data Analysis	*28*
Participants	**28**
Measures	**29**
Commitment to Organisational Change	*29*
Organisational Commitment	*29*
Behavioural Support of Organisational Change	*30*
Control Variables	*30*
Demographic Variables	*30*

University of Cape Town

CHAPTER 4: RESULTS **31**

Psychometric Properties of the Constructs **31**
Commitment to Organisational Change Scale *31*
Behavioural Support of Organisational Change Scale *37*
Organisational Commitment Scale *43*

Descriptive Statistics, Reliabilities and Intercorrelations of the Variables in the Study **44**

Behavioural Consequences of Commitment **46**
Consequences of Affective and Normative Commitment to Organisational Change *46*
Consequences of Continuance Commitment to Organisational Change *47*

Commitments as Predictors of Behavioural Support **47**
Rationale for Hierarchical Multiple Regression *48*
Employee Commitments and Compliance *49*
Employee Commitments and Co-operation *51*
Employee Commitments and Championing *52*
Assumptions of Multiple Regression Analysis *54*
Predictive Ability of Employee Commitments *55*

Summary of Results in Relation to Hypotheses **56**

CHAPTER 5: DISCUSSION **57**

Overview of Key Findings **57**

Findings of this Study and Past Research **58**
Psychometric Properties of the Constructs *58*
Behavioural Consequences of Commitment to Organisational Change *60*
Commitments as Predictors of Behavioural Support *62*

Implications for Theory and Practice **63**
Theoretical Implications *63*
Practical Implications *64*

Recommendations for Future Research **66**

Conclusion **69**

REFERENCES **70**
APPENDICES **81**

University of Cape Town

TABLES

Table	Description	Page
Table 1	Employee *Attitudes to Organisational Change* and *Organisational Commitment*	9
Table 2	Factor Analysis: *Commitment to Organisational Change* Scale (original scale)	32
Table 3	Factor Analysis: Final *Commitment to Organisational Change* Scale (revised scale)	34
Table 4	Hierarchical Factor Analysis: Final *Commitment to Organisational Change* Scale	35
Table 5	Factor Analysis: *Behavioural Support of Organisational Change* Scale (original scale)	38
Table 6	Factor Analysis: Final *Behavioural Support of Organisational Change* Scale	40
Table 7	Hierarchical Factor Analysis: *Behavioural Support of Organisational Change* Scale	41
Table 8	Factor Analysis: Original *Organisational Commitment* Scale	43
Table 9	Means, Standard Deviations, Reliabilities and Intercorrelations	45
Table 10	Correlations between *Commitment to Organisational Change* and Behavioural Support	46
Table 11	Hierarchical Regression Summary for Dependent Variable: *Compliance*	49
Table 12	Hierarchical Regression Summary for Dependent Variable: *Co-operation*	51
Table 13	Hierarchical Regression Summary for Dependent Variable: *Championing*	53
Table 14	Hypotheses and Summary of Results	56

University of Cape Town

APPENDICES

Appendix	Description	Page
Appendix A	Original Scales (English)	81
Appendix B	Original Scales (Afrikaans)	83
Appendix C	Diagrammatic View of the Literature underlying Commitment to Organisational Change	85

University of Cape Town

ACKNOWLEDEGMENTS

During the course of this year, there were many people that have contributed to the realisation of this project. First, I sincerely thank my supervisor, Associate Professor Jeffrey Bagraim for helping me to conceptualise this project and for his guidance during the research process. I also want to thank him for his expertise and for the countless discussions on the subject, as well as for his "open door policy". Second, I want to thank the CEO of AGRA Namibia, Peter Kazmaier, and the HR Manager, Griffort Beukes, for the assistance during the project. Third, I want to thank Anthea Adams for translating the questionnaire into Afrikaans. I also want to thank Heimo Kreft, Susan Steenkamp, Herman Louw, Merwe Fourie and Arnold Klein for the verification of the translation. I also want to express my thanks to the 106 participants of the survey. Fourth, I want to thank Dr. Helgo Schomer for our discussions on the practical application of commitment for individual and organisational change. Fifth, I am especially thankful to Kenny Rafel for his invaluable tips and comments concerning the final draft of this dissertation. Finally, I sincerely want to thank my girlfriend Sheila for supporting me during the course of this project, for her love, and her understanding.

University of Cape Town

CHAPTER 1: INTRODUCTION

Everything flows and nothing stays... you can't step into the same river twice
Heraclitus (c.540- c.480 BC: Plato Cratylus)

Although the above metaphor originated in ancient Greece, it has not lost its actuality. On the contrary, as we have moved into the 21st century, we are faced with more change than ever before, and the speed of the river of change appears to increase. The results of globalisation, driven by advancements in technology and the deregulation of economic affairs, are reminding us that everything flows and that nothing stays the same.

During the past decade, organisations too have been faced with more change than ever before. To survive in hypercompetitive, increasingly global markets, organisations have to continuously adapt to change (Burke, 2002).

The types of organisational change vary, and range from transformational changes, such as mergers and acquisitions, to evolutionary changes, such as the implementation of a unifying business standard, or the implementation of a technological innovation. Whilst transformational changes feature more prominently in the area of organisational change, in fact more than 95 percent of organisational changes are evolutionary (Burke, 2002). One such incremental organisational change is the implementation of an organisation-wide information system innovation.

To increase effectiveness and efficiency, many organisations have initiated organisation-wide information system projects during the last few years. Typical innovations are the implementation of Enterprise Resource Planning (ERP) systems, such as SAP, Oracle, or Peoplesoft. These projects represent an important event in the life of any organisation. Often, these projects also represent a large financial investment, in both technology and training (Yardley, 2002).

University of Cape Town

Yet, the majority of new information system implementations fail to deliver the promised results (Yardley, 2002). The effectiveness or success of such an implementation depends on many factors (Armenakis, Harris, & Mossholder, 1993), such as flawless technical implementation, customisation, and maintenance.

However, technical factors are only the necessary condition for success; the sufficient condition is the appropriate use and support of the system by its users (Yardley, 2002). These users are human beings. Therefore, employees – and in particular their attitudes and behaviours – play an important role during an information system change project.

Despite the importance of human beings in a change project and the high cost of failure, past research tended to apply a systems, or macro approach to the study of organisational change, paying little attention to the prediction of human attitudes, or behaviours (Armenakis & Bedeian, 1999; Stanley, Meyer, & Topolnytsky, 2005).

One human aspect is the study of human attitudes towards change, in particular employee commitment. Previous research has emphasised the importance of employee commitment in organisational change in general (e.g. Coetsee, 1999; Connor & Patterson, 1982), and in particular information system change (Umble & Umble, 2002; Yardley, 2002). Employee commitment is often regarded as the key for successful implementation (e.g. Kotter & Schlesinger, 1979; Piderit, 2000). Nonetheless, studies have thus far not paid sufficient attention to the definition and measurement of commitment in such a situation. There is thus little empirical evidence for the hypothesised importance of commitment in an information system change (Herscovitch & Meyer, 2002). Although some studies have investigated commitment in relation to organisational change, they have not paid attention to advances in the field of commitment research (e.g. Iverson, 1996; Lau & Woodman, 1995; Swailes, 2004; Vakola & Nikolaou, 2005; Yousef, 2000a, 2000b). Moreover, commitment studies have not yet been conducted in relation to a real-life information system change in a non-Western context.

University of Cape Town

This study, consequently, is about employee commitment to information system change and addresses the above problem. Information system change is regarded as evolutionary or incremental organisational change (Burke, 2002), that specifically involves the implementation of an enterprise-wide ERP system that affects all employees working on a computer.

The objective of this study, then, is to understand the nature and role of employee commitment in relation to an information system change, with particular emphasis placed on applying developments in commitment research to such a situation. As such, the *Commitment to Organisational Change* construct developed by Herscovitch and Meyer (2002) will be tested in relation to employee behavioural support to obtain empirical evidence for the importance of commitment in a situation of information system change.

To do this, a cross-sectional survey study was conducted with employees of a large Namibian retail organisation in the agricultural sector. The main variables were employee *Commitment to Organisational Change* (directed at the information system change), employee *Behavioural Support of Organisational Change*, which was conceptualised as *Compliance*, *Co-operation* and *Championing* (concerning the information system change), and finally, *Organisational Commitment*.

Structure of the Dissertation

In the next chapter, I will review the literature concerning the conceptualisation of *Commitment to Organisational Change*. This review will be concluded by setting out the associated research questions, objectives, and hypotheses. The third chapter describes the method and procedures followed to conduct the study. The fourth chapter presents the results of the data analyses based on the research hypotheses. The final chapter discusses the research findings in relation to past research in this field. Lastly, implications for theory and practice will be discussed, and recommendations will be given for future research.

University of Cape Town

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the key research areas that lead to the conceptualisation and measurement of employee *Commitment to Organisational Change*. This construct can be traced back to two distinct research areas (see Appendix C for a diagrammatic overview), namely organisational change research and commitment research. The first section reviews how employee commitment was traditionally portrayed within the field of organisational change research. The second section reviews the major milestones in commitment research toward the conceptualisation and measurement of *Commitment to Organisational Change*. The third section summarises the current state of research. Based on this, the final section sets out the research questions, objectives, and hypotheses of this dissertation.

Research Area 1: Organisational Change Research

This section reviews how employee commitment relates to traditional organisational change research. The first part locates the study of human reactions to change in the area of organisational change research and summarises how commitment was traditionally portrayed in this regard. The second part gives an overview of approaches to the study of human aspects in this field, particularly reviewing approaches related to employee commitment. The final part gives a general critique of these studies.

Traditional Research Approaches and the Role of Commitment

The traditional approach to organisational change research was that of a macro, or systems approach, which neglected the human dimension during a change initiative. Nonetheless, there is now a growing trend in the literature to include the study of human aspects. With respect to employee commitment, however, studies within this field hypothesise its importance for successful organisational change, but do not offer a comprehensive definition, as suggested by the field of commitment research. Thus, there is little empirical evidence for the claim that commitment is indeed important during a change initiative.

University of Cape Town

Human Aspects of Organisational Change

A comprehensive review of the literature on organisational change during the 1990's indicates that little attention was paid to the study of human aspects during a change initiative (Armenakis & Bedeian, 1999). The majority of research in the field of organisational change focussed on a macro- and less person-centred perspective (Judge, Thoresen, Pucik, & Welbourne, 1999). Within this macro-perspective, content, context, process, and criterion approaches to organisational change featured most prominently (Armenakis & Bedeian). These are discussed below:

- A content approach to organisational change aims to define the factors that comprise the targets of successful organisational change and how they relate to organisational effectiveness (e.g. alternative strategic orientations, or organisational structures).
- A contextual approach to organisational change concerns an organisation's internal and external environment and aims to address the challenges arising from these environments (e.g. globalisation, specialisation, or governmental regulation).
- A process approach to organisational change examines actions undertaken during a change initiative (e.g. phases in implementing change; stages in understanding change).
- Finally, a criterion approach examines the outcomes of an organisational change project.

The final theme in this review by Armenakis and Bedeian (1999) dealt with human aspects (e.g. affective and behavioural attitudes to change), thus indicating the neglect of the human dimension in the area of change research as argued by various authors (e.g. Bovey & Hede, 2001; Judge et al., 1999; Stanley, et al., 2005; Vakola, Tsaousis, & Nikolaou, 2004; Wanberg & Banas, 2000; Wanous, Reichers, & Austin, 2000).

University of Cape Town

Hypothesised Role of Commitment

Although the human dimension was previously neglected, the current trend is towards the study of human aspects to predict employee acceptance of organisational change, and the recognition of the important role of employee commitment during a change initiative (Herscovitch & Meyer, 2002; Oreg, 2003).

Piderit (2000) notes that successful organisational change is increasingly dependent on attaining employee support and enthusiasm for suggested changes. According to Vakola and Nikolaou (2005), the traditional unfreezing-moving-refreezing model of organisational change (Lewin, 1947) lost its relevance because of the recent tremendous changes in the workplace and their corresponding impact on employees, giving rise to a more person centred approach in change research. For example, Connor and Patterson (1982) developed a model that fosters employee *Commitment to Organisational Change*. They regarded employee commitment as the most important determinant of successful organisational change, but acknowledged that it lacked conceptualisation.

Despite this hypothesised importance of employee commitment, recent articles that emphasise it fail to use a definition as suggested by commitment research (e.g. Brewer & Hensher, 1998; Coetsee, 1999; Neubert & Cady, 2001; Nijhof, de Jong, & Beukhof, 1998; Umble & Umble, 2002; Yardley, 2002). Other authors acknowledge commitment as the key for managing change and suggest a recipe for achieving commitment to change, but only vaguely define what commitment actually means (e.g. Demers, Forrer, Leibowitz, & Cahill 1996; Klein & Sorra, 1996; Kotter & Schlesinger, 1979). Other articles advocate methods to increase commitment, for example, transformational leadership (Yu, Leithwood, & Jantzi, 2002), or participation (Lines, 2004), but do not offer a comprehensive definition of commitment. A recent study on commitment to change by Chawla and Kelloway (2004) develops a model for predicting openness and commitment to change. In their predictive model, the authors equate openness with commitment, and fail to define commitment in terms of empirical research. Thus, despite its hypothesised importance, there is little empirical evidence for the importance of commitment during a change initiative.

University of Cape Town

The next part evaluates the current state of research concerning human aspects, or human reactions to organisational change.

Employee Reactions to Organisational Change

Research on human reactions involves the study of constructs relating to employee attitudes and behaviours in relation to organisational change. Broadly, these constructs can be classified into the following research categories:

- Resistance to organisational change
- Cynicism about organisational change
- Readiness for organisational change
- Openness to organisational change
- Human reactions to organisational change
- Attitudes to organisational change

In the following, I will review these approaches. Particular attention will be paid to the study of employee *Attitudes to Organisational Change* in relation to employee *Organisational Commitment*, as this approach offers first, although limited, empirical evidence for the importance of employee commitment during a change initiative.

Cynicism and Resistance to Change

More than 50 years ago, Coch and French (1948) conducted an experiment to determine why workers resist organisational change and how this resistance could be overcome. Since then the concept of resistance to organisational change has been widely studied (e.g. Bovey & Hede, 2001; Carnall, 1986; Lines, 2004; Nadler, 1981; Oreg, 2003; Piderit, 2000; Waddell & Sohal, 1998), and recently also as a consequence of employee cynicism about organisational change (e.g. Stanley et al., 2005; Wanous et al., 2000).

University of Cape Town

Openness and Readiness for Organisational Change

The constructs of employee openness to organisational change (Chawla & Kelloway, 2004; Klecker & Loadman, 2000; Miller, Johnson, & Grau 1994; Susskind, Miller, & Johnson, 1998; Wanberg & Banas, 2000) or employee readiness for organisational change (Armenakis et al., 1993; Cunningham et al., 2002; Eby, Adams, Russel, & Gaby, 2000) have been used to measure and predict employee acceptance of organisational change.

Human Reactions to Organisational Change

Other studies have investigated the relationship between organisational change, perceived employee stress, and corresponding behaviours, such as employee turnover (e.g. Ashford, 1988; Mack, Nelson, & Quick, 1998; Morrell, Loan-Clarke, & Wilkinson, 2004). Reactions to organisational change, such as employee focus of attention, work experiences and perceptions, as well as behaviour changes were also investigated (e.g. Gardner, Dunham, Cummings, & Pierce, 1987; Porras & Hoffer, 1986; Worrall, Cooper, & Campbell-Jamison, 1998).

Attitudes to Organisational Change

Another human aspect is the construct of general employee *Attitudes to Organisational Change*. According to Elizur and Guttman (1976), *Attitudes to Organisational Change* can take three distinct forms, namely the *Affective* (emotional), *Cognitive* (opinion, knowledge), and *Behavioural* (instrumental). Within this framework, a widely used scale, the general *Attitudes to Organisational Change* scale was developed by Dunham, Grube, Gardner, & Cummings (1989, as cited in Lau & Woodman, 1995) and investigated in relation to *Organisational Commitment*.

In the following, I review empirical studies that investigate the relationship between employee *Organisational Commitment* and employee *Attitudes to Organisational Change*. The contribution of these studies toward understanding the role of commitment

University of Cape Town

in an organisational change situation is twofold: First, these studies give first empirical evidence of the importance of employee commitment in a change initiative. Second, these studies show that the dimensions of *Organisational Commitment* affect *Attitudes to Organisational Change* differently. Generally, *Affective and Normative Organisational Commitments* were found to affect *Attitudes to Organisational Change* positively, whilst the opposite was found for *Continuance Organisational Commitment*. Table 1 gives an overview of the studies under review.

Table 1

Employee *Attitudes to Organisational Change* and *Organisational Commitment*

Author(s)	Participants & Country	Definition of Commitment, Scale & Cronbach's Alpha	Definition of Attitudes to Change & Cronbach's Alpha	Commitment & Attitudes to Organisational Change/ Consequences	
Lau & Woodman (1995)	305 students for survey; 26 students for interviews; 15 employees for interviews; USA	One-dimensional definition: AOC measured by OCQ (.86)	General (note A) (.90) and specific (note B) attitude to change (.88)	AOC & Attitudes to specific change (path coefficient r=-.35, p<.01)	AOC & Attitude to general change (r=.03, path insignificant)
Iverson (1996)	761 nurses in Australia	One-dimensional definition: AOC measured by OCQ (.88)	Attitude towards specific change (own measure) (.68)	AOC & Attitude to change (path coefficient r=.34, p<.001)	AOC & Attitude to change (correlation coefficient r=.49, p<.05)
Vakola & Nikolaou (2005)	292 employees in Greece	One-dimensional definition: AOC (own measure) (.75)	General attitude towards change (Note C) (.92)	AOC & general attitude to change (r=.13, p<.05)	AOC not a moderator between occupational stress and attitudes to change
Yousef (2000a; 2000b)	474 employees in the United Arab Emirates	Multi-dimensional definition: AOC (.85), COC (.80) & NOC (.79)	General attitude to change (.77) and subscales: AAC (.83), BAC (.86) & CAC (.88) (note A)	Path coefficients (all p<.05): AOC & AAC (r=.16), BAC (r=.17); COC & CAC (r=-.18), BAC (r=-.10); NOC & CAC (r=.10)	
Swailes (2004); UK	166 private accountants; 138 public accountants; UK	Multi-dimensional definition: AOC (.82) & COC (.84)	Achievement (.90) & Innovation orientation (.89) (own measures)	AOC & Achievement (r= 24, p>.001) and Innovation (r=.13, p<.05) Orientation to Organisational Change	COC & Achievement (r=-.07) and Innovation (r=-.17, p<.05) Orientation to Organisational Change

Notes:

Note A: Dunham, Grube, Gardner, & Cummings (1989, as cited in Lau & Woodman, 1995)

Note B: Lau (1990, as cited in Lau & Woodman, 1995)

Note C: Vakola, Tsaousis, & Nikolaou (2004)

OCQ (Organisational Commitment Questionnaire; Porter, Steers, Mowday, & Boulian (1974))

AOC (Affective Organisational Commitment)

COC (Continuance Organisational Commitment)

NOC (Normative Organisational Commitment)

AAC (Affective Attitude to Organisational Change)

BAC (Behavioural Attitude to Organisational Change)

CAC (Cognitive Attitude to Organisational Change)

University of Cape Town

Lau and Woodman (1995). Lau and Woodman developed a model for understanding people's responses to organisational change. The results of this study indicate that employees use a "perceptional filter" to evaluate the positive or negative aspects of change. The key result is that employees with high *Organisational Commitment* are inclined to accept organisational change more readily, if the change is perceived to be beneficial. Conversely, highly committed employees would resist change, if such change was considered harmful to the organisation. In particular, the model suggests that *Affective Organisational Commitment* adversely affects attitudes toward specific change, if the change is perceived as harmful. The path between *Affective Organisational Commitment* and general *Attitudes to Organisational Change* was insignificant, but positively correlated.

The contribution of Lau and Woodman's (1995) study towards understanding the role of commitment in a situation of organisational change is twofold. Firstly, the study determines the causal ordering between *Organisational Commitment* and specific *Attitudes to Organisational Change*. It thus gives empirical evidence of the importance of commitment in a change situation. Secondly, the study found that employees may have a positive attitude to organisational change in general, but if a specific organisational change is perceived to be harmful, the attitude to such change may be negative. A weakness of their study is the use of students in the survey sample. In fact, only half the qualitative sample comprised working individuals. Comparing non-working individuals with working individuals can lead to inconsistency, because students might not yet have worked in an organisational setting and thus may lack an understanding of organisational change. As such, students might be unsuitable for a study concerning organisational change.

University of Cape Town

Iverson (1996). Iverson developed a causal model for predicting employee acceptance of specific organisational change. The results of his study indicated that *Organisational Commitment* correlated positively to specific *Attitudes to Organisational Change*. After union membership, *Organisational Commitment* was also the second most important determinant of *Attitudes to Organisational Change*. Further path analysis showed that an employee's acceptance of organisational change increased significantly due to

Organisational Commitment. *Organisational Commitment* was thus found to be both a significant determinant and mediator of an employee's acceptance of organisational change.

The contribution of Iverson's (1996) study towards understanding commitment in a change situation is threefold. Firstly, the study offers empirical evidence of the positive impact of *Organisational Commitment* on employee acceptance of organisational change. Secondly, the study determines the causal ordering between *Organisational Commitment* and acceptance of change. In his study, for instance, *Organisational Commitment* influences *Attitudes to Organisational Change* and not vice versa. Thirdly, the study surveys employees in real-life organisations and not just students.

Vakola and Nikolaou (2005). The study by Vakola and Nikolaou applied an alternative approach to measure the relationship between a one-dimensional *Organisational Commitment* and general *Attitudes to Organisational Change*. The *Organisational Commitment* scale was part of a comprehensive Organisational Screening Tool, which is, according to Vakola and Nikolaou, an advanced form of the Occupational Stress Indicator. In terms of this measure, *Organisational Commitment* was divided into two dimensions: *Perceived Organisational Support* (5 items) and *Organisational Commitment* (4 items). According to the authors, the *Organisational Commitment* dimension can be regarded as a global, one-dimensional measure of *Affective Organisational Commitment* similar to the Organisational Commitment Questionnaire (OCQ) (see Research Area 2: Commitment Research, page 15) (Porter, Steers, Mowday, & Boulian, 1974). General *Attitudes to Change* were measured by a 29-item scale developed by Vakola et al. (2004) in a study investigating the role of emotional intelligence and personality on *Attitudes to Organisational Change*.

The results of the study indicate a weak, but statistically significant positive relationship between *Organisational Commitment* and positive *Attitudes to Organisational Change*. The study did not find evidence of *Organisational Commitment* acting as a moderator between stress and *Attitudes to Organisational Change*.

University of Cape Town

Yousef (2000a; 2000b). Yousef conducted studies investigating multi-dimensional *Organisational Commitment* (see pages 16/17 for a definition) in relation to general *Attitudes to Organisational Change*. The results of his studies indicate that an employees' *Attitude to Organisational Change*, in particular the affective and behavioural components, increase with an increase in *Affective Organisational Commitment*. Another finding shows that *Continuance Organisational Commitment* negatively influences *Cognitive* and *Behavioural Attitudes to Organisational Change*. Finally, *Normative Organisational Commitment* positively influences *Cognitive Attitudes to Organisational Change*.

The contribution of Yousef's (2000a; 2000b) studies towards understanding commitment in a change situation is threefold. Firstly, the results indicate that *Organisational Commitment* positively affects *Attitudes to Organisational Change*, and Yousef gives empirical evidence for the importance of commitment in a change situation. Secondly, the study shows that the dimensions have varying consequences on *Attitudes to Organisational Change*. Whilst *Affective Organisational Commitment* positively affects *Attitudes to Organisational Change*, *Continuance Organisational Commitment* has an adverse effect. Thirdly, the study applies Meyer and Allen's (1991) three-dimensional model to a non-Western multicultural setting, which suggests that the construct can be generalised cross-culturally. According to Meyer, Stanley, Herscovitch, & Topolnytsky (2002), the number of comprehensive commitment studies outside of North America is relatively small (e.g. Cheng & Stockdale, 2003; Chen & Francesco, 2003 as cited in Vandenberghe, 2003; Ko, Price, & Mueller 1997), because most studies have applied a one-dimensional definition only (Al-Meer, 1989; Near, 1989).

Swailes (2004). Swailes conducted a study using a multi-dimensional definition of *Organisational Commitment* in relation to general *Attitudes to Organisational Change* (*Employee Achievement* and *Innovation Orientation*). The study conceptualised *Organisational Commitment* by Meyer and Allen's (1991; 1997) three-dimensional model, but only included the affective and continuance dimensions. Normative commitment was excluded due to concerns about the validity of the scale and the possible overlap with the affective dimension (Ko et al., 1997 as cited in Swailes, 2004; Ko et al.,

University of Cape Town

1997). The author furthermore developed a three-item *Employee Achievement* scale and a four-item *Employee Innovation Orientation* scale to display general *Attitude to Organisational Change*. The author developed these scales by means of earlier qualitative research (Swailes, 2000, as cited in Swailes, 2004). High *Employee Achievement* or *Innovation Orientation* indicates a positive general *Attitude to Organisational Change*. The author distinguished between various commitment profiles developed by Becker (1992) and Becker and Billings (1993) to illustrate the varying relationships of the profiles to *Employee Achievement* and *Innovation Orientation*.

The contribution of Swailes' (2004) study in understanding the role of commitment during organisational change is twofold: Firstly, his results show that the commitment dimensions relate differently to general *Attitudes to Organisational Change*. The results indicate a significant positive relationship between *Affective Organisational Commitment* and *Employee Achievement* and *Employee Innovation Orientation* toward organisational change. *Continuance Organisational Commitment* is negatively related to the *Employee Achievement* and *Innovation Orientation* to organisational change. Secondly, the sample comprised real world employees and not just students as well. Despite these contributions, the exclusion of the normative commitment scale can be regarded as a weakness, because there is sufficient empirical evidence of the distinctiveness (although related) of the scale from the affective commitment dimension (Allen & Meyer, 1996; Hackett, Bycio, & Hausdorf, 1994; Meyer et al., 2002). Another weakness concerns the usage of general *Attitudes to Organisational Change*. As the study by Lau and Woodman (1995) has shown, the general and specific attitudes of employees can differ.

University of Cape Town

Limitations and Contributions of previous Studies

In summary, the above studies have applied either single- or multi-dimensional definitions of *Organisational Commitment* in relation to general or specific *Attitudes to Organisational Change*. Although these studies provide the initial empirical evidence of the importance of employee commitment in developing a positive general attitude towards an organisational change initiative, they do not take into account developments

in the area of commitment research, as will be shown in the next section on Commitment Research. At this stage, the following issues can be criticised.

The criticism regarding studies applying a one-dimensional measure (e.g. Iverson, 1996; Lau & Woodman, 1995; Vakola & Nikolaou, 2005) of *Organisational Commitment* is twofold. Firstly, by measuring only one dimension of this variable, the other dimensions are neglected. Research in the area of commitment has shown that these dimensions have varying behavioural consequences (Meyer & Herscovitch, 2001; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Wasti, 2005). Secondly, it can be argued that the underlying concept of the OCQ is outdated, as it had been developed during the early 1970's within a different work setting and job market. Compared to the 1990's, the 1970's were characterised by greater job security and little change, thus casting doubt on whether the OCQ can still be relevant to the modern workplace (Swailes, 2002).

Studies applying a multi-dimensional definition of *Organisational Commitment* in relation to *Attitudes to Organisational Change* (Swailes, 2004; Yousef, 2000a, 2000b) can be criticised, firstly, for applying the *Organisational Commitment* focus only. Recent developments in commitment research indicate that predictions of employee behaviour can be improved by using a target specific commitment focus and not just the *Organisational Commitment* focus only (Herscovitch & Meyer, 2002). A second weakness concerns the relevance of *Organisational Commitment* in relation to the recent drastic changes in the workplace. Due to waves of redundancies and downsizing processes during the past 10 years, Baruch (1998) states that, overall, *Organisational Commitment* is on the decline. Kontraduk, Hausdorf, Korabik, and Rosin (2004) found that increased career mobility associated with recent changes in the workplace could also have a negative impact on *Organisational Commitment*. Organisational change can also have an adverse impact on *Organisational Commitment* and lead to the dissolution of internalised commitment and an increase in compliance commitment (Bennett & Durkin, 2000). Other researchers found a significant decline in employee loyalty during the 1990's (Armenakis & Bedeian, 1999). This has made it necessary to measure the commitment of employees not only to the organisation, but also to organisational change and other targets (e.g. organisational goals). Thirdly, all the above studies assume an

University of Cape Town

attitude-behaviour link between positive *Attitudes to Organisational Change*, whether specific or general, and employee behavioural support. This assumes that, if an employee has a positive general or specific attitude toward organisational change, the employee would also contribute to the success of a change initiative by showing behavioural support. This link to behaviour, however, was not empirically verified. As such, it is not clear whether positive *Attitudes to Organisational Change* do factually lead to behavioural support and thus to an increased likelihood of success. Fourthly, most of the above studies focus on general *Attitudes to Change* only (except for Lau & Woodman, 1995, and Iverson, 1996). According to Cascio (2000), however, behaviour is less influenced by general attitudes than by attitudes toward a specific behaviour. As shown in the study by Lau and Woodman, employees can have a positive attitude to change in general, but a negative one towards a specific change. Moreover, a study by Rashid, Sambasivan & Rahman (2004) found that organisational culture was a significant moderator of general attitudes to organisational change. Whilst some cultures facilitate the acceptance of change, others discourage it. The assessment of general *Attitudes to Organisational Change* in an organisational change situation could thus be misleading.

Research Area 2: Commitment Research

This section discusses the evolution in commitment research toward the development of *Commitment to Organisational Change* as a distinct and measurable construct. The major milestones were early conceptualisations of *Organisational Commitment*, multi-dimensional definitions of commitment, and finally, the move toward a general model of commitment, which could be applied to an organisational change initiative.

Early Conceptualisations of Commitment

Research on commitment in the workplace can be traced back to the middle of the last century when various researchers indirectly referred to the modern concept of commitment while focusing on organisational or bureaucratic effectiveness (Swailes, 2002). The importance of employee commitment to the organisation and its tasks was introduced during the 1960's in relation to the successful implementation of

University of Cape Town

organisational change. During this period, *Organisational Commitment* emerged as a distinct construct and became the most developed focus of employee workplace commitment with respect to theory and research (Meyer, Allen, & Topolnytsky, 1998; Swailes).

During the 1970's, empirical research on *Organisational Commitment* gained momentum and culminated in the development of a specific definition and measurement, the *Organisational Commitment* Questionnaire (OCQ) (Porter et al., 1974). *Organisational Commitment*, as measured by this questionnaire was defined as an employee's acceptance of the organisation's goals and values; a willingness to exert considerable effort on behalf of the organisation; and a strong desire to maintain membership in the organisation (Porter et al.,). Mowday, Steers, and Porter (1979), amongst others, found the scale to be both valid and reliable, and it thus became a widely used definition and measurement tool of *Organisational Commitment*.

The dominant research method that emerged at that time was thus of an empirical, and more particularly of a quantitative nature. *Organisational Commitment* was regarded as an important predictor of behaviour at the workplace, with important consequences for work-related variables, including absenteeism, employee turnover and job satisfaction (Mathieu & Zajac, 1990), as well as non-work variables such as non-work satisfaction (Romzek, 1989). Begley and Czajka (1993) found that *Organisational Commitment* moderates employee stress, job dissatisfaction, and turnover intention during times of organisational change and turmoil.

This development can be seen as a first milestone in commitment research, as it gave the construct a new direction, methodologically (e.g. by using quantitative methods), as well as conceptually (i.e. by defining *Organisational Commitment* and its antecedents, correlates and consequences) (Swailes, 2002). During this time, however, *Organisational Commitment* was still regarded as a one-dimensional construct, though, defined by an employee's identification and involvement with an organisation (Mowday, 1999), and with little consensus concerning the underlying dimensionality (Meyer et al., 1998).

University of Cape Town

Multi-dimensionality of Commitment

This narrow definition of the *Organisational Commitment* construct changed during the 1980's and early 1990's, when various frameworks of multi-dimensional *Organisational Commitment* emerged. Despite other multi-dimensional definitions of commitment, two frameworks dominated and generated most research (Meyer & Herscovitch, 2001).

Firstly, O'Reilly and Chatman (1986) developed a three-dimensional framework of *Compliance*, *Identification* and *Internalisation Organisational Commitment*. A scale to measure these dimensions was developed and widely used by researchers.

Secondly, Allen and Meyer (1990) developed another framework of *Organisational Commitment*. This framework regards *Organisational Commitment* as three-dimensional, comprising *Affective*, *Normative,* and *Continuance Commitment*. In their view, *Affective Organisational Commitment* refers to the emotional bond of the employee to the organisation. *Normative Organisational Commitment* refers to the obligation felt by an employee to remain a member of an organisation. Finally, *Continuance Organisational Commitment* is the concern of employees with regard to the perceived costs associated with leaving the organisation. This last type of commitment can be divided further into two separate, but highly correlated subscales concerned with the costs of leaving the organisation namely: *Personal Sacrifice* and *Lack of Alternatives* (Meyer, Allen, & Gellatly, 1990). These three commitments together form the commitment profile of an employee. A comprehensive review of studies covering this area is beyond the scope of this thesis, but factor analyses have generally shown that the three dimensions were distinguishable, yet related (Allen & Meyer, 1996; Dunham, Grube, & Castaneda, 1994; Hackett et al., 1994; Irving, Coleman, & Cooper, 1997). A recent meta-analysis of the *Organisational Commitment* construct generally confirms past research on the construct and in particular on its three-dimensional structure (Meyer et al., 2002).

Meyer and Allen (1997) argued that, despite differences across frameworks of *Organisational Commitment*, there are also important similarities, and that they share the core essence of commitment. One fundamental similarity is that the different dimensions

University of Cape Town

are merely different mind-sets of how an individual is compelled towards an entity (e.g. organisation, or union) or a course of action (e.g. organisational goals). Furthermore, most models also show an emotional bond with the organisation as one of the dimensions (Meyer & Herscovitch, 2001). According to Mowday (1999), there is also an overlap between Porter et al.'s (1974) definition of commitment and the above multi-dimensional frameworks. O'Reilly and Chatman's (1986) internalisation commitment and Meyer and Allen's (1991) affective commitment are seen as the same as Porter's commitment (Dunham et al., 1994), as measured by the OCQ. Meyer and Herscovitch further argued that another similarity shared by different frameworks of commitment is the assumption that commitment binds an individual to an organisation and that all definitions reflect an affective, cost concerned and moral component. According to Meyer and Allen, the lack of consensus about the definition of commitment helped to establish commitment as a multi-dimensional construct and showed that the different dimensions are just different labels given to similar mind-sets underlying commitment.

The shift from a one-dimensional definition to a multi-dimensional one can be seen as a second significant milestone in commitment research. It is today widely accepted that *Organisational Commitment* can take multiple dimensions and that these dimensions have different antecedents and consequences (Mowday, 1999; Meyer & Allen, 1997). Various studies have assessed the varying consequences of the dimensions on job performance (Meyer et al., 1989; Randall, Fedor, & Longenecker, 1990; Wasti, 2005), employee turnover, absenteeism (Somers, 1995), and turnover intentions (Jaros, 1997). Other studies found that hypothesised antecedents, such as employee stock ownerships relate differently to the three *Organisational Commitment* dimensions (Culpepper, Gamble, & Blubaugh, 2004).

University of Cape Town

Multiple Foci of Commitment

Apart from the debate about the underlying dimensionality of commitment, another issue that was criticised was the dominance of *Organisational Commitment* as the only focus of commitment. It was pointed out that other foci were equally important in predicting behaviours (Becker, 1992; Becker & Billings, 1993; Becker, Billings, Eveleth, & Gilbert,

1996; Mueller, Wallace, & Price, 1992; Reichers, 1985, 1986; Swailes, 2004). Such foci of commitment include the work itself, the union, or the profession (Meyer, Allen, & Smith, 1993; Morrow, 1983). Other foci include top management, co-workers, supervisors and customers (Gregersen, 1993), but *Organisational Commitment* was still seen as the key mediating focus (Hunt & Morgan, 1994) and thus attracted the main attention of research (Mathieu & Zajac, 1990; Meyer et al., 2002).

General Model of Commitment

In 2001, Meyer and Herscovitch suggested a general model for studying commitment at the workplace by emphasising that commitment should have a core framework. This general model is an expansion of Meyer and Allen's (1991) model of *Organisational Commitment* and comprises three dimensions that can be directed at multiple foci at the workplace. In this model, commitment is defined as a binding force, influenced by different mind-sets (perceived costs, desire and obligation), which shape behaviour. Different bases underlie and influence these mind-sets (e.g. a lack of alternatives, personal characteristics, and personal involvement). The shaped behaviour is then directed at a target (e.g. an entity or a course of action). Meyer and Herscovitch classified these behaviours as either focal or discretionary behaviours towards a target. With regard to the former these referred to an employee's course of action affected by his or her commitment. With regard to the latter, these referred to an employee's behaviour not specified in terms of commitment, but affected by the discretion of the employee, such as showing extra effort. This behaviour can then be directed at an explicit or implied target. This target can be an entity (e.g. an organisation), or an intended outcome of a course of action, such as an organisational change initiative. Herscovitch and Meyer (2002) noted that the best predictors of behaviour tend to be target-related. For example, in situations of competing commitments (Kegan & Lahey, 2001; Reichers, 1986), it can be more effective to measure multiple commitments to predict behaviour. It is widely recognized today that employees can be committed towards multiple foci at the workplace (Meyer & Allen, 1997; Meyer & Herscovitch, 2001). The move towards multiple foci (Swailes, 2002), and in particular toward a general multi-dimensional model of commitment, constitutes a third significant milestone in commitment research. The implication is that

University of Cape Town

various foci of commitment can be used to predict change related behaviours. As such, organisational change can become a focus of commitment.

Commitment to Organisational Change

Commitment to Organisational Change was first conceptualised in a study by Herscovitch and Meyer (2002). The study applies the general model of commitment, as developed by Meyer and Herscovitch (2001), to a variety of organisational change situations (e.g. mergers of departments, introduction of new technology, modifications to shift work).

An employee can thus show a commitment profile towards change that consists of varying degrees of *Affective, Continuance and Normative Commitment to Organisational Change* with varying behavioural consequences. This constitutes a significant change in how the relationship between commitment and organisational change had been studied so far. More specifically, the authors defined the three dimensions of *Commitment to Organisational Change* as follows:

> "Consequently, for the purposes of this research, we defined commitment to change as a force (mind-set) that binds an employee to a course of action deemed necessary for the successful implementation of a change initiative. The mind-set that binds an individual to this course of action can reflect (a) a desire to provide support for the change based on a belief in its inherent benefits (affective commitment to change), (b) a recognition that there are costs associated with failure to provide support for the change (continuance commitment to change), and (c) a sense of obligation to provide support for the change (normative commitment to change). That is, employees can feel bound to support a change because they want to, have to, and/or ought to" (Herscovitch & Meyer, 2002, p. 475).

The sample of their study comprised 3 groups, consisting respectively of 224 university students, 157 nurses, and 108 nurses in Canada. The study was predominantly of a quantitative nature (survey design), using various statistical methods (analysis of variance, multiple regression, correlation, and factor analysis) to determine causal links between the variables and the dimensionality of *Commitment to Organisational Change*. Variables in the study included the three dimensions of *Commitment to Organisational Change* mentioned previously. The study also contained a scale to measure the behavioural consequences (focal, or discretionary behaviours) of commitment termed *Behavioural Support of Organisational Change* by means of three subscales: *Compliance*

University of Cape Town

as a focal behaviour (Cronbach's alpha: .49), and *Co-operation* (Cronbach's alpha: .85), and *Championing* (Cronbach's alpha: .90) as discretionary behaviours. The internal consistencies of the *Affective, Continuance, and Normative Commitment to Organisational Change* scales were .94, .94, and .86 respectively. Meyer and Allen's (1991) affective, continuance and normative commitments scales were also used to measure *Organisational Commitment*, with internal validity amounting to .91, .87 and .90 respectively.

The results of their study indicate the validity of the *Commitment to Organisational Change* scales. Factor analyses indicated that the three dimensions of those scales are distinguishable from each other and distinguishable from *Organisational Commitment*. Hierarchical regression analyses indicated that *Commitment to Organisational Change* was a better predictor of self-reported behavioural support than *Organisational Commitment* (R^2 change of .24 for *Commitment to Organisational Change* compared to .00 for *Organisational Commitment*) and in particular for *Compliance* (R^2 change of .15, compared to .7). *Affective Commitment to Organisational Change* was positively correlated to *Compliance* ($r=.32$, $p<.01$), *Co-operation* ($r=.53$, $p<.01$) and *Championing* ($r=.67$, $p<.01$) of organisational change. *Continuance Commitment to Organisational Change* was positively related to *Compliance* ($r=.17$, $p<.05$), but inversely, or unrelated to *Co-operation* ($r=-.01$) and *Championing* ($r=-.06$). *Normative Commitment to Organisational Change* was positively correlated to *Compliance* ($r=.34$, $p<.01$), *Co-operation* ($r=.51$, $p<.01$) and *Championing* ($r=.54$, $p<.01$).

Contributions. The contribution of Herscovitch and Meyer's (2002) study to understanding the role of commitment in a change situation is threefold.

Firstly, it applies the three-dimensional *Commitment to Organisational Change* construct to a variety of organisational change initiatives. It thus goes beyond *Organisational Commitment* and beyond the one-dimensional definitions used in previous studies.

University of Cape Town

Secondly, it empirically links commitment to *Behavioural Support of Organisational Change*. Apart from previous studies that focused on the positive relationship between *Organisational Commitment* and *Attitudes to Organisational Change*, their results provide the first evidence for the importance of *Commitment to Organisational Change* itself in a change situation.

Thirdly, the study has shown that *Commitment to Organisational Change* is a better predictor of the behavioural support in an organisational change situation than *Organisational Commitment*, and thus questions the approach of previous studies that focused on *Organisational Commitment* in relation to *Attitudes to Organisational Change* (e.g. Iverson, 1996; Lau & Woodman, 1995; Swailes, 2004; Vakola & Nikolaou, 2005; Yousef, 2000a; 2000b).

Limitations. The first limitation of their study is the use of a cross-sectional research design. The weakness of such an approach is that it measures a point in time. Longitudinal studies have suggested, however, that commitment; in particular, *Organisational Commitment* might not be stable over time (Banks & Henry, 1993). Relatively few studies have applied a longitudinal cross-sequential research design and thus not much is known about the impact of changing environments on *Organisational Commitment* (Meyer et al., 2002). Whilst a longitudinal study by Beck and Wilson (2000) indicated a decline in *Affective Organisational Commitment* with tenure, another one by Vandenberghe, Bentein and Stinglhamber (2004), indicated some stability in *Affective Organisational Commitment* towards multiple foci.

A second critique is that no causal ordering was established in the correlational analysis. The direction of the relationship between *Commitment to Organisational Change* and the behavioural consequences is thus a hypothesised one and based on logic.

A third critique is the assumption that high levels of commitment are good, without appreciating the possible negative effects, such as work-life conflict (Lamsa & Savolainen, 2000; Randall, 1987).

University of Cape Town

A fourth weakness is the almost exclusive reliance on self-report measures, including the problem of social-desirability bias and central tendency (Potsakoff & Organ, 1986).

A fifth criticism is the use of one occupational group only, which limits the generalisability of the study.

Finally, although the authors used *Change Significance* and *Change Impact* as control variables, they did not differentiate between clusters of organisational change (e.g. evolutionary compared to transformational organisational change). Changes included in the study ranged from transformational changes, such as mergers, to evolutionary changes, such as the introduction of new technology. As Burke (2002) noted, not all organisational changes are the same and, as such, they should be differentiated in relation to employee commitment.

Summary of Commitment to Organisational Change Research

This review traced the conceptualisation and measurement of *Commitment to Organisational Change* back to two broad and different areas of research. These areas were organisational change and commitment research. It was shown that, although human aspects have been neglected in the past, there is now a trend in organisational change research to incorporate a study of human aspects. The recognition that commitment and, in particular, *Organisational Commitment*, plays a vital role in the successful management of organisational change was shown, but recent studies have not yet applied advanced definitions of *Organisational Commitment* in relation to *Attitudes to Organisational Change*, nor have they investigated commitment as the focus of organisational change. It was also shown that advancements in commitment research have facilitated the conceptualisation and measurement of *Commitment to Organisational Change*. To date, however, there is only one published study that applies the focus of commitment to an organisational change situation. This study links *Commitment to Organisational Change* to employee behavioural support, and indicates that it is a better predictor of this than *Organisational Commitment* (Herscovitch & Meyer, 2002).

University of Cape Town

Thus far, then, the *Commitment to Organisational Change* construct has only been applied in a Canadian context, amongst students and members of one occupational group; furthermore, it was only applied to English speakers and with reference to a variety of predominantly hypothetical organisational change initiatives. Thus, there is still very little empirical evidence to prove that commitment is indeed beneficial and valid during an information system change. As a result of the above, this dissertation will investigate the following research questions, objectives and hypotheses.

Research Questions, Objectives and Hypotheses

Research Questions

The research questions that follow from the current state of research explore three aspects: Firstly, can the *Commitment to Organisational Change* construct (Herscovitch & Meyer, 2002) be generalised to apply to an information system change in a non-Western country with diverse participants? Secondly, is there a positive empirical link between commitment to information system change and employee behavioural support? Thirdly, is *Commitment to Organisational Change* a better predictor of employee behavioural support than *Organisational Commitment*? Based on these research questions, the next section looks at the research objectives and hypotheses.

Research Objectives

Based on the research questions, this section defines the objectives and hypotheses of this study. The objectives of this research are threefold:

The first objective is to examine the portability of the *Commitment to Organisational Change* and *Behavioural Support of Organisational Change* constructs (Herscovitch & Meyer, 2002) to a Namibian (i.e. non-Western) context and with diverse participants (across occupational levels and in two languages: English and Afrikaans). The second objective is to determine the role of employee commitments in managing information technology change, by investigating the relationship between *Commitment to*

University of Cape Town

Organisational Change and *Behavioural Support of Organisational Change*, conceptualised as *Compliance*, *Co-operation* and *Championing*. The third objective is to determine whether *Commitment to Organisational Change* is a better predictor than *Organisational Commitment* of employee behavioural support of information system change. To achieve these objectives, I tested the following hypotheses:

Research Hypotheses

Hypothesis One

Commitment to Organisational Change has three distinct dimensions: *Affective, Continuance and Normative Commitment to Organisational Change.*

Hypothesis Two

Behavioural Support of Organisational Change has three distinct dimensions: *Compliance, Co-operation and Championing.*

Hypothesis Three

Affective and Normative Commitments to Organisational Change are positively related to *Co-operation* and *Championing*.

Hypothesis Four

Continuance Commitment to Organisational Change is not positively related to *Co-operation* and *Championing*, but positively related to *Compliance*.

Hypothesis Five

Commitment to Organisational Change explains more of the variance in *Behavioural Support of Organisational Change* than *Organisational Commitment* does.

University of Cape Town

CHAPTER 3: METHOD

A cross-sectional survey of employees in a large Namibian retail organisation undergoing information technology change was conducted to test the five hypotheses. This chapter is divided into four sections, which respectively describe the research design, the procedure, the participants and the measures used.

Research Design

The research design for data collection and analysis was guided by the underlying epistemological stance, the cross-sectional time dimension and the particular data collection method.

Epistemological Stance

In this study, the underlying assumptions about knowledge acquisition fall within the quantitative paradigm. This paradigm assumes that knowledge is objective and can be acquired by empirical evidence and is guided by fundamental laws of human nature (Goles & Hirschheim, 2000). Grounded in this paradigm, this study tries to explain and predict the regulated or causal relationships between employee commitment and employee support of organisational change. This view, of course, can be criticised (Mingers, 2001), but the primary purpose of this study was to empirically verify the *Commitment to Organisational Change* scale in a non-Western context. For comparability with past research, the same paradigm had to be followed. Thus, a conscious decision was made to conduct research within this paradigm.

University of Cape Town

Time Dimension

The time dimension of this study is cross-sectional. This implies that a snapshot or point-in-time measurement was taken of employee commitment and other variables. The advantage of this approach is that results were obtained quickly and at relatively low cost.

Survey Design

Data was collected with a survey questionnaire. This involved distributing the questionnaire to all the employees in the target population (i.e. employees working with a computer). The advantage of this method was that variables were conceptualised and measured on a quantifiable Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The data generated was then analysed with statistical methods to determine the relationships between the variables.

Procedure

Data Collection

After obtaining ethical clearance for the research project, a large Namibian organisation (with 450 employees), which was at that time implementing a new organisation-wide ERP information system in the retail sector, was identified and contacted to participate in the study. The implementation of this system constituted a significant innovation in terms of information technology, compared to the old system. Institutional approval to conduct the survey study was obtained from the Chief Executive Officer.

To reach all the employees who would be affected by the information system change (i.e. employees working with a computer, which amounted to 150 full-time employees), the Chief Executive Officer and the Human Resources Director recommended that the English language questionnaire should be translated into Afrikaans, because of the dominance of the Afrikaans language as the main communication medium. Consequently, a professional translator of the Afrikaans Language Department at the University of Cape Town translated the English version of the questionnaire into Afrikaans. Five bilingual Afrikaans-English speakers thereafter verified the Afrikaans version and confirmed that the version constituted an exact translation of the original English version.

University of Cape Town

The Human Resources Director then issued an internal memorandum to inform the employees who were working with the old and new information system about the questionnaire. The questionnaires were distributed to all full-time employees who would be affected by the information system change. In the cover letter, employees were asked to complete the questionnaire and to return it, after a specified time, in a sealed envelope to the closed box at the reception of the head office.

Data Analysis

The data analysis commenced upon completion of data collection by using the statistical analysis package STATISTICA (version 7.0). After capturing the survey data into a spreadsheet, the first step was to describe the characteristics of the sample by using descriptive statistics. The second step was to verify the factor structures of the *Commitment to Organisational Change*, *Behavioural Support of Organisational Change*, and *Organisational Commitment* scales. The criteria for these factor structures were based on past research (Herscovitch & Meyer, 2002) and on an equal number of items per subscale. Items that loaded on more than one factor were eliminated. Based on the modified scales, the means, standard deviations, reliabilities and intercorrelations were calculated. Finally, hierarchical regression analysis was applied to explain the variance in *Behavioural Support of Organisational Change* with demographic variables, *Commitment to Organisational Change* and *Organisational Commitment* as predictors.

University of Cape Town

Participants

After a four-week period and four call backs (personal telephone calls, emails and one official memorandum), 107 questionnaires out of 150 were returned, of which 106 were usable, constituting a response rate of 70%.

Half (50%) of the participants were males, slightly less than half (46%) were females, and the rest (4%) did not declare their gender. Sixty-seven percent (67%) of the participants worked at branch level and 23% at the head office. Eighty-five percent (85%) of the participants completed the Afrikaans version of the survey, and only fifteen percent

(15%) the English version. The average age of the participants ranged from 19 to 73 years (M= 35.4; SD=10.4). Tenure ranged from 3 months to 24 years (M=5.9; SD=5.5), with an average of 3.7 years tenure in the current position (minimum 3 months, maximum 19 years). The average job grade was 6.5 (1 being the lowest level and 15 being the highest level) and the average organisational level was 3.23 (1 being the lowest level and 5 being top management). The highest qualifications of the participants ranged from "High School" (13%) and "Matric" (53%) to "Technikon" (8%), "University" (10%), and "Other" (6%), with 10% not declaring their highest qualifications.

Measures

This part summarises the scales used in the study. See Appendix A and B for the English and Afrikaans versions of the survey scales.

Commitment to Organisational Change

Herscovitch and Meyers' (2002) eighteen-item *Commitment to Organisational Change Scale* was used to measure commitment to information system change. The scale consists of three subscales of six items each, measuring *Affective* (e.g. "This change is a good strategy for this organisation"), *Continuance* (e.g. "I feel pressure to go along with this change") and *Normative* (e.g. "It would be irresponsible to of me to resist this change") *Commitment to Organisational Change* on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Organisational Commitment

Organisational Commitment was measured by Bagraim's (2004) twelve-item instrument. The scale consists of three subscales of four items each, measuring *Affective* (e.g. "I feel emotionally attached to this organisation"), *Continuance* (e.g. "It would be very costly to leave this organisation right now") and *Normative* (e.g. "I would feel guilty if I left this organisation right now") *Organisational Commitment* on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

University of Cape Town

Behavioural Support of Organisational Change

Herscovitch and Meyer's (2002) twenty-item *Behavioural Support of Organisational Change* scale was used to measure *Compliance*, *Co-operation* and *Championing* of the information system change. The scale consists of three subscales measuring *Compliance* (six items, e.g. "I comply with my organisation's directives regarding the change"), *Co-operation* (eight items, e.g. "I try to keep myself informed about the change") and *Championing* (six items, e.g. "I speak positively about the change to outsiders") on a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Control Variables

Herscovitch and Meyer's (2002) control variables to measure the participants' perceptions of *Change Significance* (e.g. "How significant is this change for your organisation?"), and *Change Impact* ("To what extent will this change affect the performance of your job?") on job performance, organisational climate and non-work life were included in the study, and measured by a 5-point Likert type response scale ranging from 1 (extremely minor; large negative effect) to 5 (extremely major; large positive effect).

Demographic Variables

Demographic variables included gender, age, job grade, highest qualification, organisational tenure, position tenure, organisational level, and office location, and were measured by multiple-choice and self-report items (e.g. age).

In summary, this chapter detailed the research design, research procedure, participants and scales of the study. Based on the above research method, the next chapter summarises the results of the data analysis.

University of Cape Town

CHAPTER 4: RESULTS

This chapter consists of five sections and summarises the results of the data analysis. The first section reviews the psychometric properties of the *Commitment to Organisational Change, Behavioural Support of Organisational Change*, and *Organisational Commitment* scales. The second section presents the descriptive statistics, reliabilities, and intercorrelations of the study. The third section discusses the results of the correlation analysis between commitment and behavioural support. The fourth section investigates the predictive relationship between the two foci of employee commitment and consequent *Behavioural Support of Organisational Change*. The final section links the main findings of this study to the research hypotheses.

Psychometric Properties of the Constructs

This first section reviews the psychometric properties of the *Commitment to Organisational Change* and *Behavioural Support of Organisational Change* constructs and thereby addresses the first two hypotheses of the study.

Commitment to Organisational Change Scale

To test the hypothesis that *Commitment to Organisational Change* comprises three distinct components (*Affective, Continuance and Normative Commitment to Organisational Change*), I conducted a principal components factor analysis using varimax-normalised rotation with casewise deletion of missing data.

The rationale for using this method was justified by the purpose of extracting the minimum number of factors whilst accounting for the maximum variance in the original set of variables. Prior research indicated a possible three-factor solution (e.g. Herscovitch & Meyer, 2002). The orthogonal rotation method was justified because it provides the maximum possible simplification of the factor matrix, thus making interpretation easier (Hair, Anderson, Tatham, & Black, 1998).

University of Cape Town

Factor Analysis of the Original Commitment to Organisational Change Scale

The initial principal components factor analysis was conducted with the original 18 *Commitment to Organisational Change* items (Herscovitch & Meyer, 2002) and revealed, after varimax normalised rotation, four factors with an eigenvalue of greater than 1.0, accounting for 29.4%, 21.1%, 8.9% and 5.6% of the total variance (65.2%), respectively. Table 2 below shows this interim result.

Table 2
Factor Analysis: *Commitment to Organisational Change* Scale (original scale)

	Factor			
Affective Commitment to Change Items	**I**	**II**	**III**	**IV**
ACC1: I believe in the value of this change.	**0.818**	0.033	-0.172	-0.234
ACC2: This change is a good strategy for this organisation.	**0.852**	0.084	-0.071	-0.140
ACC3: I think that management is right about introducing this change.	**0.836**	0.057	-0.134	-0.134
ACC4: This change serves an important purpose.	**0.830**	0.077	-0.197	-0.125
ACC5: Things would be worse without this change.	**0.782**	-0.032	0.108	0.264
ACC6: This change is necessary.	**0.835**	-0.026	0.008	-0.035
Continuance Commitment to Change Items				
CCC1: I have no choice but to go along with this change.	0.233	0.138	**0.653**	0.034
CCC2: I feel under pressure to go along with this change.	-0.326	0.104	0.486	**0.619**
CCC3: I have too much at stake to resist this change.	-0.089	0.100	**0.677**	0.344
CCC4: It would be too costly for me to resist this change.	-0.202	0.148	**0.719**	0.059
CCC5: It would be risky to speak out against this change.	-0.337	0.189	**0.659**	-0.294
CCC6: Resisting this change is not a viable option for me.	-0.422	0.443	**0.473**	-0.168
Normative Commitment to Change Items				
NCC1: I feel a sense of duty to work toward this change.	0.056	**0.672**	0.107	-0.024
NCC2: I do not think it would be right of me to oppose this change.	0.125	**0.849**	0.024	0.045
NCC3: I would feel bad about opposing this change.	-0.013	**0.795**	0.162	0.122
NCC4: It would be irresponsible of me to resist this change.	0.090	**0.691**	0.224	0.069
NCC5: I would feel guilty about opposing this change.	-0.056	**0.770**	0.095	0.113
NCC6: I feel an obligation to support this change.	-0.180	0.446	-0.058	**0.608**
Eigenvalues	5.309	3.810	1.602	1.023
Individual total variance (percent)	29.49%	21.16%	8.90%	5.68%
Cumulative total variance (percent)	29.49%	50.65%	59.55%	65.23%

Notes:
Original Scale: Herscovitch & Meyer (2002)
N=100 (casewise deletion of missing data)
Principal components factor analysis with varimax-normalised rotation.
Significant loadings are presented in boldface. Factor loadings of .55, or above are significant at the .05 significance level for N=100 (Hair et al., 1998).
The numbering (e.g. ACC1) shows the item numbers of the original scale.

University of Cape Town

The six *Affective Commitment to Organisational Change* items loaded strongly onto Factor I (with factor loadings greater than .78). Five *Normative Commitment to Organisational Change* items loaded strongly onto Factor II (factor loadings greater than .67). Item NCC6 ("I feel an obligation to support this change"), however, loaded strongly onto Factor IV (factor loading of .60). The six *Continuance Commitment to Organisational Change* items loaded moderately onto Factor III (factor loadings greater than .47) but also moderately onto Factor IV, thus making an interpretation difficult.

Consequently, the initial principal components factor analysis did not yield three clear factors as described by Herscovitch and Meyer (2002). It was therefore decided to conduct further factor analyses.

The original factor structure was examined and items with weak loadings or high cross-loadings were removed. Removing only the weakest loading item per subscale, however, also did not result in a clear three-factor structure. It was therefore decided to remove a further weak or cross-loaded item per subscale. To ensure equal subscale lengths (e.g. four items per subscale), the following items were removed: "Things would be worse without this change" (ACC5); "This change is necessary" (ACC6); "I feel under pressure to go along with this change" (CCC2);"Resisting this change is not a viable option for me" (CCC6);"I feel a sense of duty to work towards this change" (NCC1); "I feel an obligation to support this change" (NCC6). The factor structure of the scale was then re-examined.

Factor Analysis of the Revised Commitment to Organisational Change Scale

Principal Components Factor Analysis. The final factor structure, after removing the above items, and following varimax normalised rotation, yielded three significant factors with eigenvalues greater than 1.0, accounting for 30.7%, 25.6% and 11.0% of total variance respectively (67.3% combined variance). The sample size of 100 cases implies that a factor loading of .55, or above, can be considered statistically significant at the .05 significance level (Hair et al., 1998).

University of Cape Town

As can be seen in Table 3, the *Affective Commitment to Organisational Change* items loaded strongly onto Factor I (factor loadings greater than .86). The *Normative Commitment to Organisational Change* items loaded strongly onto Factor II (factor loadings greater than .76). Lastly, the *Continuance Commitment to Organisational Change* items loaded strongly onto Factor III (factor loadings greater than .67).

Table 3
Factor Analysis: Final *Commitment to Organisational Change* Scale (revised scale)

	Factor		
Affective Commitment to Change Items	**I**	**II**	**III**
ACC1: I believe in the value of this change.	**0.898**	-0.018	-0.132
ACC2: This change is a good strategy for this organisation.	**0.906**	0.051	-0.036
ACC3: I think that management is right about introducing this change.	**0.868**	0.035	-0.100
ACC4: This change serves an important purpose.	**0.870**	0.058	-0.167
Continuance Commitment to Change Items			
CCC1: I have no choice as to go along with this change.	0.201	0.118	**0.693**
CCC3: I have too much at stake to resist this change.	-0.163	0.123	**0.675**
CCC4: It would be too costly to resist this change.	-0.192	0.171	**0.721**
CCC5: It would be too risky to speak out against this change.	-0.285	0.103	**0.686**
Normative Commitment to Change Items			
NCC2: I do not think that it would be right of me to oppose this change.	0.139	**0.822**	0.043
NCC3: I would feel bad about opposing this change.	-0.051	**0.837**	0.175
NCC4: It would be irresponsible of me to resist this change.	0.064	**0.767**	0.212
NCC5: I would feel guilty about opposing this change.	-0.037	**0.794**	0.114
Eigenvalues	3.690	3.076	1.328
Individual total variance (percent)	30.70%	25.60%	11.00%
Cumulative total variance (percent)	30.70%	56.30%	67.30%

Notes:
N=100 (casewise deletion of missing data)
Principal components factor analysis with varimax-normalised rotation.
Each item's significant loadings are presented in boldface. Factor loadings of .55, or above are significant at the .05 significance level for N=100.
The numbering (e.g. ACC1) shows the item numbers of the original scale.

Hierarchical Factor Analysis. An analysis of the correlation coefficients between the refined constructs indicated that *Affective Commitment to Organisational Change* and *Continuance Commitment to Organisational Change* (r=-.219, p=.038) are significantly negatively related, whilst *Normative Commitment to Organisational Change* and *Continuance Commitment to Organisational Change* (r=.297, p=.004) share a significantly positive relationship (see Table 9). This indicates that, although the *Commitment to Organisational Change* construct revealed three factors, these factors are not entirely independent, but weakly related.

University of Cape Town

The correlations between the three *Commitment to Organisational Change* dimensions and the shared factor loadings prompted me to examine the relationship between the three factors further. For this purpose, as suggested by Statsoft Inc. (2006), I conducted a hierarchical factor analysis to determine whether, apart from the three factors, another shared factor existed. The aim of this method is to determine independent factors in relation to a factor that is related to these independent factors. In this case, an overall secondary behavioural support factor would affect all the items. These items in turn can form independent, primary factors, yet be related to the secondary factor (Statsoft Inc.).

Table 4
Hierarchical Factor Analysis: Final *Commitment to Organisational Change* Scale

	Factors			
Affective Commitment to Change Items	**Secondary Factor**	**Primary I**	**Primary II**	**Primary III**
ACC1: I believe in the value of this change.	-0.285	**0.859**	0.047	-0.046
ACC2: This change is a good strategy for this organisation.	-0.206	**0.879**	0.097	0.024
ACC3: I think that management is right about introducing this change.	-0.239	**0.836**	0.089	-0.028
ACC4: This change serves an important purpose.	-0.268	**0.834**	0.119	-0.086
Continuance Commitment to Change Items				
CCC1: I have no choice as to go along with this change.	0.384	0.257	0.023	**0.566**
CCC3: I have too much at stake to resist this change.	0.459	-0.097	0.011	**0.527**
CCC4: It would be too costly to resist this change.	0.510	-0.118	0.047	**0.557**
CCC5: It would be too risky to speak out against this change.	0.485	-0.215	-0.014	**0.530**
Normative Commitment to Change Items				
NCC2: I do not think that it would be right of me to oppose this change.	0.320	0.184	**0.747**	-0.057
NCC3: I would feel bad about opposing this change.	0.442	0.011	**0.732**	0.037
NCC4: It would be irresponsible of me to resist this change.	0.408	0.121	**0.670**	0.083
NCC5: I would feel guilty about opposing this change.	0.388	0.018	**0.703**	-0.006

Notes:

N=100 (casewise deletion of missing data)
Each item's significant loadings are presented in boldface. Factor loadings of .55, or above for the primary factors are significant at the .05 significance level for N=100 (Hair et al., 1998). No generally agreed upon criteria exist concerning the significance of secondary factors (Stasoft Inc., 2006); The numbering (e.g. ACC1) shows the item numbers of the original scale.

University of Cape Town

The results of this analysis show that one general secondary factor exists in relation to three unique primary factors (see Table 4). All items (except for CCC3) loaded significantly onto their respective primary factors (items with factor loadings above .55, for N=100), as well as moderately onto the second order factor. This implies the existence of a general *Commitment to Organisational Change* factor, explaining the relationship between the factors.

Internal Consistency of the Commitment to Organisational Change Scale

Following the factor analyses, as suggested by Hair et al. (1998), I conducted item reliability analyses with the refined scales. The reliability estimates (Cronbach's alpha) of the refined *Affective Commitment, Continuance Commitment, and Normative Commitment to Organisational Change* scales were .918 (average inter-item correlation =.742), .687 (average inter-item correlation = .361) and .824 (average inter-item correlation = .544) respectively (see Table 9). Analyses of the individual items revealed that the internal consistency would not increase by eliminating items from the three subscales. Except for the *Continuance Commitment to Organisational Change* subscale, the scales indicate high levels of internal consistency, above the .70 minimum value as suggested (Hair et al.).

Assumptions of Factor Analysis

According to Hair at al. (1998), the critical assumptions of principal components factor analysis are conceptual rather than statistical and thus they were not assessed. Nonetheless, an inspection of the normal distribution diagrams of the *Commitment to Organisational Change* variables indicates that the assumption of normality is met.

Summary: Dimensionality of the Commitment to Organisational Change Scale

The results of the above analysis support Hypothesis One that *Commitment to Organisational Change* has three underlying dimensions. Except for the *Continuance Commitment to Organisational Change* scale, the scales indicated high levels of internal

University of Cape Town

consistency. Nonetheless, the initial factor analysis of the original *Commitment to Organisational Change* scale did not yield the expected three factors. and follow-up analyses thus had to be conducted, resulting in the elimination of two items per subscale. The intercorrelations between the constructs indicate relationships between the components of *Commitment to Organisational Change*. This relationship was confirmed by hierarchical factors analysis, indicating a moderate secondary factor that is shared by the three dimensions. Thus, although the analysis yielded three dimensions, these dimensions are not entirely unrelated.

Behavioural Support of Organisational Change Scale

To test the hypothesis that *Behavioural Support of Organisational Change* consist of three distinct components (*Compliance, Co-operation and Championing*), I conducted principal components factor analysis with varimax-normalised rotation and casewise deletion of missing data. The rationale for using this particular method was the same as for the above analysis of the *Commitment to Organisational Change* scale.

Factor Analysis of the Original Behavioural Support of Organisational Change Scale

The first principal components factor analysis included all twenty items from Herscovitch & Meyer's (2002) original *Behavioural Support of Organisational Change* multi-item scale (see Table 5). The analysis revealed four dimensions with eigenvalues greater than 1.0, accounting for 37.5%, 11.5%, 10.1% and 8.4% of total variance, respectively (combined variance: 67.6%).

Following varimax-normalised rotation, the factor loadings were mixed (see Table 5 below). Several items, including BSCH1 to BSCH5 loaded most strongly onto Factor I (factor loadings greater than .70). The other items loaded onto Factor II and III, with Factor IV being the weakest. This mix of factor loadings (except for BSC1 to BSC5) made an interpretation difficult. The hypothesised three dimensions did not emerge.

University of Cape Town

Table 5

Factor Analysis: *Behavioural Support of Organisational Change* Scale (original scale)

	Factors			
Compliance Items	**I**	**II**	**III**	**IV**
Concerning the computer system change at my organisation, I…				
BSC1: …will comply with management's directives regarding the change.	0.190	0.139	**0.774**	0.106
BSC2: …will accept role changes required by the change.	0.169	0.182	**0.731**	0.075
BSC3: … will adjust the way I do my job as required by this change.	0.218	0.052	**0.814**	0.194
BSC4: …will only work on change-related activities that are directly relevant to my job.	-0.125	**-0.807**	-0.056	0.136
BSC5: …will do only what is specifically required of me when it comes to the change.	-0.096	**-0.902**	-0.148	-0.057
BSC6: …will do only what is absolutely necessary when it comes to this change.	-0.037	**-0.854**	-0.128	-0.120
Co-operation Items				
Concerning the computer system change at my organisation, I…				
BSCO1: …will work toward the change consistently.	0.123	-0.171	0.092	**0.674**
BSCO2: …will remain optimistic about the change, even in the face of adversity.	0.128	0.009	0.371	**0.603**
BSCO3: …will avoid former practices, even if they seem easier.	0.104	-0.058	0.503	**0.613**
BSCO4: …will engage in change-related behaviours that seem difficult in the short-term but are likely to have long-term benefits.	**0.773**	0.123	0.278	0.001
BSCO5: …will seek help concerning the change when needed.	**0.749**	-0.116	0.344	0.000
BSCO6: …will not complain about the change.	0.151	0.075	0.044	**0.759**
BSCO7: …will try to keep myself informed about the change.	**0.660**	-0.005	0.218	0.302
BSCO8: …am tolerant of temporary disruptions and/or ambiguities in my job.	0.389	0.201	0.135	0.506
Championing Items				
Concerning the computer system change at my organisation, I…				
BSCH1: …will encourage the participation of others in the change.	**0.810**	0.101	0.194	0.143
BSCH2: …will speak positively about the change to co-workers.	**0.750**	0.31	-0.096	0.375
BSCH3: …will speak positively about the change to outsiders.	**0.701**	0.203	-0.122	0.420
BSCH4: …will try to find ways to overcome change-related difficulties.	**0.823**	0.075	0.104	0.205
BSCH5: …will persevere with the change to reach goals.	**0.817**	-0.020	0.230	0.106
BSCH6: …will try to overcome co-workers' resistance toward the change.	0.563	0.274	-0.153	**0.617**
Eigenvalue	7.513	2.303	2.020	1.696
Individual total variance (percent)	37.56%	11.52%	10.10%	8.48%
Cumulative total variance (percent)	37.56%	49.08%	59.18%	67.66%

Notes:

Scale: Original scale by Herscovitch & Meyer (2002)

N=104 (casewise deletion of missing data)

Principal components factor analysis with varimax normalised rotation.

Each item's highest loading is presented in boldface. Factor loadings of .55, or above are significant at the .05 significance level for N=104 (Hair et al., 1998).

University of Cape Town

It was thus decided to re-examine the individual factor loadings. The original factor structure was examined, and items with weak loadings or high cross-loadings were removed. To ensure equal subscale lengths, three to four items were removed from each subscale.

Based on the above criteria, the following items were eliminated: BSC4: "Concerning the computer system change at my organisation, I will only work on change-related activities that are directly relevant to my job"; BSC5: "Concerning the computer system change at my organisation, I will do only what is specifically required of me when it comes to the change"; BSC6: "Concerning the computer system change at my organisation, I will do only what is absolutely necessary when it comes to this change"; BSCO4: "Concerning the computer system change at my organisation, I will engage in change-related behaviours that seem difficult in the short-term but are likely to have long-term benefits"; BSCO5: "Concerning the computer system change at my organisation, I will seek help concerning the change when needed"; BSCO6: " Concerning the computer system change at my organisation, I will not complain about the change"; BSCO7: "Concerning the computer system change at my organisation, I will try to keep myself informed about the change"; BSCO8: "Concerning the computer system change at my organisation, I am tolerant of temporary disruptions and/or ambiguities in my job"; BSCH1: "Concerning the computer system change at my organisation, I will encourage the participation of others in the change"; BSCH5: "Concerning the computer system change at my organisation, I will persevere with the change to reach goals"; BSCH6: "Concerning the computer system change at my organisation, I will try to overcome co-workers' resistance toward the change".

Factor Analysis of the Revised Behavioural Support of Organisational Change Scale

Principal Components Factor Analysis. Following the elimination of the above items, a further principal components factor analysis was conducted. The result was a significant three factor solution with eigenvalues greater than 1.0, accounting for 42.1%, 17.2% and 14.8% of total variance respectively (combined variance 73.9%). The entire sample

University of Cape Town

comprised 104 cases, implying that a factor loading of .55, or above, is statistically significant at the 5% significance level (Hair et al., 1998).

Table 6 shows the factor loadings after varimax-normalised rotation. The remaining three *Compliance* items loaded most strongly onto Factor I, with item BSC3 ("Concerning the computer system change at my organisation, I will adjust the way I do my job as required by the change") also loading onto Factor III. The *Co-operation* items loaded most strongly onto Factor III, with item BSCO3 ("Concerning the computer system change at my organisation, I will avoid former practices, even if they seem easier") also loading weakly onto Factor I. The *Championing* items loaded most strongly onto Factor II, with item BSCH4 ("Concerning the computer system change at my organisation, I will try to find ways of overcoming change-related difficulties"), also loading onto the other two factors.

Table 6
Factor Analysis: Final *Behavioural Support of Organisational Change* Scale

	Factor		
Compliance Items	**I**	**II**	**III**
Concerning the computer system change at my organisation, I...			
BSC1: ...will comply with management's directives regarding the change.	**0.855**	0.181	0.035
BSC2: ...will accept role changes required by the change.	**0.829**	0.151	0.079
BSC3: ...will adjust the way I do my job as required by the change.	**0.784**	0.096	0.355
Co-Operation Items			
Concerning the computer system change at my organisation, I...			
BSCO1: ...will work toward the change consistently.	-0.065	0.175	**0.777**
BSCO2: ...will remain optimistic about the change, even in the face of adversity.	0.182	0.121	**0.779**
BSCO3: ...will avoid former practices, even if they seem easier.	0.355	0.106	**0.743**
Championing Items			
Concerning the computer system change at my organisation, I...			
BSCH2: ...will speak positively about the change to co-workers.	0.167	**0.922**	0.090
BSCH3: ...will speak positively about the change to outsiders.	0.107	**0.901**	0.096
BSCH4: ...will try to find ways to overcome change-related difficulties.	0.176	**0.780**	0.280
Eigenvalues	3.792	1.555	1.303
Individual total variance (percent)	42.12%	17.27%	14.82%
Cumulative total variance (percent)	42.10%	59.40%	73.90%

Notes:
N=104 (casewise deletion of missing data)
Principal components factor analysis with varimax-normalised rotation was performed.
Significant loadings are presented in boldface. Factor loadings of .55, or above are significant at the .05 significance level for N=104 (Hair et al., 1998).

Hierarchical Factor Analysis. Following the above principal components factor analysis, the correlations between the *Compliance, Co-operation and Championing* constructs

University of Cape Town

were examined. *Compliance* was both significantly positively related to *Co-operation* (r=.489, p=.000) and *Championing* (r=.457, p=.000). *Co-operation* was significantly positively related to *Championing* (r=.369, p=.000) (see Table 9). These significant correlations indicate that the dimensions are not independent.

The strong correlations between the three *Behavioural Support of Organisational Change* constructs and the shared factor loadings prompted me to examine the relationship between the three factors further. The results of the subsequent analysis show that one significant general secondary factor exists in relation to three unique primary factors (see Table 7).

Table 7
Hierarchical Factor Analysis: *Behavioural Support of Organisational Change* Scale

	Factors			
Compliance Items	**Secondary Factor**	**Primary I**	**Primary II**	**Primary III**
Concerning the computer system change at my organisation, I...				
BSC1: ...will comply with management's directives regarding the change.	0.502	**0.705**	0.041	-0.116
BSC2: ...will accept role changes required by the change.	0.498	**0.681**	0.013	-0.071
BSC3: ... will adjust the way I do my job as required by this change.	0.585	**0.609**	-0.066	0.179
Co-operation Items				
Concerning the computer system change at my organisation, I...				
BSCO1: ...will work toward the change consistently.	0.418	-0.190	0.059	**0.651**
BSCO2: ...will remain optimistic about the change, even in the face of adversity.	0.513	0.028	-0.021	**0.624**
BSCO3: ...will avoid former practices, even if they seem easier.	0.572	0.184	-0.053	**0.571**
Championing Items				
Concerning the computer system change at my organisation, I...				
BSCH2: ...will speak positively about the change to co-workers.	0.525	0.012	**0.778**	-0.065
BSCH3: ...will speak positively about the change to outsiders.	0.491	-0.037	**0.767**	-0.049
BSCH4: ...will try to find ways to overcome change-related difficulties.	0.558	0.011	**0.626**	0.114

Notes:
N=104 (casewise deletion of missing data)
Significant loadings are presented in boldface.
Factor loadings of .55, or above for the primary factors are significant at the .05 significance level for N=104 (Hair et al., 1998). No generally agreed upon criteria exist concerning the significance of the secondary factors (Statsoft Inc., 2006).

University of Cape Town

All items loaded onto the second order factor (no guidelines currently exist concerning the significance of secondary factors) (Statsoft Inc., 2006), as well as loading significantly onto their expected primary factors (items with factor loadings above .55, for N=104). This implies the existence of a general *Behavioural Support of Organisational Change* factor that underpins the three dimensions of *Compliance*, *Co-operation,* and *Championing*.

Internal Consistency of the Behavioural Support of Organisational Change Scale

Following the factor analyses, I conducted reliability analyses (Cronbach's alpha) to establish the internal consistency of the refined *Behavioural Support of Organisational Change* scales. The reliability estimates for the *Compliance, Co-Operation* and *Championing* scales were .817 (average inter-item correlation =.600), .714 (average inter-item correlation =.456) and .873 (average inter-item correlation =.710) respectively, indicating acceptable internal consistency (Hair, et al., 1998; Nunnally, 1978) (see Table 9). As before, following the advice of Hair et al., the underlying assumptions of factor analysis were not investigated, nonetheless, the variables were normally distributed.

Summary: Dimensionality of the Behavioural Support of Organisational Change Scale

In sum, this section provides evidence in support of Hypothesis Two that *Behavioural Support of Organisational Change* has three dimensions, viz. *Compliance*, *Co-operation* and *Championing*. The scales show acceptable internal consistency, but are moderately intercorrelated. This indicates that, although three dimensions were uncovered, they are not independent of each other. The hierarchical factor analysis suggests that a general *Behavioural Support of Organisational Change* factor exists, which underpins *Compliance*, *Co-operation,* and *Championing*. Thus, instead of describing the three dimensions as independent factors, they should rather be referred to as related facets or components of *Behavioural Support of Organisational Change*. Due to the small sample size, differences between the Afrikaans (85% of participants) and English (15% of participants) versions of the scales were not assessed. According to Hair et al. (1998), factor analysis requires at least 100 cases for a scale of 20 items.

University of Cape Town

Organisational Commitment Scale

The *Organisational Commitment* construct was of secondary interest for the purpose of this study, but formed the basis for further analyses (hierarchical multiple regression and correlation analyses). Consequently, the dimensionality of the original *Organisational Commitment* scale (Bagraim, 2004) was confirmed by principal components factor analysis (casewise deletion of missing data) (see Table 8).

Table 8
Factor Analysis: Original *Organisational Commitment* Scale

	Factor		
Affective Organisational Commitment Items	I	II	III
AOC1: I feel a strong sense of connection to this organisation.	0.032	**0.803**	0.037
AOC2: I feel emotionally attached to this organisation.	-0.045	**0.729**	0.051
AOC3: I feel like part of the family at this organisation.	0.141	**0.844**	0.144
AOC4: This organisation has a great deal of personal meaning for me.	0.193	**0.814**	0.110
Continuance Organisational Commitment Items			
COC1: It would be very costly for me to leave this organisation right now.	**0.843**	0.234	0.055
COC2: Too much of my life would be disrupted if I decided that I wanted to leave this organisation now.	**0.847**	0.150	0.135
COC3: I would not leave this organisation right now because I would stand to lose.	**0.804**	-0.062	0.223
COC4: For me personally, the cost of leaving this organisation would be far greater than the benefit.	**0.773**	0.004	0.289
Normative Organisational Commitment Items			
NOC1: Even if it were to my advantage, I do not feel that it would be right to leave this organisation now.	0.200	0.343	**0.715**
NOC2: I would feel guilty if I left this organisation now.	0.209	0.140	**0.872**
NOC3: I would not leave this organisation right now because I have a sense of obligation to the people in it.	0.085	-0.057	**0.832**
NOC4: I would violate a trust if I quit my job with this organisation now.	0.218	0.069	**0.830**
Eigenvalue	4.539	2.276	1.675
Individual total variance (percent)	37.83%	18.97%	13.96%
Cumulative total variance (percent)	37.83%	56.80%	70.76%

Notes:
Scale: Original scale by Bagraim (2004).
Principal components factor analysis with varimax normalised rotation.
Significant loadings are presented in boldface. Factor loadings of .55, or above are significant at the .05 significance level for N=103 (Hair et al. 1998).
The numbering (e.g. AOC1) shows the item numbers of the original scale.

Following varimax-normalised rotation, three significant factors (factor loadings larger than .55 for N=103) with eigenvalues greater than 1.0 emerged, accounting for 37.8%,

University of Cape Town

18.9% and 13.9% of total variance (total variance explained: 70.7%). The *Affective, Continuance,* and *Normative Organisational Commitment* items loaded strongly onto Factor II, I and III, respectively. Shared loadings of items across factors were weak, confirming the underlying three-dimensionality of *Organisational Commitment* (see Table 8).

Internal Consistency of the Organisational Commitment Scale

Following the factor analysis, I conducted item reliability analysis (Cronbachs's alpha) to estimate the internal consistency of the scales (see Table 9). The alpha coefficients for the *Affective*, *Continuance* and *Normative Organisational Commitment* scales were .814 (average inter-item correlation =.534), .859 (average inter-item correlation =.609) and .849 (average inter-item correlation =.589) respectively, indicating high levels of internal consistency (above .70), as recommended by Hair et al. (1998).

Descriptive Statistics, Reliabilities, and Intercorrelations of the Variables in the Study

This second section presents the descriptive statistics, reliabilities and intercorrelations of the study. After verifying the dimensionality of the *Commitment to Organisational Change*, *Behavioural Support of Organisational Change* and *Organisational Commitment* constructs by factor analysis, I computed the means, standard deviations, reliabilities (as measured by Cronbach's alpha) and intercorrelations of the variables (Table 9). These variables are based on the results of the final factor analyses for the scales, implying that only the retained items in the final factor analysis were used to compute the summed variables.

I then assessed whether the individual variables were normally distributed. The histograms of the variables indicated that the variables did not depart significantly from the normal distribution.

University of Cape Town

Table 9

Means, Standard Deviations, Reliabilities, and Intercorrelations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	—	—	—													
2. Age	35.473	10.499	.092	—												
3. Tenure	5.977	5.543	.002	**.568****	—											
4. Affective Commitment to Change	3.750	0.896	.006	.050	**-.250***	(.918)										
5. Continuance Commitment to Change	2.800	0.770	**-.207***	-.072	.044	**-.219****	(.687)									
6. Normative Commitment to Change	3.219	0.871	.016	.123	.154	.026	**.297****	(.824)								
7. Compliance	4.025	0.714	.168	.153	.116	**.359***	.076	**.270***	(.817)							
8. Co-operation	3.789	0.726	-.031	**.231***	.110	**.237***	-.005	**.340***	**.489****	(.714)						
9. Championing	4.113	0.682	.041	.088	-.055	**.505****	-.183	.092	**.457****	**.369****	(.873)					
10. Affective Organisational Commitment	3.623	0.723	-.045	.019	0.2	.131	-.041	.196	**.363****	.196	.176	(.814)				
11. Continuance Organisational Commitment	3.201	0.857	.110	.058	-.009	.130	.099	.004	.083	.113	.062	.239	(.859)			
12. Normative Organisational Commitment	3.392	0.847	-.019	0.2	-.057	**.453****	-.128	.075	**.233***	.186	**.233***	**.340****	**.422****	(.849)		
13. Change Significance	3.848	0.969	-.058	.116	-.08	**.648****	-.068	.199	**.446****	**.278***	**.453****	**.322***	.144	**.292***	—	
14. Change Impact	3.473	0.687	.068	.135	-.037	**.534****	-.191	.180	**.302***	**.281***	**.520****	**.138***	-.018	.175	**.590****	—

Notes: N=90 (casewise deletion of missing data); *p<.05, **p<.01; Dashes indicate a single item measure; Estimates of each scale's internal consistency (Cronbach's Alpha) are presented on the diagonal in parentheses.

University of Cape Town

Behavioural Consequences of Commitment

This third section discusses the results of the correlation analyses of the relationship between the dimensions of *Commitment to Organisational Change* and employee behavioural support (*Compliance*, *Co-operation* and *Championing*) and addresses Hypotheses Three and Four.

To test these two hypotheses, I conducted a correlation analysis using casewise deletion of missing data. As a result of this and of the corresponding reduction in cases due to missing demographical data (see Table 9, N=90), I decided to compute the correlations with the *Commitment to Organisational Change* and *Behavioural Support of Organisational Change* items only. By only including these variables, it was possible to compute the correlations for the complete sample (see Table 10, N=106).

Table 10
Correlations between *Commitment to Organisational Change* and Behavioural Support

Variable	1	2	3	4	5	6
1. Affective Commitment to Change	(.918)					
2. Continuance Commitment to Change	**-.242***	(.687)				
3. Normative Commitment to Change	.031	**.338****	(.824)			
4. Compliance	**.428****	.067	**.280***	(.817)		
5. Co-operation	.185	.068	**.399****	**.414****	(.714)	
6. Championing	**.429****	-.187	.111	**.352****	**.351****	(.873)

Note:
**p<.05. **p<.01.*
Estimates of each scale's internal consistency (Cronbach's alpha) are presented on the diagonal in parentheses.
N=106 (Casewise deletion of missing data).

Consequences of Affective and Normative Commitment to Organisational Change

Table 10 shows that *Affective Commitment to Organisational Change* is weakly positively correlated to *Co-operation* (r=.185, p=.057), but significantly positively correlated to *Championing* (r=.429, p=.000). *Normative Commitment to Organisational Change* is significantly positively correlated to *Co-operation* (r=.399, p=.000), but not significantly positively correlated to *Championing* (r=.111, p=.255). The two forms of commitment thus relate positively to *Co-operation* and *Championing*, although this is not consistently statistically significant. The results of this correlation analysis are mixed,

University of Cape Town

showing that *Affective* and *Normative Commitment to Organisational Change* are not consistently significantly positively related to *Co-operation* and *Championing*. Therefore, the hypothesis that *Affective Commitment to Organisational Change* and *Normative Commitment to Organisational Change* are significantly positively correlated to *Co-operation* and *Championing* is only partially supported.

Consequences of Continuance Commitment to Organisational Change

Table 10 shows that *Continuance Commitment to Organisational Change* is not significantly correlated to *Championing* (r=-.187, p=.054), *Co-operation* (r=.068, p=.486) and *Compliance* (r=.067, p=.495). Consequently, these results offer partial support of the hypothesis that *Continuance Commitment to Organisational Change* is not positively related to *Co-operation* and *Championing*, but is positively related to *Compliance*.

Commitments as Predictors of Behavioural Support

This fourth section investigates the predictive relationship between the two foci of employee commitment and consequent *Behavioural Support of Organisational Change*. It thus presents the results of the data analysis that investigated whether *Commitment to Organisational Change* and *Organisational Commitment* help to explain *Behavioural Support of Organisational Change* (*Compliance*, *Co-operation* and *Championing*), thereby addressing Hypothesis Five. The first part of this section describes the rationale for using hierarchical multiple regression analysis. This part is followed by the analyses concerning the prediction of *Compliance*, *Co-operation,* and *Championing* by means of the independent variables. Thereafter, the assumptions of multiple regression analysis are discussed, followed by a brief summary of the results.

To test the hypothesis that *Commitment to Organisational Change* explains more of the variance in *Behavioural Support of Organisational Change* than does *Organisational Commitment*, I conducted a hierarchical regression analysis. The individual dependent variables were the three behavioural support variables, *Compliance*, *Co-operation* and *Championing*. In order for Hypothesis Five to be accepted, *Commitment to*

University of Cape Town

Organisational Change had to be a better predictor than *Organisational Commitment* for all three facets of behavioural support.

Rationale for Hierarchical Multiple Regression

Multiple regression analysis automatically forces all independent variables into the regression equation and as such indicates the total explanation offered by all independent variables (Van den Honert, 1999). Therefore, hierarchical multiple regression was chosen. This type of analysis helps to establish the incremental explanation offered by blocks of the independent variables in the variance of the dependent variable. This incremental explanation can be accounted for by measuring the changes in the coefficient of multiple determination (R^2) and in the adjusted coefficient of multiple determination (Adjusted R^2) in the hierarchical multiple regression model (Hair et al., 1998). This means that the independent variables will be included in the model in a stepwise procedure, and that the changes in R^2 and the Adjusted R^2 will be measured. This difference in the coefficient of multiple determination is thus a measure of the explanation offered by each independent variable in explaining the dependent variable. The Adjusted R^2 assesses whether an independent variable really adds significantly to the prediction of the dependent variable, by taking into account the sample size and the number of independent variables (Van den Honert). According to Hair et al., the higher the value of R^2 and adjusted R^2, the greater the explanatory power of the independent variable.

In relation to Hypothesis Five, the emphasis is on the relative explanations offered by *Commitment to Organisational Change* in relation to *Organisational Commitment*. Therefore, in order to test this hypothesis and to compare the results of this study with past research, I decided to base the order of entry of the independent variables on the study by Herscovitch and Meyer (2002). As a result, the individual hierarchical regression analysis for these three dependent variables consisted of four steps. In the first step, three demographic variables were introduced as independent variables (Age, Tenure and Gender). In the second step, two control variables were introduced (*Change Significance* and *Change Impact*). Steps three and four introduced the dimensions of

University of Cape Town

Organisational Commitment (*Affective, Continuance and Normative Organisational Commitment*) and *Commitment to Organisational Change* (*Affective, Continuance and Normative Commitment to Change*). Varying the entry of the *Organisational Commitment* and *Commitment to Organisational Change* variables at steps three and four (e.g. inserting *Commitment to Organisational Change* before *Organisational Commitment*) did not change the significance of the individual regression parameters, the models, or the contribution of the variance explained in the dependent variables.

Employee Commitments and Compliance

After conducting hierarchical regression analysis with *Compliance* as the dependent variable, the incremental variances accounted for by demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* were 5.7%, 19.0%, 4.7%, and 4.6%, respectively (see Table 11). Together these independent variables explained 34.0% of the variance in *Compliance*. The changes in the Adjusted R^2 after adding the demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* were 2.5%, 17%, 2.2%, and 2.2% respectively (total 24.7%).

Table 11
Hierarchical Regression Summary for Dependent Variable: *Compliance*

Variable	Step 1	Step 2	Step 3	Step 4
Gender	-0.232	-0.196	-0.192	-0.172
Age	0.009	0.002	0.004	0.004
Tenure	0.004	0.016	0.007	0.009
Change Significance		**0.265****	**0.199***	0.112
Change Impact		0.070	0.080	0.037
Affective Organisational Commitment			**0.212***	**0.228***
Continuance Organisational Commitment			-0.013	-0.015
Normative Organisational Commitment			0.037	-0.012
Affective Commitment to Change				0.182
Continuance Commitment to Change				0.077
Normative Commitment to Change				0.093
R^2	0.057	**0.248****	**0.294****	**0.340****
Adjusted R^2	0.025	**0.203****	**0.225****	**0.247****
Change in R^2		**0.190****	0.047	0.046

Notes: N= 90 (casewise deletion of missing data); *p<.05. **p<.01
Values are standardised regression coefficients and values for R^2, Adjusted R^2 and change in R^2

University of Cape Town

In step 2, *Change Significance* was a statistically significant coefficient in the regression equation to predict *Compliance* (t (84)=3.34; p=.001). The change in R^2 was also statistically significant after adding *Change Significance* and *Change Impact* as independent variables to predict *Compliance* (F=10.64; p=.000). In step 3, *Affective Organisational Commitment* (t (81)=2.00; p=.049) and *Change Significance* (t (81)= 2.36; p=.021) were statistically significant as coefficients in the regression equation to predict *Compliance*. In step 4, only *Affective Organisational Commitment* was a significant predictor (t (78)=2.13; p=.036). The final regression model (step 4) was significant in predicting *Compliance* (F (11.78) = 3.659; p=.000).

Moderating the steps of entry for *Commitment to Organisational Change* and *Organisational Commitment* did not significantly change the regression parameters, the significance of the regression models and the variance. When *Commitment to Organisational Change* was entered in step 3 (formerly in step 4, see Table 11), the change in R^2 was 5.0% (insignificant, F=1.945; p=.128) compared to 4.6%. When *Organisational Commitment* was entered in step 4 (previously in step 3, see Table 11), the change in R^2 was 4.1% (insignificant, F=0.041; p=.18) compared to 4.7%.

These results indicate that with respect to *Compliance*, *Commitment to Organisational Change* did not significantly account for a greater percentage in the variance than *Organisational Commitment* (change in R^2: 4.6% compared to 4.7%; change in Adjusted R^2: 2.2% compared to 2.2%). The change in R^2 was not statistically significant. The large significant contribution of *Change Significance* and *Change Impact* in explaining the variance (change in R^2=19.0%; change in Adjusted R^2 =17.0%) in *Compliance* is worth noting. In conclusion, *Commitment to Organisational Change* is not a significantly better predictor of *Compliance* than *Organisational Commitment*.

University of Cape Town

Employee Commitments and Co-Operation

After conducting a hierarchical regression analysis with *Co-operation* as the dependent variable, the total incremental variance (R^2) of 23.0% accounted for by demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* was 5.7%, 8.0%, 1.9% and 7.2%, respectively (see Table 12). The change in the Adjusted R^2 after adding the demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* was 2.2%, 6.2%, -1.2% and 4.7% respectively. The total explanation offered in the variance of *Co-operation* by all the independent variables was low (R^2=23.0%; Adjusted R^2=12.1%).

Table 12
Hierarchical Regression Summary for Dependent Variable: *Co-operation*

Variable	Step 1	Step 2	Step 3	Step 4
Gender	-0.077	-0.071	-0.082	-0.098
Age	**0.017***	0.012	0.013	0.012
Tenure	-0.005	0.004	-0.001	-0.002
Change Significance		0.116	0.065	0.000
Change Impact		0.169	0.189	0.124
Affective Organisational Commitment			0.121	0.093
Continuance Organisational Commitment			0.051	0.075
Normative Organisational Commitment			0.018	-0.026
Affective Commitment to Change				0.107
Continuance Commitment to Change				-0.046
Normative Commitment to Change				**0.238***
R^2	0.057	**0.137***	0.157	**0.230***
Adjusted R^2	0.024	**0.086***	0.074	**0.121***
Change in R^2		**0.080***	0.019	0.072

Notes: N= 90 (casewise deletion of missing data); *p<.05. **p<.01
Values are standardised regression coefficients and values for R^2, Adjusted R^2 and change in R^2

In step 1, age was significant as a predictor for *Co-operation* (t (86)=1.99; p=.048). In step 2, *Change Significance* made a significant contribution to the explanation of variance in *Co-operation* (change in R^2 =8.0%; F=3.91; p=.023). In step 4, *Normative Commitment to Organisational Change* was significant as a predictor (t (78)=2.61; p=.010) of *Co-operation.* The final regression model in step 4, predicting *Co-operation*, was significant (F(11.78)=2.121; p=.028).

University of Cape Town

Moderating the steps of entry for *Commitment to Organisational Change* and *Organisational Commitment* did not significantly change the regression parameters, the significance of the regression models and the variance of the dependent variable. When *Commitment to Organisational Change* was entered in step 3 (formerly in step 4, see Table 12), the change in R^2 was 7.8% (insignificant, F=2.706; p=.050) compared to 7.2%. When *Organisational Commitment* was entered in step 4 (previously in step 3, see Table 12), the change in R^2 was 1.4% (insignificant, F=0.482; p=0.695) compared to 1.9%.

The incremental change in explained variation was greater after entering *Commitment to Organisational Change* than after entering *Organisational Commitment* (R^2 change 7.2% compared to 1.9%). The adjusted R^2 was also greater after entering *Commitment to Organisational Change* than after entering *Organisational Commitment* (Adjusted R^2 change was 4.7% compared to –1.2%). This shows that *Commitment to Organisational Change* explains a greater increment in the variance of *Co-operation*, although not significantly (change in R^2 was insignificant). This implies that, statistically, *Commitment to Organisational Change* explains as much as *Organisational Commitment* in the variance of *Co-operation*. Therefore, it cannot be concluded that *Commitment to Organisational Change* is a better predictor, because the explanation offered could be due to chance.

Employee Commitments and Championing

After conducting a hierarchical regression analysis with *Championing* as the dependent variable, the total incremental variance of 35.5% accounted for by the demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* was 2.4%, 28.0%, 1.1% and 3.8%, respectively (see Table 13). The changes in the adjusted R^2 after adding the demographic variables, control variables, *Organisational Commitment* and *Commitment to Organisational Change* was 0%, 26.4%, -1.5% and 1.5% respectively.

University of Cape Town

In step 2, *Change Significance* was significant in the explanation of the variance in *Championing* (change in R^2 =28.0%; F=16.96; p=.000). In steps 2, 3 and 4 *Change Impact* was a significant predictor of *Championing* (Step 2: t (84)=3.34, p=.001; Step 3: t (81)=3.28, p=.001; Step 4: t (78)=2.56, p=.01). The final regression model was significant (F (11.78)=3.908; p=.000), indicating that there is a significant predictive relationship between *Championing* and the independent variables.

Table 13
Hierarchical Regression Summary for Dependent Variable: *Championing*

Variable	Step 1	Step 2	Step 3	Step 4
Gender	0.037	0.036	0.043	0.014
Age	0.011	0.002	0.001	0.001
Tenure	-0.021	-0.006	-0.005	0.002
Change Significance		0.165	0.136	0.041
Change Impact		**0.385****	**0.387****	**0.314***
Affective Organisational Commitment			0.045	0.073
Continuance Organisational Commitment			-0.011	0.011
Normative Organisational Commitment			0.085	-0.005
Affective Commitment to Change				0.238
Continuance Commitment to Change				-0.055
Normative Commitment to Change				0.016
R^2	0.024	**0.305****	**0.316****	**0.355****
Adjusted R^2	-----	**0.264****	**0.249****	**0.264****
Change in R^2		**0.280****	0.011	0.038

Notes: N= 90 (casewise deletion of missing data); *p<.05. **p<.01
Values are standardised regression coefficients and values for R^2, Adjusted R^2 and change in R^2

Moderating the steps of entry for *Commitment to Organisational Change* and *Organisational Commitment* did not significantly change the regression parameters, the significance of the regression models and the variance of the dependent variable. When *Commitment to Organisational Change* was entered in step 3 (formerly in step 4, see Table 13), the change in R^2 was 4.5% (insignificant, F=1.911; p=.134) compared to 3.8%. When *Organisational Commitment* was entered in step 4 (previously in step 3), the change in R^2 was 0.39% (insignificant, F=.160; p=.922) compared to 1.1%.

These results indicate that *Commitment to Organisational Change* contributes more to explaining *Championing* than *Organisational Commitment* (R^2 change 3.8% compared to 1.1%; Adjusted R^2 change –1.5% compared to 1.5%), although this is not statistically significant (change in R^2 not significant). Therefore, it cannot be concluded that

University of Cape Town

Commitment to Organisational Change is statistically a better predictor of *Championing*, as this result could be due to chance. The large significant contribution of *Change Impact* (change in R^2 =28.0%) in explaining variance in *Championing* and as a predictor is worth noting.

Assumptions of Hierarchical Multiple Regression

Following the hierarchical multiple regression analyses for the dependent variables *Compliance*, *Co-operation,* and *Championing*, I assessed the four underlying assumptions of the multiple regression models. The framework suggested by Hair et al. (1998) was used as a guideline and included an investigation of linearity, constant variance, independence of the error terms, and normality of the error term distribution. As suggested by Hair et al., this was done by examining the residual plots for the combined effects of all independent variables and also the partial regression plots for all independent variable to assess which variables violates the assumption of linearity. Additionally, the correlations between the independent variables were reviewed to assess the extent of multicollinearity amongst the independent variables.

Linearity, Constant Variance and Independence of the Error Terms

An inspection of the residual plots for the *Compliance*, *Co-operation,* and *Championing* regression models with the combined effect of all independent variables indicated that linearity, constant variance, and independence of the error terms were generally given, whilst some departures were observed. Generally, none of the departures were severe enough to question the application of multiple regression analysis.

Normality of the Error Terms

Investigating the normal probability plots of *Compliance*, *Co-operation*, and *Championing* as dependent variables tested whether these variables were normally distributed. An inspection of the histograms suggests that the assumption of normality is justified, as indicated by the residual line closely following the diagonal line (Hair et al., 1998).

University of Cape Town

Impact of Multicollinearity on the Multiple Regression Models

An inspection of Tables 9 and 10 shows that several of the independent variables are correlated significantly. For example, *Affective Commitment to Organisational Change* with: *Continuance Commitment to Organisational Change* (r=-.242, p=.038), *Normative Organisational Commitment* (r=.453, p=.000), *Change Impact* (r=.534, p=.000) and *Change Significance* (r=.648, p=.000). This implies that the so-called independent variables are not in fact independent, but related, suggesting a weak degree of multicollinearity (Hair et al., 1998). According to Hair et al. significant intercorrelations (e.g. r > .70) have an adverse impact on the explanatory and predictive ability of a multiple regression model. This is because the additional unique variance of two correlated independent variables (e.g. *Affective Commitment to Organisational Change* and *Normative Organisational Commitment*) will be shared, resulting in a marginally lower increase in explanation (R^2). This makes it difficult to separate the additional effect of each new independent variable on the dependent variable. Nonetheless, none of the interccorelations in this study was strong enough to adversely affect the regression models.

Predictive Ability of Employee Commitments

In sum, the results of the hierarchical multiple regression analysis did not support Hypothesis Five that *Commitment to Organisational Change* is a better predictor of behavioural support conceptualised as *Compliance*, *Co-operation* and *Championing* than *Organisational Commitment*. Interestingly, *Change Significance* and *Change Impact* were both important significant predictors of the dependent variables with respect to an information system change.

University of Cape Town

Summary of Results in Relation to Hypotheses

Table 14 in this, the final section of this chapter, summarises the key results of this study in relation to the hypotheses set out in Chapter 2.

Table 14
Hypotheses and Summary of Results

Hypothesis	Method	Finding	Conclusion
1. *Commitment to Organisational Change* has three distinct components (*Affective, Continuance and Normative Commitment to Organisational Change*).	Factor Analysis; Hierarchical Factor Analysis	3 factors (explained variance=67.3%)	Supported
2. *Behavioural Support of Organisational Change* has three distinct components (*Compliance*, *Co-operation* and *Championing*).	Factor Analysis; Hierarchical Factor Analysis	3 factors (explained variance=73.9%)	Supported
3. *Affective* and *Normative Commitments to Organisational Change* are positively related to *Co-operation* and *Championing*.	Correlation Analysis	*ACC* & *Co-operation* (r=.185, p=.57), *Championing* (r=.429, p=.000); *NCC* & *Co-operation* (r=.399, p=.000), *Championing* (r=.111, p=.255).	**Partially** supported
4. *Continuance Commitment to Organisational Change* is not positively related to *Co-operation* and *Championing*, but positively related to the *Compliance*.	Correlation Analysis	*CCC* & *Compliance* (r=.067, p=.495), *Co-operation* (r=.068, p=.486), *Championing* (r=-.187, p=.054).	**Partially** supported
5. *Commitment to Organisational Change* explains significantly more of the variance in *Behavioural Support of Organisational Change* than *Organisational Commitment* does.	Multiple Regression Analysis	*Commitment to Organisational Change* is not a statistically significantly better predictor of *Compliance*, *Co-operation* and *Championing*.	**Not** Supported

Notes:
ACC (*Affective Commitment to Organisational Change*)
CCC (*Continuance Commitment to Organisational Change*)
NCC (*Normative Commitment to Organisational Change*)

Based on the methods and analyses of this study, the above table summarised the results. The next chapter discusses these results.

University of Cape Town

CHAPTER 5: DISCUSSION

This chapter integrates the findings of this study with past research, and is organised into five sections. The first section gives an overview of the significant findings. The second section discusses these findings in the light of past research. The third section discusses the implications for current theory and practice. The fourth section makes suggestions for future research. The last section contains the conclusions of this dissertation.

Overview of Key Findings

The objectives of this research were threefold. The first objective was to determine whether the *Commitment to Organisational Change* construct (Herscovitch & Meyer, 2002) could be generalised to apply to an information system change in a non-Western context. The second objective was to determine the relationship between *Commitment to Organisational Change* and employee behavioural support of information system change. Lastly, the third objective was to determine whether *Commitment to Organisational Change* is a better predictor of behavioural support than *Organisational Commitment*. In order to meet these three objectives, I examined Hypotheses One to Five.

The results of this study indicate that the two constructs of *Commitment to Organisational Change* and *Behavioural Support of Organisational Change* are indeed valid with regard to an information system change, in a non-Western context, and in the Afrikaans language (85% of participants completed the Afrikaans version of the questionnaire). *Affective and Normative Commitment to Organisational Change* relate positively to all three components of behavioural support, albeit not significantly. *Continuance Commitment to Organisational Change* is unrelated to *Co-operation* and *Compliance*, but negatively and insignificantly related to *Championing*. *Commitment to Organisational Change* was a not a significantly better predictor of behavioural support than *Organisational Commitment* with respect to *Co-operation, Championing*, and *Compliance*. Unexpectedly, *Change Significance* and *Change Impact* both offered significant explanations for employee *Co-operation* and *Championing* of information

University of Cape Town

system change. Generally, these results only partially support the findings of the study by Herscovitch and Meyer (2002).

Findings of this Study and Past Research

This part discusses the results of the study in the light of past research, with particular emphasis on the only study on *Commitment to Organisational Change* so far (Herscovitch & Meyer, 2002), but also with reference to the wider literature in the field of organisational change. First, the findings with respect to the psychometric properties of the constructs will be discussed. Thereafter, the discussion investigates the behavioural consequences of the *Commitment to Organisational Change* dimensions. Lastly, the third part discusses the predictors of behavioural support.

Psychometric Properties of the Constructs

Properties of the Commitment to Organisational Change Scale

The analysis of the *Commitment to Organisational Change* construct generated the expected dimensionality in line with past research (Herscovitch & Meyer, 2002). In that study, three factors accounted for 67.6% of the variance in *Commitment to Organisational Change*, compared to 67.3% in this current study. The internal consistency of the scales was also in line with past research. This suggests that the construct can be generalised to apply to an information system change in a non-Western country and in the Afrikaans language. Nonetheless, in the current study, the initial factor analysis generated four factors, with the *Continuance Commitment to Organisational Change* subscale indicating the strongest cross-loadings. Two items per subscale were thus removed to ensure equal scale length. In particular, this research indicated a possible split in the continuance dimension into two sub-dimensions. This is in line with past research on *Continuance Organisational Commitment*, which was sometimes found to split into two sub-dimensions (*Low Alternatives* and *High Sacrifice*) (Meyer et al., 2002). An unexpected result, however, was the absence of a significant relationship between the affective and normative dimensions of *Commitment to Organisational Change*.

University of Cape Town

Herscovitch and Meyer (2002) found moderate significant correlations between all three scales. This may suggest that, with respect to a specific change, such as an information system change, the commitment profiles of employees are more differentiated and tend to be more distinct. The study by Herscovitch and Meyer referred to a variety of change initiatives, ranging from revolutionary changes such as mergers to evolutionary changes such as the implementation of new technology.

Properties of the Behavioural Support of Organisational Change Scale

The finding in this study that the *Behavioural Support of Organisational Change* construct in fact comprises three dimensions is contrary to the study by Herscovitch and Meyer (2002). They did not find that behavioural support had a three-dimensional structure, but decided instead to form the *Compliance*, *Co-operation,* and *Championing* scales based on face validity. In particular, they noted:

> "An attempt to verify the factor structure of these items using principal-axis factor analysis with oblimin rotation failed to yield the expected three factors. Rather, the analysis produced a large first factor and, when more than one factor was extracted, the solution was difficult to interpret. Factor analysis, however, may not be an appropriate analysis to conduct given the nature of the constructs. Because individuals who engage in championing behaviors are also likely to be cooperative and to comply with behavioral requirements, there are dependencies among the items that preclude detection of a clean three-factor structure. Therefore, we combined items to form Compliance, Co-operation, and Championing Scales based on an intuitive judgement of construct-relevance." (Herscovitch & Meyer, 2002, p.478).

Despite the ultimate finding that *Behavioural Support of Organisational Change* comprises three dimensions; the current study eliminated an average of three items per subscale until this three-dimensional structure emerged. The scales were also moderately intercorrelated. Hierarchical factor analyses indicated that there is a general behavioural support factor that underpins *Compliance*, *Co-operation,* and *Championing*. Thus, the three components should rather be viewed as "facets" of support than independent dimensions. Herscovitch and Meyer (2002) gave a possible explanation for this. They noted that employees who engage in *Championing* would also automatically co-operate and comply with a change, and thus the three components would always be related. Another explanation could be that employees do not differentiate strongly between the

University of Cape Town

facets, because the differences between *Compliance*, *Co-operation,* and *Championing* still leave room for interpretation. For example, the meaning of *Co-operation* and *Championing* could differ from one individual to the next. Thus, further research is necessary to verify the results of this study, in particular, with regard to the general support factor.

Behavioural Consequences of Commitment to Organisational Change

The correlations between the *Commitment to Organisational Change* dimensions and *Compliance*, *Co-operation* and *Championing* are generally similar to the findings presented in past research, but mixed with respect to statistical significance. Thus, statistically, Hypotheses Three and Four were only partially supported.

Affective and *Normative Commitment to Organisational Change* correlated significantly positively with *Compliance,* while *Continuance Commitment to Organisational Change* was unrelated. In the study by Herscovitch and Meyer (2002), all three dimensions of *Commitment to Organisational Change* correlated significantly positively to *Compliance*. It was therefore an unexpected result of this study that the continuance dimension is unrelated to *Compliance*. As such, it implies that, in an information system change situation, continuance committed employees would not even comply with the requirements of the change. Herscovitch and Meyer regarded this as a form of resistance. The reasons for this finding are unclear, but it could be hypothesised that such employees perceive the implementation as a threat (e.g. will they still be necessary after the implementation?) and thus do not even show minimum support. Another explanation is that this study was conducted with reference to a specific information system change situation, but it must be borne in mind that organisational changes are never the same from one company and one situation to another, and that they may differ significantly (Burke, 2002). In contrast to the present study, the study by Herscovitch and Meyer referred to a variety of change situations. This in turn could have had an important impact on employee perceptions and influence commitment dimensions. As indicated by Lau and Woodman (1995), employees can have a positive *Attitude to Organisational Change* in general, but if a specific change is perceived as harmful, they may have a negative

University of Cape Town

attitude towards it. Thus, *Commitment to Organisational Change* to a variety of changes may be different than commitment to a specific change initiative, because employees perceive different changes differently.

Affective Commitment to Organisational Change correlated significantly positively to *Championing*, but not to *Co-operation*. This is contrary to the previous study where the affective component was also significantly positively correlated to *Co-operation*. An explanation of this could be that affectively committed employees prefer to comply and to champion the information system change, and to regard *Co-operation* as less desirable. Alternatively, the employees might interpret *Compliance*, *Co-operation,* and *Championing* differently, as discussed in the section on the psychometric properties of the constructs. Thus, the reason for this result could be tied to the relatively small differences between the behavioural support facets. Nonetheless, the correlation between *Affective Commitment to Organisational Change* and *Co-operation* ($r = .185$; $p = .057$) missed statistical significance at the 5% significance level only by a tiny fraction. This could be attributed to the relatively small sample size ($N = 106$) in the study; if the sample had been larger, past research might have been confirmed.

Normative Commitment to Organisational Change correlated significantly positively to *Co-operation*, but not to *Championing*. Again, this is unexpected with respect to previous research, where the normative dimension was also correlated significantly positively to *Championing*. This shows that predominantly normatively committed employees would not go beyond *Co-operation* in relation to the information system change. Perhaps because these employees feel a sense of obligation to support the information system change, they regard *Co-operation* as sufficient, but do not go as far as *Championing*.

In sum, these results are important in the light of previous research, in particular with reference to studies that have highlighted the importance of commitment in a change initiative, assuming a positive relationship between employee commitment and successful implementation (e.g. Coetsee, 1999; Connor & Patterson, 1982; Klein & Sorra, 1996; Kotter & Schlesinger, 1979; Umble & Umble, 2002; Yardley, 2002). The results of this study show that commitment is indeed beneficial in managing organisational change.

University of Cape Town

Nonetheless, the dimensions of *Commitment to Organisational Change* relate differently to the behavioural consequences. This shows that the nature of commitment counts in relation to behavioural support, confirming the critique of previous studies that only applied the affective dimension of commitment in relation to *Attitudes to Organisational Change* (e.g. Iverson, 1996; Lau & Woodman, 1995; Vakola & Nikolaou, 2005).

Commitments as Predictors of Behavioural Support

The results of this study indicate that *Commitment to Organisational Change* is not a significantly better predictor of behavioural support (*Compliance*, *Co-operation* and *Championing*) than *Organisational Commitment*. Thus, unexpectedly, the findings of this study do not confirm previous research. Herscovitch and Meyer (2002) found that *Commitment to Organisational Change* is a significantly better predictor of *Compliance* than *Organisational Commitment* (significant change in R^2 of 15% compared to 7%).

Another unexpected result is the relative importance of *Change Significance* in the explanation of *Compliance*, and *Change Impact* in the explanation of *Championing*. In both cases, *Change Significance* and *Change Impact* offer a significantly better explanation than *Commitment to Organisational Change* and *Organisational Commitment*. Herscovitch and Meyer (2002) found that *Change Significance* and *Change Impact* offered only a small explanation in the variance of *Compliance*. As such, they termed these two independent variables "Control Variables". The findings of the current study show that commitment is not the only important predictor of *Co-operation* and *Championing*, but show that other mechanisms could also play an important role. In the light of past research, the study by Lau and Woodman (1995) may offer some explanation. In their study, employees supported a specific change, if it was perceived to be beneficial to the organisation. In the current study, 71% of employees agree, or strongly agree that they believe in the value of the information system change. This strong belief in the value of the change could in itself lead to *Co-operation* and *Championing*, but this is merely a hypothesis and needs to be verified empirically.

University of Cape Town

Implications for Theory and Practice

Theoretical Implications

The results of this study have four implications. Firstly, as shown by factor analysis, the *Commitment to Organisational Change* construct can be generalised to an information system change, in a non-Western context and in two languages (Afrikaans and English). Although, this construct was not a better predictor of behavioural support than *Organisational Commitment*, the sample of this study was relatively small. The implication of this is that further research is required to establish this construct fully as a possible alternative to *Organisational Commitment* in predicting work-related behaviours.

Secondly, the strong explanation offered by *Change Significance* and *Change Impact* in *Compliance*, *Co-operation* and *Championing* behaviours shows that in the case of information system change these variables can be better predictors of discretionary and focal behaviours than commitment, and that they should be included in future research. These variables should thus not only be included as control variables, but as actual predictors of behavioural support. Perhaps, these variables could be regarded as antecedents of *Affective Commitment to Organisational Change*, as indicated by the strong correlations. *Affective Commitment to Organisational Change* correlated positively to both *Change Significance* (r=.648; p=.000) and *Change Impact* (r=.534; p=.000). Interestingly, the other dimensions of *Commitment to Organisational Change* did not correlate significantly to *Change Significance* and *Change Impact*. *Compliance*, *Co-operation* and *Championing* were equally strongly correlated to *Change Significance* and *Change Impact*, indicating a possible causal relationship between the control variables, *Affective Commitment to Organisational Change,* and behavioural support. Nonetheless, this is only a hypothesis and needs to be verified empirically.

Thirdly, the analysis has shown that the dimensions of *Commitment to Organisational Change* related differently to the behavioural consequences. This result is in line with previous studies on *Organisational Commitment*, in particular, that the nature of

University of Cape Town

commitment is important for job performance (Meyer, et al., 1989). In other words, affective and normative commitments are positively linked to *Compliance*, *Co-operation* and *Championing*, whereas continuance commitment is adversely related, or without beneficial behavioural implications. Studies should thus include all three dimensions in relation to the consequences.

Fourthly, the analysis of the dimensions of the *Behavioural Support of Organisational Change* scale shows that *Compliance*, *Co-operation* and *Championing* are not entirely independent, but are instead underpinned by a general behavioural support factor. Thus, they should be regarded as facets of behavioural support and not as independent dimensions.

Practical Implications

The implications for the practical management of information system change are threefold.

Firstly, employee *Commitment to Organisational Change* is important when implementing new information systems, and it has important behavioural consequences. Managers or consultants who wish to implement such information system innovations should therefore include commitment in their "soft" project plans. The *Commitment to Organisational Change* scale used in this research could be used to assess the current overall commitment profile of the employees affected by the system change, and actions could be taken to increase affective and normative commitment levels. The overall commitment profile will give implementation managers an indication of the nature and strength of current employee commitment toward the implementation. This measurement in turn helps managers to 'manage' employee commitments (Mowday, 1999, p.399). A quantification of the current *Commitment to Organisational Change* profile of the workforce could furthermore help managers to attach a monetary value to assessing the financial impact of employee commitment in relation to organisational change initiatives. As such, the construct could be integrated into behaviour-costing approaches, as suggested by Cascio (2000), or Huselid (1995).

University of Cape Town

Secondly, dimensions of *Commitment to Organisational Change* relate differently to *Compliance*, *Co-operation,* and *Championing*. The relationships show that *Affective Commitment to Organisational Change* is the preferable commitment to be fostered by implementation managers, followed by *Normative Commitment to Organisational Change*. Fostering *Continuance Commitment to Organisational Change*, however, should be avoided. The results have shown that continuance committed employees may not even comply with the requirements of the information system change and, according to Herscovitch and Meyer (2002), this might be a form of resistance. Nonetheless, the antecedents of the *Commitment to Organisational Change* dimensions have not yet been empirically studied. In the meantime, managers should rely on the tools offered by the change management literature, such as employee participation (Lines, 2004), involvement, and communication (Wanberg & Banas, 2000; Yardley, 2002). Herscovitch and Meyer (2002) argue that, based on the general model of commitment, affective commitment develops when employees are involved, or participate in a change. They further argue that normative commitment develops by socialisation and the receipt of benefits; and continuance commitment by an employee's perception of loss of investments, or a lack of alternatives. The main implication of these hypothesised antecedents is that forcing employees to comply with the change would result in the development of continuance commitment (e.g. employees perceive a lack of alternatives). These employees in turn would not even offer *Compliance* in relation to the information system change. Bonuses and benefits would lead to the development of normative commitment and, lastly, involvement and participation would lead to the development of affective commitment. Thus, managers should pay attention to involvement and participation, rather than using either benefits or coercion, because *Affective Commitment to Organisational Change* was most positively linked to *Championing*.

Thirdly, perceived *Change Significance* and *Change Impact* on work and non-work life play an important role with respect to employee behavioural support of information system change. Managers should thus include communication in their project plans. The significance of the change for the organisation and the potential benefits for work and non-work life should be communicated clearly and regularly to the employees who would be affected by the information system change. This in turn helps in the development of

University of Cape Town

Co-operation and *Championing* behaviours. In the light of the non-existence of a relationship between *Continuance Commitment to Organisational Change* and behavioural support, managers should be honest about possible adverse consequences, such as layoffs due to implementation of the system. Ashford (1988) noted that perceived uncertainty and fears about an organisational change are associated with increased employee stress levels. Therefore, clear communication would remove a possible perceived threat that might lead to *Continuance Commitment to Organisational Change*. These suggestions are, however, still hypotheses and require further research.

Recommendations for Future Research

The recommendations for future research are based on the limitations of this study and on other issues that emerged during the research process.

Firstly, the cross-sectional time dimension applied in this study does not help to establish the direction between commitment and behavioural support, other than by employee self-reporting. It is thus recommended to apply longitudinal, experimental, or quasi-experimental research designs in future research. For example, in this study, it is only hypothesised that *Co-operation* and *Championing* behaviours lead to successful change. A longitudinal, or cross-sequential study could verify whether employee *Co-operation* and *Championing* really does lead to successful information system change. Similar to a study by Bentein, Vandenberg, Vandenberghe and Stinglhamber (2005), or Beck and Wilson (2000) with respect to *Organisational Commitment*, such a study could also investigate the stability, decline, or increase of the *Commitment to Organisational Change* dimensions, and consequences over the lifecycle of an organisational change project.

Secondly, the survey design limits the data to one self-reported source. This self-reported source is prone to social desirability bias, common method variance, central tendency and self-selection bias (Podsakoff & Organ, 1986). Although factor analyses indicated the dimensions of the scales of the employees that completed the survey, the results of the remaining 30 percent of employees who did not complete the survey are unknown. Thus,

University of Cape Town

the employees who completed the survey could be different to those who did not complete the survey. Combined with the relatively small sample size, this limits the generalisability of the results. It does not take into account the attitudes of the remaining 30 percent of the employees, and this constitutes self-selection bias. Thus, it is recommended to use multi-source data, for example interviews, or other data.

Thirdly, a problem associated with the above survey design is the limiting effect of the epistemological stance applied in this study. To overcome the limitation of the positivist paradigm applied in this study, Mingers (2001) recommends combining different research methods, preferably from different existing paradigms. This would overcome the criticism offered by Lamsa and Savolainen (2000, p. 304), viz. that the positivist paradigm that is applied in most commitment research regards employees as "self-interested human calculators", reduced to a few variables. In particular, they suggest interviews should be used to capture the nature of commitment in relation to behavioural support. This could then help to clarify unresolved issues in this study, such as the unexpected finding that continuance committed employees would not even comply with the requirements of the change, by uncovering the reasons for this behaviour (e.g. perceived threat to employment).

Fourthly, although the *Commitment to Organisational Change* scale was shown to be both valid and reliable in the Afrikaans language, more care should be taken to ensure adequate translation. Due to the small sample, it was not possible to trace possible differences in dimensionality for English and Afrikaans speakers. Although the Afrikaans translation was prepared by a professional translator and verified by bilingual speakers, procedures suggested by Muller and Wytykowska (2004) should be used to establish the convergent and discriminant validity of the translated scales.

Fifthly, this study assumes that high commitment to information system change is always good, implying that the employee is wrong if he or she is resisting such change (Piderit, 2000; Waddell & Sohal, 1998). According to Randall (1987), high *Organisational Commitment* can, however, have severe negative consequences for employees as well as organisations (e.g. work-life conflict). It can be hypothesised that the same applies if

University of Cape Town

commitment is directed at other foci, such as information system change. It is thus suggested to research the possible adverse consequences of overly high *Commitment to Organisational Change* (e.g. stress) and situations where a lack of commitment could be a sign for management to review a change initiative.

Sixthly, in light of the fact that the antecedents of *Commitment to Organisational Change* have not yet been empirically established, it would be beneficial to include more control questions. For example, we would need to test how much employees know about the new information system; whether they have been involved in the implementation; how much training they have received; whether they will receive benefits, or whether they perceive the system as a threat to employment. This would then allow for comparisons across groups and shed more light on how the commitment dimensions are formed. In particular, *Change Significance* and *Change Impact* should be investigated in relation to *Commitment to Organisational Change* and the behavioural consequences by means of path analyses to determine the directions between the variables.

Finally, this study only investigated commitment in relation to an information system change. According to Burke (2002), all organisational changes are not the same, but can be broadly classified into transformational or evolutionary changes. This limits the generalisability of this study to this particular context and in a broader sense to evolutionary changes. It is thus suggested that other change situations should be investigated too, such as mergers and acquisitions, or staff 'rightsizing' and downsizing. It would then be worthwhile to determine how commitment relates to various changes. In particular, it would be worthwhile to determine whether employees react in the same manner to clusters of transformational and evolutionary changes. This could then help managers of organisational change to apply a change specific measure to predict human attitudes and behaviours with regard to the outcome of the change. Furthermore, this suggestion is tied to the need to develop an integrated model of *Commitment to Organisational Change*, empirically linking the antecedents, correlates, and consequences to clusters of transformational and evolutionary organisational changes.

University of Cape Town

Conclusion

As indicated in the introduction to this dissertation, the speed of the river of change appears to be increasing. At this stage, there are no indications that organisations will be faced with less change in the decades to come. Without gaining the co-operation and commitment of the employees, such transformations are not likely to deliver the desired outcomes. This dissertation aimed to further our understanding of employee commitment in relation to an information system innovation. The results indicate that employee *Commitment to Organisational Change* can be measured in a non-Western context. As such, it offers a tool for managers to assess the commitment profile of the workforce. Based on this assessment, managers can design specific strategies to foster employee behavioural support. Nonetheless, more research is required to understand fully the mechanisms that underlie the construct and the associated beneficial consequences for change success.

University of Cape Town

References

Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organisation. *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.

Al-Meer, A.R.A. (1989). Organizational commitment: A comparison of Westerners, Asians and Saudis. *International Studies of Management & Organization, 19*, 74-84.

Armenakis, A.A., & Bedeian, A.G. (1999). Organizational change: A review of theory and research in the 1990s. *Journal of Management, 25,* 293-315.

Armenakis, A.A, Harris, S.G., & Mossholder, K.W. (1993). Creating readiness for organizational change. *Human Relations, 46*, 681- 703.

Ashford, S.J. (1988). Individual strategies for coping with stress during organizational transitions. *The Journal of Applied Behavioral Science, 24*, 19-36.

Bagraim, J.J. (2004). *Measuring Organisational Commitment: A South African application.* Unpublished manuscript, School of Management Studies, University of Cape Town.

Banks, M.H., & Henry, P. (1993). Change and stability in employee commitment. *Journal of Occupational and Organizational Psychology, 66*, 177-184.

Baruch, Y. (1998). The rise and fall of organizational commitment. *Human Systems Management, 17*, 135-144.

Beck, K., & Wilson, C. (2000). Development of affective commitment: A cross-sequential examination of change with tenure. *Journal of Vocational Behavior, 56*, 114-136.

University of Cape Town

Becker, T.E. (1992). Foci and bases of commitment: Are they distinctions worth making? *Academy of Management Journal, 35*, 232-244.

Becker, T.E., & Billings, R.S. (1993). Profiles of commitment: An empirical test. *Journal of Organizational Behavior, 14*, 177-190.

Becker, T.E., Billings, R.S., Eveleth, D.M., & Gilbert, N.L. (1996). Foci and bases of organizational commitment: Implications for job performance. *Academy of Management Journal, 39*, 454-482.

Begley, T.M., & Czajka, J.M. (1993). Panel analysis of the moderating effect of commitment on job satisfaction, intent to quit, and health following organizational change. *Journal of Applied Psychology, 78*, 552-556.

Bennett, H., & Durkin, M. (2000). The effects of organisational change on employee psychological attachment. *Journal of Managerial Psychology, 15*, 126-147.

Bentein, K., Vandenberg, R., Vandenberghe, C., & Stinglhamber, F. (2005). The role of change in the relationship between commitment and turnover: A latent growth modeling approach. *Journal of Applied Psychology, 90*, 468-482.

Bovey, W.H., & Hede, A. (2001). Resistance to organizational change: The role of cognitive and affective processes. *Leadership & Organization Development Journal, 22*, 372-382.

Brewer, A.M., & Hensher, D.A. (1998). The importance of organisational commitment in managing change: Experience of the NSW private bus industry. *Logistics and Transportation Review, 34*, 117-130.

Burke, W.W. (2002). *Organization change. Theory and practice*. Thousand Oaks, California: Sage Publications.

Carnall, C.A. (1986). Toward a theory for the evaluation of organizational change. *Human Relations, 39*, 745-766.

Cascio, W.F. (2000). *Costing human resources. The financial impact of behavior on organizations* (4th ed.). Cincinnati: South-Western College Publishing.

University of Cape Town

Chawla, A., & Kelloway, E.K. (2004). Predicting openness and commitment to change. *Leadership & Organization Development Journal, 25*, 485-498.

Cheng, Y., & Stockdale, M.S. (2003). The validity of the three-component model of organizational commitment in a Chinese context. *Journal of Vocational Behaviour, 62*, 465-489.

Coch, L., & French, J.R.P. (1948). Overcoming resistance to change. *Human Relations, 1*, 512-532.

Coetsee, L. (1999). From resistance to commitment. *Public Administration Quarterly, 23*, 204-222.

Connor, D.R., & Patterson, R.W. (1982). Building commitment to organisational change. *Training and Development Journal, 36*, 18-30.

Culpepper, R.A., Gamble, J.E., & Blubaugh, M.G. (2004). Employee stock ownership plans and three-component commitment. *Journal of Occupational and Organizational Psychology, 77*, 155-170.

Cunningham, C.E., Woodward, C.A., Shannon, H.S., MacIntosh, J., Lendrum, B., Rosenbloom, D., & Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural consequences. *Journal of Occupational and Organizational Psychology, 75*, 377-392.

Demers, R., Forrer, S.E., Leibowitz, Z., & Cahill, C. (1996). Commitment to change. *Training and Development, 50*, 22-27.

Dunham, R.B., Grube, J.A., & Castaneda, M.B. (1994). Organizational commitment: The utility of an integrative definition. *Journal of Applied Psychology, 79*, 370-380.

Eby, L.T., Adams, D.M., Russel, J.E.A., & Gaby, S.H. (2000). Perceptions of organizational readiness for change: Factors related to employees' reactions to the implementation of team-based selling. *Human Relations, 53*, 419-442.

Elizur, D., & Guttman, L. (1976). The structure of attitudes toward work and technological change within an organization. *Administrative Science Quarterly, 21*, 611-621.

University of Cape Town

Gardner, D.G., Dunham, R.B., Cummings, L.L., & Pierce, J.L. (1987). Employee focus of attention and reactions to organizational change. *The Journal of Applied Behavioral Science, 23*, 351-370.

Goles, T., & Hirschheim, R. (2000). The paradigm is dead, the paradigm is dead... long live the paradigm: The legacy of Burrell and Morgan. *Omega, 28*, 249-268.

Gregersen, H.B. (1993). Multiple commitments at work and extrarole behavior during three stages of organizational tenure. *Journal of Business Research, 26*, 31-47.

Hackett, R.D., Bycio, P., & Hausdorf, P.A. (1994). Further assessments of Meyer and Allen's (1991) three-component model of organizational commitment. *Journal of Applied Psychology, 79*, 15-23.

Hair, J.F., Anderson, R.E., Tetham, R.L., & Black, W.C. (1998). *Multivariate data analysis* (5 ed.). Delhi: Pearson Education.

Herscovitch, L., & Meyer, J.P. (2002). Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology, 87*, 474-487.

Hunt, S.D., & Morgan, R.M. (1994). Organizational commitment: One of many commitments or key mediating construct? *Academy of Management Journal, 37*, 1568-1587.

Huselid, M.A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal, 38*, 635-672.

Irving, P.G., Coleman, D.F., & Cooper, C.L. (1997). Further assessments of a three-component model of occupational commitment: Generalizability and differences across occupations. *Journal of Applied Psychology, 82*, 444-452.

Iverson, R.D. (1996). Employee acceptance of organizational change: The role of organizational commitment. *The International Journal of Human Resource Management, 7*, 123-149.

University of Cape Town

Jaros, S.J. (1997). An assessment of Meyer and Allen's (1991) three-component model of organizational commitment and turnover intentions. *Journal of Vocational Behavior, 51*, 319-337.

Judge, T.A., Thoresen, C.J., Pucik, V., & Welbourne, T.M. (1999). Managerial coping with organizational change: A dispositional perspective. *Journal of Applied Psychology, 84*, 107-122.

Kegan, R., & Lahey, L. (2001). The real reason people won't change. *Harvard Business Review, 79*, 85-92.

Klecker, B.M., & Loadman, W.E. (2000). Measuring principals' openness to change on three dimensions: Affective, cognitive and behavioral. *Journal of Instructional Psychology, 26*, 213-225.

Klein, K.J., & Sorra, J.S. (1996). The challenge of innovation implementation. *Academy of Management Review, 21*, 1055-1080.

Ko, J.W., Price, J.L., & Mueller, C.W. (1997). Assessment of Meyer and Allen's three-component model of organizational commitment in South Korea. *Journal of Applied Psychology, 82*, 961-973.

Kontraduk, T.B., Hausdorf, P.A, Korabik, K., & Rosin, H.M. (2004). Linking career mobility with corporate loyalty: How does job change relate to organizational commitment? *Journal of Vocational Behavior, 65*, 332-349.

Kotter, J.P., & Schlesinger, L.A. (1979). Choosing strategies for change. *Harvard Business Review, 57*, 106-114.

Lamsa, A., & Savolainen, T. (2000). The nature of managerial commitment to strategic change. *Leadership & Organization Development Journal, 21*, 297-306.

Lau, C., & Woodman, R.W. (1995). Understanding organizational change: A schematic perspective. *Academy of Management Journal, 38,* 537-554.

Lewin, K. (1947). Frontiers in group dynamics. *Human Relations, 1*, 5-41.

University of Cape Town

Lines, R. (2004). Influence of participation in strategic change: Resistance, organizational commitment and change goal achievement. *Journal of Change Management, 4*, 193-215.

Mack, D.A., Nelson, D.L., & Quick, J.C. (1998). The stress of organisational change: A dynamic process model. *Applied Psychology: An International Review, 47*, 219-232.

Mathieu, J.E., & Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin, 108*, 171-194.

Meyer, J.P., & Allen N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*, 61-89.

Meyer, J.P., & Allen, N.J. (1997). *Commitment in the workplace*. Thousand Oaks, CA: Sage Publications.

Meyer, J.P., Allen, N.J., & Gellatly, I.R. (1990). Affective and continuance commitment to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology, 75*, 710-720.

Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78*, 538-551.

Meyer, J.P., Allen, N.J., & Topolnytsky, L. (1998). Commitment in a changing world of work. *Canadian Psychology, 39*, 83-93.

Meyer, J.P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review, 11*, 299-326.

Meyer, J.P., Paunonen, S.V., Gellatly, I.R, Goffin, R.D., & Jackson, D.N. (1989). Organizational commitment and job performance: It's the nature of the commitment that counts. *Journal of Applied Psychology, 74*, 152-156.

University of Cape Town

Meyer, J.P., Stanley, D.J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior, 61*, 20-52.

Miller, V.D., Johnson, J.R., & Grau, J. (1994). Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research, 22*, 59-80.

Mingers, J. (2001). Combining IS research methods: Towards a pluralist methodology. *Information Systems Research, 12*, 240-259.

Morrell, K.M., Loan-Clarke, J., & Wilkinson, A.J. (2004). Organisational change and employee turnover. *Personnel Review, 33*, 161-173.

Morrow, P.C. (1983). Concept redundancy in organizational research: The case of work commitment. *Academy of Management Review, 8*, 486-500.

Mowday, R.T. (1999). Reflections on the study and relevance of organizational commitment. *Human Resource Management Review, 8*, 387-401.

Mowday, R.T, Steers, R.M., & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*, 224-247.

Mueller, C.W., Wallace, J.E., & Price, J.L. (1992). Employee commitment: Resolving issues. *Work and Occupations, 19*, 211-236.

Muller, J.M., & Wytykowska, A.M. (2005). Psychometric properties and validation of a Polish adaptation of Carver and White's BIS/BAS scales. *Personality and Individual Differences, 39*, 795-805.

Nadler, D.A. (1981). Managing organizational change: An integrative perspective. *The Journal of Applied Behavioral Science, 17*, 191-211.

Near, J.P. (1989). Organizational commitment among Japanese and U.S. workers. *Organization Studies, 10*, 281-300.

University of Cape Town

Neubert, M.J., & Cady, S.H. (2001). Program commitment: A multi-study longitudinal field investigation of its impact and antecedents. *Personnel Psychology, 54*, 421-448.

Nijhof, W.J., de Jong, M.J., & Beukhof, G. (1998). Employee commitment in changing organizations: An exploration. *Journal of European Industrial Training, 22*, 243-248.

Nunnally, J.C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology, 88*, 680-693.

O'Reilly, C., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effect of compliance, identification, and internalisation on prosocial behavior. *Journal of Applied Psychology, 71*, 492-499.

Piderit, S.K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review, 25*, 783-794.

Porras, J.I., & Hoffer, S.J. (1986). Common behavior changes in successful organization development efforts. *The Journal of Applied Behavioral Science 22*, 477-494.

Porter, L.W, Steers, R.M, Mowday, R.T., & Boulian, P.V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59*, 603-609.

Potsakoff, P.M., & Organ, D.W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*, 531-544.

Randall, D.M. (1987). Commitment and the organization: The organization man revisited. *Academy of Management Review, 12*, 460-471.

Randall, D.M., Fedor, D.B., & Longenecker, C.O. (1990). The behavioral expression of organizational commitment. *Journal of Vocational Behavior, 36*, 210-224.

University of Cape Town

Rashid, M.Z.A., Sambasivan, M., & Rahman, A.A. (2004). The influence of organizational culture on attitudes toward organizational change. *Leadership & Organization Development Journal, 25*, 161-179.

Reichers, A.E. (1985). A review and reconceptualization of organizational commitment. *Academy of Management Review, 10*, 465-476.

Reichers, A.E. (1986). Conflict and organizational commitments. *Journal of Applied Psychology, 71*, 508-514.

Romzek, B.S. (1989). Personal consequences of employee commitment. *Academy of Management Journal, 32*, 649-661.

Somers, M.J. (1995). Organizational commitment, turnover and absenteeism: An examination of direct and interaction effects. *Journal of Organizational Behavior, 16,* 49-58.

Stanley, D.J., Meyer, J.P., & Topolnytsky, L. (2005). Employee cynicism and resistance to organizational change. *Journal of Business and Psychology, 19*, 429-459.

Susskind, A.M., Miller, V.D., & Johnson, J.D. (1998). Downsizing and structural holes. Their impact on layoff survivors' perceptions of organizational chaos and openness to change. *Communication Research, 25*, 30-65.

Statsoft Inc. (2006). *Electronic Statistics Textbook*. Tulsa, OK: Statsoft. Retrieved on December 11, 2005, from: http://www.statsoft.com/textbook/stathome.html.

Swailes, S. (2002). Organizational commitment: a critique of the construct and measures. *International Journal of Management Reviews, 4*, 155-178.

Swailes, S. (2004). Commitment to change: Profiles of commitment and in-role performance. *Personnel Review, 33*, 187-204.

Umble, E.J., & Umble, M. (2002). Avoiding ERP implementation failure. *Industrial Management, 44*, 25-33.

University of Cape Town

Vakola, M., & Nikolaou, I. (2005). Attitudes towards organizational change. What is the role of employees' stress and commitment? *Employee Relations, 27*, 160-174.

Vakola, M., Tsaousis, I., & Nikolaou, I. (2004). The role of emotional intelligence and personality variables on attitudes toward organizational change. *Journal of Managerial Psychology, 19*, 88-110.

Vandenberghe, C. (2003). Application of the three-component model to China: Issues and perspectives. *Journal of Vocational Behavior, 62*, 516-523.

Vandenberghe, C., Bentein, K., & Stinglhamber, F. (2004). Affective commitment to the organization, supervisor, and work group: Antecedents and outcomes. *Journal of Vocational Behavior, 64*, 47-71.

Van den Honert, R. (1999). *Intermediate statistical methods for business and economics* (2nd ed.). Cape Town: UCT Press (Pty) Ltd.

Waddell, D., & Sohal, A.S. (1998). Resistance: A constructive tool for change management. *Management Decision, 36*, 543-548.

Wanberg, C.R., & Banas, J.T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology, 85*, 132-142.

Wanous, J.P., Reichers, A.E., & Austin, J.T. (2000). Cynicism about organizational change. Measurement, antecedents, and correlates. *Group & Organization Management, 25*, 132-153.

Wasti, S.A. (2005). Commitment profiles: Combinations of organizational commitment forms and job outcomes. *Journal of Vocational Behaviour, 67*, 290-308.

Worrall, L., Cooper, C.L., & Campbell-Jamison, F. (1998). The impact of organizational change on the work experiences and perceptions of public sector managers. *Personnel Review, 29*, 613-636.

Yardley, D. (2002). *Successful IT project delivery: Learning the lessons of project failure*. London: Pearson Education.

University of Cape Town

Yousef, D.A. (2000a). Organizational commitment and job satisfaction as predictors of attitudes toward organizational change in a non-western setting. *Personnel Review, 29*, 567-592.

Yousef, D.A. (2000b). Organizational commitment as a mediator of the relationship between Islamic work ethic and attitudes towards organizational change. *Human Relations, 53*, 513-537.

Yu, H., Leithwood, K., & Jantzi, D. (2002). The effects of transformational leadership on teachers' commitment to change in Hong Kong. *Journal of Educational Administration, 40*, 368-389.

University of Cape Town

APPENDIX A: ORIGINAL SCALES (ENGLISH)

Note: All scales were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Commitment to Organisational Change **Scale (Herscovitch & Meyer, 2002)**
Affective Commitment to Organisational Change Items
ACC1: I believe in the value of this change
ACC2: This change is a good strategy for this organisation
ACC3: I think that management is right about introducing this change
ACC4: This change serves an important purpose
ACC5: Things would be worse without this change
ACC6: This change is necessary
Continuance Commitment to Organisational Change Items
CCC1: have no choice but to go along with this change
CCC2: I feel under pressure to go along with this change
CCC3: I have too much at stake to resist this change
CCC4: It would be too costly for me to resist this change
CCC5: It would be risky to speak out against this change
CCC6: Resisting this change is not a viable option for me
Normative Commitment to Organisational Change Items
NCC1: I feel a sense of duty to work toward this change
NCC2: I do not think it would be right of me to oppose this change
NCC3: I would feel bad about opposing this change
NCC4: It would be irresponsible of me to resist this change
NCC5: I would feel guilty about opposing this change
NCC6: I feel an obligation to support this change

Organisational Commitment **Scale (Bagraim, 2004)**
Affective Organisational Commitment Items
AOC1: I feel a strong sense of connection to this organisation
AOC2: I feel emotionally attached to this organisation
AOC3: I feel like part of the family at this organisation
AOC4: This organisation has a great deal of personal meaning for me
Continuance Organisational Commitment Items
COC1: It would be very costly for me to leave this organisation right now
COC2: Too much of my life would be disrupted if I decided that I wanted to leave this organisation now
COC3: I would not leave this organisation right now because I would stand to lose
COC4: For me personally, the cost of leaving this organisation would be far greater than the benefit
Normative Organisational Commitment Items
NOC1: Even if it were to my advantage, I do not feel that it would be right to leave this organisation now
NOC2: I would feel guilty if I left this organisation now
NOC3: I would not leave this organisation right now because I have a sense of obligation to the people in it
NOC4: I would violate a trust if I quit my job with this organisation now

University of Cape Town

Behavioural Support of Organisational Change **Scale (Herscovitch & Meyer, 2002)**

Concerning the computer system change at my organisation, I...

Compliance Items

BSC1: ...will comply with management's directives regarding the change
BSC2: ...will accept role changes required by the change
BSC3: ... will adjust the way I do my job as required by this change
BSC4: ...will only work on change-related activities that are directly relevant to my job
BSC5: ...will do only what is specifically required of me when it comes to the change
BSC6: ...will do only what is absolutely necessary when it comes to this change.

Co-operation Items

BSCO1: ...will work toward the change consistently
BSCO2: ...will remain optimistic about the change, even in the face of adversity
BSCO3: ...will avoid former practices, even if they seem easier
BSCO4: ...will engage in change-related behaviours that seem difficult in the short-term but are likely to have long-term benefits
BSCO5: ...will seek help concerning the change when needed
BSCO6: ...will not complain about the change
BSCO7: ...will try to keep myself informed about the change
BSCO8: ...am tolerant of temporary disruptions and/or ambiguities in my job

Championing Items

BSCH1: ...will encourage the participation of others in the change
BSCH2: ...will speak positively about the change to co-workers
BSCH3: ...will speak positively about the change to outsiders
BSCH4: ...will try to find ways to overcome change-related difficulties
BSCH5: ...will persevere with the change to reach goals
BSCH6: ...will try to overcome co-workers' resistance toward the change

Change Significance **and** ***Change Impact*** **Items (Herscovitch & Meyer, 2002)**

Change Significance: Measured on a 5-point Likert scale ranging from 1 (extremely minor) to 5 (extremely major).

CS1: How significant is this change for your organisation?

Change Impact: Measured on a 5-point Likert scale ranging from 1 (large negative effect) to 5 (large positive effect).

CI1: To what extent will this change affect performance of your job?
CI2: To what extent will this change affect the climate in your organisation?
CI3: To what extent will this change affect your non-work life?

University of Cape Town

APPENDIX B: ORIGINAL SCALES (AFRIKAANS)

Afrikaans Version of *Commitment to Organisational Change* Scale
Affective Commitment to Organisational Change Items
ACC1: Ek glo in die waarde van hierdie verandering
ACC2: Hierdie verandering is 'n goeie strategie vir hierdie organisasie
ACC3: Ek dink dat die bestuur reg is oor die instelling van hierdie verandering
ACC4: Hierdie verandering dien 'n belangrike doel
ACC5: Dinge sou erger wees sonder hierdie verandering
ACC6: Hierdie verandering is noodsaaklik
Continuance Commitment to Organisational Change Items
CCC1: Ek het geen keuse as om saam met hierdie verandering te stem nie
CCC2: Ek verkeer onder druk om saam met hierdie verandering te stem
CCC3: Ek het te veel op die spel om hierdie verandering teen te staan
CCC4: Dit sal te duur vir my wees om hierdie verandering teen te staan
CCC5: Dit sou gewaagd wees om my teen hierdie verandering uit te spreek
CCC6: Om teëstand teenoor hierdie verandering te bied is nie 'n haalbare keuse vir my nie
Normative Commitment to Organisational Change Items
NCC1: Ek het 'n pligsgevoel om my vir hierdie verandering te beywer
NCC2: Ek dink nie dit sou reg van my wees om my teen hierdie verandering te verset nie
NCC3: Ek sou sleg voel om my teen hierdie verandering te verset
NCC4: Dit sou onverantwoordelik van my wees om hierdie verandering teen te staan
NCC5: Ek sou skuldig voel om my teen hierdie verandering te verset
NCC6: Ek voel onder verpligting om hierdie verandering te steun

Afrikaans Version of *Organisational Commitment* Scale
Affective Organisational Commitment Items
AOC1: Ek voel 'n sterk gevoel van verbondenheid met hierdie organisasie
AOC2: Ek voel emosioneel verbonde aan hierdie organisasie
AOC3: Ek voel soos deel van die familie by hierdie organisasie
AOC4: Hierdie organisasie het heelwat persoonlike betekenis vir my
Continuance Organisational Commitment Items
COC1: Dit sou baie duur vir my wees om hierdie organisasie op die oomblik te verlaat
COC2: Te veel van my lewe sal ontwrig word indien ek sou besluit dat ek hierdie organisasie nou wil verlaat
COC3: Ek sou nie hierdie organisasie op die oomblik wou verlaat nie omdat ek gevaar sou loop om te verloor
COC4: Vir my persoonlik sou die koste om hierdie organisasie te verlaat baie meer as die voordeel wees
Normative Organisational Commitment Items
NOC1: Al sou dit tot my voordeel wees voel ek nie dat dit reg sou wees om hierdie organisasie nou te verlaat nie
NOC2: Ek sou skuldig voel indien ek hierdie organisasie nou verlaat
NOC3: Ek sou nie hierdie organisasie op die oomblik verlaat nie want ek het 'n pligsbesef teenoor sy mense
NOC4: Ek sou vertroue skend indien ek nou my werk by hierdie organisasie sou bedank

University of Cape Town

Afrikaans Version of *Behavioural Support of Organisational Change* Scale

Met betrekking tot die verandering van die rekenaarstelsel by my organisasie, sal ek...

Compliance Items
BSC1: ...aan die bestuur se opdragte voldoen ten opsigte van die verandering
BSC2: ...die rolveranderinge vereis deur die verandering, aanvaar
BSC3: ... die manier hoe ek my werk verrig, aanpas, soos vereis deur hierdie verandering
BSC4: ...slegs werk met aktiwiteite wat verband hou met die verandering en wat direk van toepassing op my werk is
BSC5: ...slegs doen wat spesifiek van my verwag word ten opsigte van die verandering
BSC6: ...slegs dit doen wat absoluut noodsaaklik is ten opsigte van hierdie verandering
Co-operation Items
BSCO1: ...my konsekwent beywer vir die verandering
BSCO2: ...optimisties bly oor die verandering, selfs in teëspoed
BSCO3: ...vorige praktyke vermy, al lyk dit asof hulle makliker is
BSCO4: ...betrokke raak by werkverrigtinge wat verband hou met verandering al kom dit voor asof dit op die korttermyn moeilik is maar waarskynlik langtermyn voordele het
BSCO5: ... wanneer nodig, om hulp vra met betrekking tot die verandering
BSCO6: ...nie kla oor die verandering nie
BSCO7: ...probeer om myself op die hoogte van sake rakende die verandering te hou
BSCO8: ...verdraagsaam wees teenoor tydelike onderbrekings en/ of onduidelikhede in my werk
Championing Items
BSCH1: ...die deelname van ander in die verandering aanmoedig
BSCH2: ...positief met medewerkers oor die verandering praat
BSCH3: ...positief met buitestanders oor die verandering praat
BSCH4: ...probeer om maniere te vind om moeilikhede wat gepaard gaan met die veranderinge, te oorkom
BSCH5: ...volhou met die verandering om doelwitte te bereik
BSCH6: ...probeer om medewerkers se teenstand teenoor die verandering te oorkom

Afrikaans Version of *Change Significance* and *Change Impact*

Die Betekenis van die Verandering:

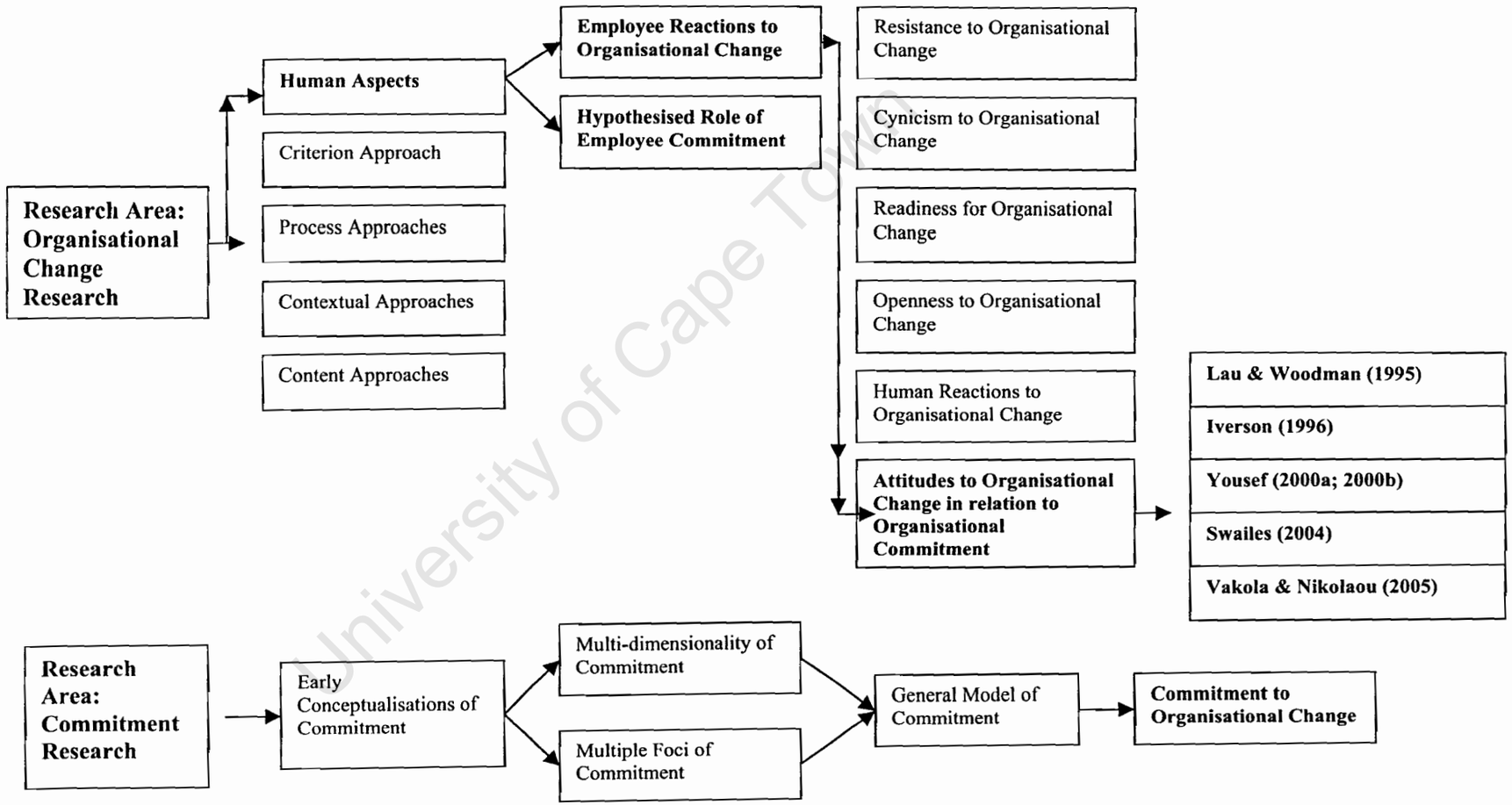
Hoe betekenisvol is hierdie verandering vir u organisasie?

Die Impak van die Verandering op U:

Tot watter mate sal hierdie verandering die verrigting van u werk affekteer?
Tot watter mate sal hierdie verandering die klimaat in u organisasie affekteer?
Tot watter mate sal hierdie verandering u persoonlike lewe affekteer?

University of Cape Town

APPENDIX C: Diagrammatic View of the Literature underlying Commitment to Organisational Change



University of Cape Town