The effects of perceived values-congruence on organisational change recipients’ beliefs

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Abstract

This study examines the impact of perceived values-congruence within an organisation on the beliefs of employees about a recently experienced organisational change, and whether trust and the perception of quality of communication mediate these relationships. An organisational behaviour typology was developed from the existing literature, and then empirically tested. The intention here is to provide new knowledge to the field of organisational change, by extending research into values-congruence, in an attempt to link these theoretical concepts. The results of this analysis offer a contribution to the understanding of factors affecting organisational change implementation outcomes.

Data were collected from 251 respondents who had recently (within the last six months) experienced organisational change, by means of an online panel survey. The proposed model was tested with partial least squares structural equations analyses to determine which aspects of employee perceived values-congruence (with their organisation and/or its sub-units) influenced these employees’ specific beliefs about an organisational change. The investigated beliefs are discrepancy (the need to change), appropriateness (the changes are relevant to the situation), self-efficacy (employees possess the skills to perform new tasks), principal support (the organisation’s leaders support the change), and valence (employees will gain from the change). These aspects have previously been found to influence the development of employee readiness for organisational change (Armenakis et al. 2007). However, the impact of perceived values-congruence on these change related beliefs has not previously been examined. An exploratory factor analysis suggested that a five-beliefs structure, suggested by Armenakis and colleagues in 2007, was not supported for the current research, resulting in the reduction of five beliefs into three, effectively combining the constructs of appropriateness, self-efficacy and valence.
into one new variable that was titled ‘Positive Views’ in the current research. The constructs of discrepancy and principal support remained largely intact and were subsequently retained for the analysis.

The results of this analysis provide strong support for the importance of perceived values-congruence on the beliefs that impact readiness for change. In particular, values-congruence with the organisation has a strong influence on change related beliefs. More limited support has been found for the influence of perceived values-congruence with the supervisors on change related beliefs. However, no support has been found for a relationship between perceived values-congruence with the work groups and the change related beliefs that are investigated.

Additionally, this study evaluates whether the relationships between perceived values-congruence and organisational change recipients’ beliefs are mediated by a number of constructs that had previously been found to positively affect other types of organisational outcomes (Edwards & Cable 2009). These mediator constructs were trust, and quality of communication in the organisation. Fully mediated relationships were confirmed for both of these constructs in the present study, using Baron and Kenny’s (1986) definition for mediation. In particular, trust had a strong effect on employee beliefs, being positive and significant for all three aspects of employee beliefs about change (i.e., positive views, discrepancy, and principal support), whereas the quality of communication had a positive significant effect on only one of the three aspects of employee beliefs about change (positive views). The report concludes with theoretical and practical implications of the results, outlining the importance of the investigated factors for change researchers and recommendations for practitioners on how to approach change implementation through the recognition of values and values-congruence in a future organisation.
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Statement of Candidate Contribution

This thesis does not contain work that I have published, nor work under review for publication.
Chapter One

1 Introduction

1.1 BACKGROUND TO THE RESEARCH

Organisations must innovate and successfully implement changes if they are to remain competitive in today’s global marketplace (Kotter 1995). Change in its most basic form is adaptation. Without it, organisations face the risk of becoming outdated, inefficient, and uncompetitive (Firoozmand 2013). Indeed, the idea that organisations ‘change or perish’ is widely accepted (Abrahamson 2000, p. 75). However, change is not a guarantee that an organisation will survive in today’s dynamic environment, as change can be so disruptive that it can bring about the demise of the organisation itself (Abrahamson 2000; Pascale, Millemann & Gioja 1997). Consequently, it is not surprising that change is seen as a crucial research area (Bedeian 1986) and is often suggested to be a research field in its own right (Burke 2011), with a number of change theories being suggested.

1.1.1 ORGANISATIONAL CHANGE THEORIES

Organisational change has provided the background for a variety of theories and conceptual developments (e.g., Armenakis & Bedeian 1999; Kotter & Schlesinger 1979; Lewin 1947). One of the most notable outcomes of this work has been a recognition that employees experience change in individual and unique ways (Bouckenooghe 2010). It has also been recognised that employees have different emotional and cognitive phases during a change process (e.g., Oreg, Vakola & Armenakis 2011; Scott & Jaffe 1988). This led to a suggestion that it is not organisations that change but, rather, the individuals within them (Goodman & Loh 2011, p. 242).
Past research has suggested two factors determine the success or failure of change initiatives (Bouckenooghe 2010), namely:

1. Pre-change and change antecedents, which influence employees’ reactions to change (e.g., Kim, Hornung & Rousseau 2011).

2. Organisational development processes (e.g., Burke 1997).

The present study focused on the pre-change and change antecedent body of knowledge in an attempt to better understand employees’ beliefs that influence their reactions to change.

1.1.2 Antecedents to Organisational Change

Prior research has suggested a number of potential precursors to employees’ reactions to organisational change (e.g., Elias 2009; Kiefer 2005; Kim, Hornung & Rousseau 2011; Oreg, Vakola & Armenakis 2011; Rafferty, Jimmieson & Armenakis 2013; Vakola, Tsausis & Nikolaou 2004; Wanous, Reichers & Austin 2004). Largely absent from these investigations, however, were inquiries into employees’ values and more specifically their perceived values-congruence with their organisation and the individuals within, and how these factors influence employees’ beliefs about organisational change. This perceived congruence is likely to be important, because this factor has been found to influence a number of other organisational processes (Argandoña 2003; Bouckenooghe et al. 2005; Kasof et al. 2007; Meglino & Ravlin 1998) and outcomes (Cohen & Liu 2011; Finegan 2000; Fischer & Smith 2004). The current investigation examined the effects employees’ values and their perceived values-congruence with their organisation had on employees’ readiness for change (Armenakis et al. 2007).
1.2 THE RESEARCH PROBLEM

Given the likely importance of values-congruence that was noted in the previous section, the research question addressed was:

*Does the perceived values-congruence between employees and their organisation, their supervisors, and their work groups impact on these employees’ beliefs about organisational change implementations?*

It was expected that perceived values-congruence between employees and their organisations, supervisors, and work groups would affect employees’ beliefs about the necessity and appropriateness of a change, as well as their beliefs about principals’ support, employees’ self-efficacy, and the likely beneficial outcomes of the change. These beliefs are likely to influence employees’ resistance and/or commitment to change implementation, although there are a number of potential mediators to this relationship; two of which being trust and quality of communication are examined in this thesis.

1.2.1 ORGANISATIONAL CHANGE: A HOLISTIC APPROACH

Trying to determine the factors affecting the success or failure of organisational change has long been the focus of researchers (e.g., Van De Ven & Poole 1995) and many factors have been examined. For example, the complexity of the organisational change seems to influence implementation outcomes (e.g., Pettigrew, Woodman & Cameron 2001). Researchers have also examined the impact of job definitions (Staw & Ross 1985), employment relationships (Conway & Monks 2008), group designs (Cummings 2004), innovation (Poole et al. 2000), growth (Disney, Haskel & Heden 2003), leadership (Kim & Mauborgne 2003), reorganisation (Cartwright & Schoenberg 2006) and downsizing (Mishra & Spreitzer 1998). These authors have examined the
predisposition toward and reactions to change in employees as a critical component of the change process.

Change often has negative consequences for employees (Marks 2006), such as increased stress (e.g., Amiot et al. 2006; Begley & Czajka 1993; Cooper & Markus 1995), increased anxiety (e.g., Miller, Johnson & Grau 1994; Oreg 2006), fatigue (e.g., Pierce & Dunham 1987) and the display of negative emotions (e.g., Kiefer 2005), which impact productivity. Consequently, it is important to understand the factors that influence employees’ reactions to organisational change.

Many variables have been linked to employees’ reactions to change (Oreg, Vakola & Armenakis 2011). This research draws on both organisational change and the broader organisational literature to identify and investigate the impact that values-congruence, trust, and the quality of communication have on employees’ readiness to change. Previous studies have found that values-congruence influenced employees’ reactions to change (e.g., Lamm, Gordon & Purser 2010); however, no studies were found to examine the potential mediation of trust and quality of communication.

1.2.2 RESEARCH ISSUES

The specific questions examined in the present study were:

1. Does an employee’s perceived values-congruence with their organisation, supervisors and work group impact their beliefs about organisational change? If so, which values-congruence level (i.e., congruence with the organisation, supervisor, or work group) impacts more on employees’ beliefs about change?

2. Do an employee’s felt trust, and perception of the quality of communication, in their organisation mediate the relationship between perceived values-congruence
and employees’ beliefs in organisational change? If so, which of these mediating variables impacts more?

1.2.3 CONTRIBUTIONS

Understanding employees’ reactions to organisational change is particularly important today (Wong & Kleiner 1996), as organisations need to implement changes more often than in the past (Armenakis, Harris & Mossholder 1993) and, in many cases, change is a continuous process (Graetz & Smith 2010). Answering the study’s research questions will increase our understanding of employees’ reactions to change and provide theoretical and practical contributions that are summarised in subsequent sections.

Theoretical contribution

Firstly, the proposed model, which is shown in Figure 1-1, built on prior research into perceived values-congruence, as well as the broader organisational literature, and the drivers of organisational change. As is evident from the study’s research questions, the model included mediating factors between values-congruence and employees’ beliefs about planned organisational change. The investigated mediators were trust, and quality of communication, which have previously been found to impact on a range of positive organisational outcomes, such as organisational commitment (Neves & Caetano 2006) and satisfaction with management (Nelissen & van Selm 2008), but not on beliefs about change. The study also examined three different organisational levels (work groups, supervisors, and the organisation) when examining the impact of values-congruence.
Practical contribution

The current research was designed to provide a tool for change leaders that would help them better understand individual differences in change related beliefs. This should help them to create an environment in which change is more likely to be accepted. Building trust and communication quality through shared values may prove to be an important precursor to organisational change implementations.

Understanding the extent of values-congruence between group members, their managers, and their organisation, can inform change leaders about such groups’ compatibility and provide insights into how differences might be managed. The results should also provide a basis to better understand and improve trust, and the quality of communication; factors that have previously been found to improve employees’ job satisfaction and willingness to stay (Edwards & Cable 2009).
1.3 JUSTIFICATION FOR THE RESEARCH

A review of the organisational change literature suggested that values-congruence is likely to play a role in the development of employees’ beliefs about change, although this has not yet been empirically investigated. In particular, this study, for the first time, examined individual’s perceptions of their values-congruence with different levels of their employing organisation (their work group, supervisor, and the organisation as a whole) and how these perceptions impacted on their beliefs about change. The study built on work that linked perceived values-congruence to trust (Wells & Kipnis 2001), and quality of communication (Edwards & Cable 2009; Schall 1983) to investigate their influence on employees’ beliefs about organisational change. While these variables have been suggested as predictors of organisational change outcomes (Morgan & Zeffane 2003; Tucker, Yeow & Viki 2013), they have not previously been investigated as mediators between values-congruence and beliefs about organisational change.

Organisational change is a phenomenon all employees and organisations face at some point (Foster 2010), which raises the question as to how to best achieve a successful transformation. Beer and Nohria (2000) found 70% of change efforts failed, while Kotter (1995) argued that failed change attempts cost considerable time, money and resources. It is, therefore, imperative that organisations understand the factors that influence reactions to change implementations. Being equipped with such understanding will likely decrease costs and increase chances of success.

People are motivated by the values or life-goals that are most important to them (Rokeach 1973; Schwartz 1992). This suggested a better understanding of employees’ values-orientations may uncover factors that increase employees’ willingness to change (Sagiv & Schwartz 2000). While previous research has investigated many potentially influencing factors, a values perspective has not been used by many organisational
change researchers. This seems unfortunate, as a better understanding of employees’ values, and in particular their perception of values-congruence with their organisations, should allow change practitioners to better prepare organisations for change.

1.4 AN OUTLINE OF THE THESIS

The thesis is arranged into six chapters (an introduction, a literature review, the propositions development, methodology, results, and conclusions). These chapters are discussed in turn in subsequent sections.

1. Introduction

The introduction chapter provides a background to the study, outlines the broad fields of research investigated, and introduces the research problems that were the study’s focus. Additionally, the chapter outlines some of the study’s expected contributions.

2. Literature review and research issues

This chapter examines past research in organisational change, individual values, and values-congruence. The literature review begins with a summary of the organisational change literature and some relevant theories in the field. This is followed by an examination of pre-change issues, change antecedents, and employees’ reactions to such implementations. The second part of the literature review discusses values and values-congruence and how these factors might affect antecedents to change, reactions to and outcomes of organisational change implementations.

3. Propositions development

The chapter outlines the development of five hypotheses that provided the foundation for the present study. These hypotheses suggest relationships between values-
congruence and employees’ beliefs about change and the presence of two mediating constructs.

4. Methodology

The methodology chapter provides an in depth discussion of the study itself. The chapter begins with a description of the way the questionnaire was developed and constructed. This is followed by a discussion of the sample selection process and the methods used to collect the needed data. Finally, the data analysis techniques used to answer the study’s research questions are described.

5. The results

The results chapter provides a detailed account of the outcomes obtained from the data analysis procedures that were outlined in the methodology chapter. These results provided the basis for the acceptance or rejection of the various hypotheses and provided evidence for the subsequent conclusions and implications.

6. Conclusions and implications

The thesis concludes with a summary of its academic contributions and practical implications for managers.

1.5 Chapter Summary

The foundations for the present study were presented in this chapter, which introduced the research problem and some research issues that resulted from an identified gap in the literature. Specifically, the research questions in relation to employee perceived values-congruence within their organisation and change related beliefs were introduced. Additionally, it was suggested that these relationships are mediated by trust, and the quality of communication. The chapter further outlined the research approach and
suggested its potential importance for change theory and practice. The next chapter is a discussion of the prior research that provided the foundations for the present study.
Chapter Two

2 Literature Review of the Research Issues

2.1 CHAPTER OVERVIEW

This chapter aims to build the theoretical foundation on which the research was based. Section 2.2 describes the focus of the current research and situates it within organisational change research. This is followed by a review of past findings within the organisational change literature that were relevant to the current research (Section 2.3). Sections 2.4 and 2.5 offer reviews into potential antecedents into employee reactions to organisational change and organisational change recipients’ beliefs (Section 2.6). Section 2.7 presents a summary of previous investigations into the importance of employee felt values and values-congruence within their organisation and organisational outcomes that have been contributed to such similarities. The chapter closes with a summarisation of its contents (Section 2.8).

2.2 BACKGROUND AND FOCUS OF THE RESEARCH

Organisations rely on their workers and work groups to achieve successful organisational outcomes (Cummings 2004). It has been proposed that perceived values-congruence between workers had a direct effect on positive, work related outcomes (Adkins, Ravlin & Meglino 1996). The current thesis investigated how the perceptions of employees affected their beliefs and attitudes towards organisational change. It builds on existing knowledge in organisational change and values-congruence. These two areas are briefly overviewed in this section to identify where the current research sits within the existing knowledge and to identify any potential gaps in the literature.
Organisational change has been researched from a variety of divergent perspectives and described, based on a number of differing theoretical concepts. The main organisational change theories included:

1) *life-cycle theory*, a progression of pre-defined stages (e.g., Chaharbaghi, Adcroft & Willis 2005; Hanks et al. 1993; Jawahar & McLaughlin 2001; Lewin 1947; Quinn & Cameron 1983);

2) *teleological theory*, change as a means to a pre-designed end (e.g., Bess 2015; Buckle 2003; Williams, Williams & Morgan 2013);

3) *dialectical theory* (e.g., Bartunek 2006; Benn & Baker 2009; Engeström & Sannino 2011), also referred to as *critical theory* (e.g., Carr 2000; Ogbor 2001; Rusaw 2000), the contest of thesis and anti-thesis in organisations, and


Many organisational change researchers combined aspects of these differing theoretical perspectives in order to explain change related phenomena (Van De Ven & Poole 1995). This literature is discussed in greater detail throughout this chapter.

Organisational change has also been studied at many different levels, referred to here as unit-levels. These include the organisation, work groups within the organisation, and individuals within and across units. Early research found change to occur from unit to unit, starting at the individual level, rather than from a unit to the whole entity (Keidel 1981).

This differentiation was important to note because of the different perspectives of units. For instance, each unit type is likely to have different motivations based on competitive
processes, conflict or other forms of interaction, as part of a hierarchical system (Van De Ven & Poole 1995) and also different experiences with historical change processes and adaptation. This insight was supported by empirical research from a range of academics, including Hannan, Pólos and Carroll (2003), who investigated organisational architecture and the change effect on the business units, and Aspara et al. (2011) who investigated business unit levels based on their historical development and how this affected change.

Notable throughout the development of organisational change research was the emergence of individuals as a key factor in the determination of success or failure of such change initiatives (e.g., Bartunek, Lacey & Wood 1992). Individuals are the smallest unit-level recipient of change (Armenakis, Harris & Mossholder 1993). Research on individuals’ reactions to change is discussed in more detail in sections 2.4 and 2.5.

The intention of the current research was to investigate how these individuals’ perceptions of values-congruence with their organisation, affected their beliefs about organisational change. Two types of congruence, or fit, were often identified in organisational literature: supplementary fit (characteristics that are similar to others’) and complementary fit (characteristics that ‘make whole’ an environment) (Bretz & Judge 1994; Muchinsky & Monahan 1987). Values-congruence is part of supplementary fit, as it is defined as the match of values between an employee and either his/her organisation, co-workers, or both (Amos & Weathington 2008). A summary of widely recognised research papers on person-organisation fit and values-congruence in organisations is presented in Appendix A.

Values-congruence research in organisations developed from earlier research, firstly into similarity-attraction hypotheses (e.g., Byrne, Griffitt & Stafaniak 1967) and
subsequently, from the extensive research into person-environment (P-E) fit and in particular person-organisation (P-O) fit (e.g., Chatman 1989; Kristof 1996; Kristof-Brown, Zimmerman & Johnson 2005). Many of the existing meta-analysis on the subject show that perceptions of fit differ for various work entities i.e. work-group, supervisor, and organisation, (e.g., Kristof-Brown, et al, 2005) and this differentiation was also adopted for the current research). The P-O fit category has potential for understanding how employees respond to imposed change. In contrast, complementary fit, which is described as the ability to fill the current needs of an organisation (Muchinsky & Monahan 1987), is less likely to impact employee reactions to imposed change.

In general, the fit theories listed many different person characteristics as being potentially important to organisations, including personality, values, goals, and attitudes (Kristof 1996). The most commonly studied focus of employee-organisation fit is that of values-congruence (Kristof-Brown et al 2005). As Chatman (1989, p. 339) noted: “In order to determine the effects that organizational membership will have on an organization’s norms and values, we must first assess the extent of agreement between the person’s values and the organization’s values.” Consequently, it was argued that values-congruence was an important factor in influencing organisational outcomes that were the result of such values-similarities (Posner 1992). Employee values and perceived values-congruence are discussed in section 2.7.

Values-congruence is one of many potential antecedents to affect change within organisations. Other antecedents at the individual level include a variety of employee characteristics and organisation specific conditions (e.g.,Cunningham et al. 2002; Kiefer 2005; Miller, Johnson & Grau 1994), which are discussed in section 2.5. The intention of the current research was to investigate the effects perceived values-congruence has
on antecedents to change and subsequent change related beliefs (Armenakis et al. 2007). It is acknowledged that other research has focused on the organisational and environmental antecedents to the change processes (e.g., Haveman 1992; Meyer, Brooks & Goes 1990; Ralston et al. 2011; Rousseau 1997), but these antecedents are not central to this thesis.

Organisational change research can be broadly separated into two main bodies of knowledge: firstly, those of investigations into the antecedents to change, that is what factors are preceding the change effort and secondly, the research into the resulting reactions to the change implementation (Bouckenooghe 2010; Fugate & Kinicki 2008; Oreg, Vakola & Armenakis 2011; Self, Armenakis & Schraeder 2007). Reactions to change have been widely studied and are regarded as the main determinant of the outcomes of organisational change implementation (Bovey & Hede 2001; Carnall 1986; Graetz & Smith 2010; Kotter 1995; Lines 2005; Pascale, Millemann & Gioja 1997; Piderit 2000).

These reactions include a myriad of concepts, such as readiness for change (e.g., Rafferty, Jimmieson & Armenakis 2013), openness to change (e.g., Axtell et al. 2002), acceptance of change (e.g., Brunton & Matheny 2009), commitment to change (e.g., Neves & Caetano 2009), cynicism about the change (e.g., Qian & Daniels 2008), or resistance to change (e.g., Johansson et al. 2014). These were often described as employees’ attitudes to organisational change (Bouckenooghe 2010).

Most commonly, prior researchers singled out one specific reaction to change and attempted to identify antecedents that would explain this reaction (Armenakis, Harris & Mossholder 1993; Herscovitch & Meyer 2002; Iverson 1996; Oreg 2006; Turner Parish, Cadwallader & Busch 2008; Reichers, Wanous & Austin 1997; Saksvik & Hetland
2009; Thomas & Hardy 2011; Vakola & Nikolaou 2005; Weeks et al. 2004). Important findings from previous research on reactions to change will be described in section 2.5.

2.3 AN OVERVIEW OF THE ORGANISATIONAL CHANGE LITERATURE

Organisational change has been defined as a holistic concept, affecting all facets of an organisation, including the individuals within (Herold, Fedor & Caldwell 2007, p. 727). These authors (2007) described organisational change as: “the alteration of existing work routines and strategies that affect a whole organisation.” The recognition of the far-reaching consequences of organisational change implementations led to the justification for a large number of in-depth analyses of such implementations.

While organisations continue to try to remain as efficient and effective as they can, change is inevitable for an organisation to remain competitive (e.g., D'Aunno, Succi & Alexander 2000; Foster 2010; Kotter & Schlesinger 1979; Weick & Quinn 1999; Whelan-Berry & Gordon 2000). Organisational change is a phenomenon faced by all individuals and organisations at some point in time (Foster 2010). This raises the question of how to achieve a successful transformation. Investigators have found that 70% of all change efforts failed (Beer & Nohria 2000; Cartwright & Schoenberg 2006; Washington & Hacker 2005), and Kotter (1995) argued that failed change efforts can cost companies immense amounts of time, money and additional resources.

A large body of research has attempted to explain the factors affecting the success or failure of organisational change (e.g., Goodstein & Burke 1991). It was widely accepted by researchers that the sheer complexity of the change process often contributed to change efforts failing (e.g., Pettigrew, Woodman & Cameron 2001). It was further acknowledged that organisational change potentially affected all unit-levels of the organisation, as well as the processes inherent to the business (Poole et al. 2000).
2.3.1 **DIFFERING APPROACHES TO CHANGE**

Early research examined organisational change and its antecedents predominantly at a strategic level (e.g., Angle & Perry 1981; Beckhard 1975; Greiner 1967; Margulies, Wright & Schooll 1977). However, many researchers later recognised and acknowledged that at the organisational unit-level, individuals’ predispositions were a major influence on the success or failure of organisational change implementations (e.g., Argyris 1993; Armenakis, Bedeian & Pond Iii 1983; Armenakis, Harris & Mossholder 1993; Judge et al. 1999; Kanter 1985; Kotter & Schlesinger 1979; Kristof-Brown, Zimmerman & Johnson 2005; Lamm, Gordon & Purser 2010; Lawler Iii 1977; Madsen, Miller & John 2005; John P. Meyer & Natalie J. Allen 1991; Miller, Johnson & Grau 1994; Oreg 2006; Reichers, Wanous & Austin 1997; Stumpf & Hartman 1984; Wanous, Reichers & Austin 2004). As such, much of the recent research has focused on employees’ attitudes, including their beliefs in the necessity and benefits of the change, resulting in either acceptance and commitment, or resistance to change within an organisation. These employee beliefs were the focus of this report.

**Complimentary and competing perspectives of change**

The recognition that organisational change could be analysed from a wide variety of perspectives has led to the development of a range of differing views about employees’ reactions to change. Table 2-1 contains the dominant perspectives developed throughout the literature. Arguably, all these viewpoints were a variation, or combination of the previously described organisational change theories (i.e., life-cycle, teleological, dialectical, and evolutionary), identified by Van De Ven and Poole (1995).
Table 2-1: Complementary and Competing Perspectives of Organisational Change

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Advocates</th>
<th>Content</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional</strong></td>
<td>DiMaggio &amp; Powell (1983)</td>
<td>Change occurs because of a shifting of the industrial landscape.</td>
<td>External</td>
</tr>
<tr>
<td><strong>Resource</strong></td>
<td>Connor (2002)</td>
<td>Change to be better equipped for the utilisation of scarce resources.</td>
<td>External</td>
</tr>
<tr>
<td><strong>Contingency</strong></td>
<td>Drazin &amp; Van De Ven (1985)</td>
<td>Change occurs in reaction to efficiency demands by a competitive market.</td>
<td>Internal or external</td>
</tr>
<tr>
<td><strong>Psychological - Organisational development</strong></td>
<td>Burke (1997)</td>
<td>Action research – problems are identified and employees’ uncertainties about change are anticipated.</td>
<td>Internal or external</td>
</tr>
<tr>
<td><strong>Psychological - Change transition</strong></td>
<td>Scott and Jaffe (1988)</td>
<td>Change is a stepwise transition of the individuals towards new ways of working.</td>
<td>Internal</td>
</tr>
<tr>
<td><strong>Political</strong></td>
<td>Morrill, Zald &amp; Rao (2003)</td>
<td>Change is the result of a clash between ideology or belief systems.</td>
<td>Internal</td>
</tr>
<tr>
<td><strong>Cultural</strong></td>
<td>Schein (1996)</td>
<td>Change is a natural progression. A firm belief about how things should be done leads to clashes with existing values and beliefs of organisational members.</td>
<td>Mostly internal</td>
</tr>
<tr>
<td>Perspectives</td>
<td>Advocates</td>
<td>Content</td>
<td>Focus</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><em>Systems</em></td>
<td>Dooley (1997)</td>
<td>Change affects all levels and sub-units within an organisation and is viewed at a holistic, system level. Change is initiated by best practice and continuous improvement.</td>
<td>Internal</td>
</tr>
<tr>
<td><em>Postmodern</em></td>
<td>Alvesson and Karreman (2000)</td>
<td>Change happens due to a change in the perception of reality. Reality is a social construction and not individually perceived.</td>
<td>Internal or external</td>
</tr>
</tbody>
</table>

The perspectives in Table 2-1 can be grouped into two competing points of view for the approach towards organisational change: strategising at the leadership level (e.g., institutional and resource) or organising at the employee level (psychological and system) (Graetz & Smith 2010). These differing views are explained next.

**Strategy-level change**

At the top part of Table 2-1 are perspectives that focus on the organisation as the main object (i.e., institutional, resource, contingency, and psychological-organisational perspectives). One view of organisational change was how change affected the organisation as an entity (e.g., Barnett & Carroll 1995; Cartwright & Schoenberg 2006; Greiner 1967; Porras & Silvers 1991). Most approaches to organisational change at this level focus on rational choices (Child 1972), such as combining an analysis of the organisational strategies with subsequent managerial decision-making for change (e.g., Kelly & Amburgey 1991; Meyer, Brooks & Goes 1990).

Interestingly, many of these organisational level approaches attributed success or failure of change to the organisations’ leaders’ ability to develop a vision with which they
could convince the employees of the need for change (Graetz & Smith 2010). In many cases, change success was proposed to depend solely on following a certain set of rules or steps which, if followed rigorously, would bring about the successful turnaround of the entity (e.g., Kotter 1995).

Giving managers a sense of control over their change destiny made these approaches widely popular with business leaders (Higgs & Rowland 2005). However, these organisation- or leadership-level theories often ignored the individual level complexity, diversity, and uncertainty within the organisational unit. Employees might not respond as predicted in a leader-centric approach that was based on rational, linear thought rather than intuitive, case-by-case tactics that might have to be applied (Graetz & Smith 2010). This insight led to the development of employee-centric approaches to change.

**Employee level change**

In stark contrast to strategy directed approaches to change were the employee-level change-approaches. These approaches based change implementations and subsequent success or failure on employees and their predispositions during times of change (e.g., Armenakis, Harris & Mossholder 1993; Caldwell, Herold & Fedor 2004; Kanter 1985; Oreg et al. 2008; Stanley, Meyer & Topolnytsky 2005). These approaches were seen as an attempt to organise the individuals within organisations in such a manner that positive attitudes towards change would be formed, overcoming the natural resistance phase that all employees initially experience (Oreg 2003). These behavioural-research based approaches investigated a range of potential influencing factors on employees’ reactions to change, including values and values-congruence (as discussed in section 2.7).
An important insight from reviewing the multitude of competing explanations for organisational change outcomes is that no one single approach can address all possible implications of such a complex process (Graetz & Smith 2010; Higgs & Rowland 2005). Researchers argued that different approaches, such as those that focus on both the organisational and individual units, are necessary to understand the complex change process (Lewin & Volberda 1999).

2.4 THE INDIVIDUAL PERSPECTIVE OF CHANGE

Organisational change was found to have a strong psychological impact on employees (Avey, Wernsing & Luthans 2008; Bellou 2007; Chaudhry, Coyle-Shapiro & Wayne 2011; Choi 2007; Freese, Schalk & Croon 2011; Van der Smissen, Schalk & Freese 2013). Organisational change investigators, who focused on the individual as the central unit within the change process, commonly investigated change from two perspectives:

- Psychological (Amos & Weathington 2008; Axtell et al. 2002; Barry & Stewart 1997; Bordia et al. 2004a; Cable & Edwards 2004; Cunningham et al. 2002; Fedor, Caldwell & Herold 2006; Fugate, Kinicki & Prussia 2008; Morgeson et al. 2006; MeGlino, Ravlin & Adkins 1989; Rafferty & Griffin 2006; Seppälä et al. 2012; Vakola, Tsausis & Nikolaou 2004; Weick & Quinn 1999) or


The importance of the individual within organisations can be summed up with a statement made by Iacovini (1993, p. 65), who proposed that “managing the business
side of change is easy compared with managing the people side. But if companies ignore employees' needs, the business side will suffer the consequences.”

A Historical Perspective on psychological aspects of the change process

Kurt Lewin (1947), widely accepted as one of the pioneers of organisational change related research, developed the unfreeze (old mindset) – change (transition) – refreeze (new mindset) model of change. To date, this is still one of the most often used models of the organisational change process (e.g., Bridges 1986; Kotter 1995; Walker, Armenakis & Bernerth 2007; Weiner 2009; Weick & Quinn 1999). However, other researchers have built upon this work to view the change process as a transition of different psychological phases during a transformational process (Bridges 1986; Scott & Jaffe 1988). Bridges (1986) converted Lewin’s (1947) original change model of unfreeze-change-refreeze into a psychological construct, re-defining the three stages as a transitional process (Figure 2-2). These transitional stages are introduced next:

1. **Ending, losing, letting go:**

Bridges (1986) proposed that the first, essential step for change was to let go of the old identity. Change could only happen if the employee accepted that their ways of working were about to change and the current methods and processes were no longer valid. This period was proposed to be the phase where most resistance occurred.

2. **The neutral zone**

The neutral zone was suggested to be the time between the old and the new, a time of uncertainty, confusion, and frustrations (Bridges 1986). During this time, employees were challenged to adopt new technologies or philosophies and enter a stage of experimentations, failures, and successes.
3. The new beginning

This final stage was hypothesised to be the period when employees began to be comfortable with their changed environments. They learned their new purposes and began to think “in accordance with new purposes and priorities” (Bridges 1986, p. 26). Bridge’s (1986) model (Figure 2-1) lent support to theories that suggested change was not a distinct step by step process, but rather a process of shifting through phases of change.

![Figure 2-1: The Transitional Model of Change](image)

*Source: Managing organisational transitions (Bridges 1986)*

This model incorporated individual differences in terms of the time spent within each phase and the potential that some employees may remain in one phase indefinitely. What the model failed to deliver was an explanation for these differing time-spans of transition, and why change affected the individuals differently in their progression, why some employees remained resistant while others committed to change.
The search for such an explanation led to the development of another widely known model of transition, developed by Scott and Jaffe (1988). These authors developed a progressive model of the psychological stages of change (Figure 2-2), derived from the research by Kübler-Ross and Leippe (1971) into the stages transcended by individuals during times of death or dying.

Scott and Jaffe (1988) proposed that employees who were involved in organisational change traversed comparable stages of emotions. This had particular importance for the realisation that resistance and commitment to change were two separate stages of psychological transition during organisational change. This point of view was supported by findings from Piderit (2000) whose research found support for a multidimensionality of attitudes in individuals’ responses to change.

*The change grid*

Employees who were subjected to organisational change were proposed to progress through four distinctive stages of transition: denial, resistance, exploration, and lastly, commitment to change (Scott & Jaffe 1988).
The four emotion-based stages of change transition

The four stage model (Figure 2-2) shows a proposed, directional flow of organisational and personal reactions to change along an axis grid. The vertical axis related to the environment (external or internal) of the change recipient, and the horizontal axis reflected the attention of employees either being focused on the past (the things that were) or the future (the things that might be) (Scott & Jaffe 1988).

According to Scott and Jaffe (1988), all employees, groups, organisations, and even societies go through the same stages during a change process (Figure 2-3). However, the intensity and duration of each stage varied between individuals to such an extent that some employees could be seen to ‘skip’ phases, whereas others might remain in the denial or resistance phase indefinitely (Scott & Jaffe 1988). These separate stages of
change-transition were in order of succession: denial, resistance, exploration, and commitment (Figure 2-3). These distinct stages are briefly described next.

**Denial**

At the beginning of the change process, employees may not yet fully accept or understand the meaning and consequences of the change (Tucker, Yeow & Viki 2013; Van Dam, Oreg & Schyns 2008). It was proposed that in this stage employees continued on ‘as normal’, denying the consequences of the imposed change (Scott & Jaffe 1988). In their model, this stage was closely linked, and directly followed by a stage of resistance to change.

**Resistance**

Scott and Jaffe (1988) proposed that in the resistance phase the employee experienced negative feelings, such as fear, uncertainty, anxiety and self-doubt, or frustration. The authors (1988) advocated that at this stage those employees who focused on the personal impact of the change, often experienced insecurity about their ability to cope with the new demands, which then often led to resisting the change.

**Exploration**

Finding ways to overcome resistance to change has been one of the priorities of organisational change research (e.g., Armenakis, Harris & Mossholder 1993; Battilana & Casciaro 2013; Kotter 1995; Kotter & Schlesinger 1979). The exploration stage was proposed to be a state where employees let go of the past and invoked creative and imaginative thinking to picture themselves in the new organisation (Scott & Jaffe 1988). Other academics have described the exploration stage as that point where the employee has developed beliefs in the beneficial results of the implemented change (Whelan-Berry & Somerville 2010).
Commitment

The commitment phase was reflected by employees’ beliefs in their own ability to adapt to the new environments and demands, and subsequently committed to the new ways of performing through the acceptance of new roles and expectations (Scott & Jaffe 1988). Commitment to change is widely accepted by academics and practitioners as the essential psychological state required to bring about successful organisational change (e.g., Herscovitch & Meyer 2002; Turner Parish, Cadwallader & Busch 2008).

Other academics also investigated the role of emotions during organisational change. These works included research on appraisals of change and emotions (Ellsworth & Scherer 2003; Walinga 2008), culture and emotions (Danışman 2010; Herkenhoff 2004), emotional commitment of middle managers and their attendance to employees’ emotions (Huy 2002), emotional reactions to change and their relation to cognition and behaviour (Lines 2005), emotional labour during times of change (Bryant & Wolfram Cox 2006), and the role of emotional intelligence affecting resistance to change (Nesterkin 2013).

Importantly, researchers found core values to have been important determinants for an individual’s emotional reactions to proposed change (Bartunek et al. 2006; Brosch & Sander 2014; Firoozmand 2013; Fugate, Harrison & Kinicki 2011; Lazarus 1991; Nelissen, Dijker & de Vries 2007). It has been proposed that individuals form their values around a desired state of existence (Rohan 2000; Rokeach 1973; Schwartz 1992) and the uncertainty about possible threats to this desired end state could bring about emotional reactions by the employees (O’Neill & Lenn 1995). This uncertainty and the resulting beliefs, attitudes, and reactions could be amplified by a vast number of pre-change and change antecedents, which will be discussed next.
2.5 ANTECEDENTS AND REACTIONS TO ORGANISATIONAL CHANGE

Individual differences are an important factor affecting employees’ attitudes and beliefs during times of organisational change (Agócs 1997; Fugate, Harrison & Kinicki 2011; Klarner, By & Diefenbach 2011; Mossholder et al. 2000; Ramos, Berry & Carvalho 2005; Vince & Broussine 1996). In continuance with the psychological approach for explaining employees’ beliefs and attitudes towards organisational change, this section begins with an exploration of past research into the human factors that were proposed to affect organisational change outcomes. Following on from there, a widely accepted model of antecedents, reactions, and consequences of change (Oreg, Vakola & Armenakis 2011) is introduced. The section then classifies existing literature into explicit reactions to change and their separation by researchers into affective, cognitive, and behavioural categories (Section 2.5.1). Then, pre-change and change antecedents are introduced (Section 2.5.2), followed by an analysis of pre-change antecedents (Section 2.5.3), and change antecedents (Section 2.5.4). This section concludes with a summary of the discussed reaction and antecedents to organisational change (Section 2.5.5).

Much of the early research into the antecedents and consequences of employee acceptance of change focused on understanding the relationships between small subsets of different variables. This led to a number of increasingly complex models to explain the impact of antecedents on successful change implementations (e.g., Kavanagh & Ashkanasy 2006; Walker, Armenakis & Berenger 2007; Weeks et al. 2004). One such model is that of Oreg, Vakola and Armenakis (2011), depicted in Figure 2-3, which included a comprehensive set of factors in a framework that attempted to make sense of the large number of change processes and their potential antecedents.
While this model is useful as a guide to organise this section of the literature review, it should be noted that the focus of this paper is on the left-hand side of the model, which includes the explicit reactions of employees and the antecedents to these reactions. In the next section, this large literature is organised and discussed, beginning with explicit reactions and moving to antecedents.

2.5.1 **Explicit Reactions to Organisational Change**

The central variable in Oreg et al.’s (2011) model (Figure 2-3) focused on three explicit reactions, in line with Piderit’s (2000) three-way definition of resistance to change: affective, cognitive, or behavioural. This model was used to guide the review of the literature about explicit reactions and their antecedents. Each of these explicit reactions...
are described and the literature reviewed to identify the different ways in which they have been measured (e.g., Cameron & Green 2012; Cooper & Markus 1995).

Affective Reactions to Change

Change was thought to cause a range of affective reactions in the recipients (Seo et al. 2012). Affective reactions were defined as the emotional responses of employees that were brought about by favourable or unfavourable evaluations, and strength of feelings initiated by the change (Armenakis & Bedeian 1999). Here the literature has predominantly focused on the negative affective reactions brought on by change. These included the increase in stress (e.g., Amiot et al. 2006; Begley & Czajka 1993; Cooper & Markus 1995), anxiety (e.g., Miller, Johnson & Grau 1994; Oreg 2006), and fatigue (e.g., Pierce & Dunham 1987) or display of negative emotions such anger or frustration (e.g., Kiefer 2005). However, some studies examined positive emotional outcomes of organisational transformations, for example change-related satisfaction (e.g., Jones, Jimmieson & Griffiths 2005), the affective sides of change commitment (e.g., Walker, Armenakis & Bernerth 2007), or pleasant feelings created by the change (e.g., Bartunek et al. 2006).

Cognitive Reactions to Change

Cognitive reactions to change were defined as an employees’ evaluation of the consequences of the proposed change for themselves, their organisation, or both (Oreg, Vakola & Armenakis 2011). Studies that investigated cognitive reactions to change primarily focused on the extent to which participants had a positive view of the change (e.g., Cameron & Green 2012; Wanberg & Banas 2000), employees’ perception of how much sense the change made (Bartunek et al. 2006) and employee openness to change (Axtell et al. 2002). Studies of cognitive reactions to change also examined perceived
fairness (Daly & Geyer 1994), and commitment to change (e.g., Walker, Armenakis & Bernerth 2007).

Cognitive reactions, such as change-readiness and committing to support changes in organisations, were largely viewed as the most important factor to achieve a successful outcome of planned change (Armenakis, Harris & Mossholder 1993; Miller, Johnson & Grau 1994). Individuals’ commitment to change was deemed empirically and conceptually different from organisational commitment and was found to be a more reliable predictor for the support of change (Fedor, Caldwell & Herold 2006; Meyer et al. 2002).

Far less research has focused on the negative views of change, such as perceived risk of failure (Busby & Zhang 2008), perceived uncertainty (Fugate, Prussia & Kinicki 2012), and feelings of threat (Herold, Fedor & Caldwell 2007), or loss of control (Kanter 1985). In many of those studies it was found that recipients’ involvement mitigated the negative effects of the change process and often resulted in more positive cognitive, as well as behavioural, reactions to change.

**Behavioural Reactions to Change**

Behavioural reactions to change were defined as those adjustments and adaptations of employees that are required to make an organisational change successful (Schabracq & Cooper 1998). A number of academics measured the extent to which employees became involved in change related activities (Coyle-Shapiro & Morrow 2003; Jones, Jimmieson & Griffiths 2005), or contrary behaviour, such as employees’ intentions to resign as a result of the change (e.g., Daly & Geyer 1994). However, the majority of behavioural reactions studies focused on employees’ intentions to support or resist change (Bovey & Hede 2001; Jimmieson, Peach & White 2008; Sagie & Koslowsky 1994; Stanley, Meyer & Topolnytsky 2005). Other researchers classified an employee’s ability to cope
with the change process as a behavioural outcome (e.g., Amiot et al. 2006; Judge et al. 1999), measuring their stress coping strategies or employees championing behaviour (Cunningham 2006). Arguably, some of these behaviours could have also been classified as affective or cognitive reactions to change.

It is important to note that other scholars have proposed alternative categorisations of explicit reactions to change, based on the reaction being either positive (commitment) and/or negative (resistance) For example, Piderit (2000) proposed a three level model of resistance: 1) emotional resistance (affective), 2) intentional resistance (behavioural), and 3) cognitive resistance. Similarly, (Allen & Meyer 1990) proposed a three level model of commitment to change: 1) affective commitment (the want to commit), 2) normative commitment (the need to commit), and 3) continuance commitment (employees feel they ought to commit). The consensus amongst academics is that both commitment and resistance to change are multifaceted and intrinsically connected (Coetsee 1999).

A large body of literature has focused on explaining differences in employee reactions to change (Botezat 2012; Chen & Wang 2011; Coetsee 1999; Conway & Monks 2008; Cunningham 2006; Devos, Buelens & Bouckenooghe 2007; Erwin & Garman 2010; Fedor, Caldwell & Herold 2006; Herold et al. 2008; Kumar 2012; Lau & Woodman 1995; Michel, By & Burnes 2013; Neubert & Cady 2001; Neves & Caetano 2009; Oreg 2003; 2006; Oreg & Berson 2009; Oreg et al. 2008; Saksvik & Hetland 2009; Thomas & Hardy 2011; Turner Parish, Cadwallader & Busch 2008). These studies identified a wide range of antecedents to change reactions that are discussed in the next section, following Oreg et al.’s (2011) model (Figure 2-3).
Oreg, Vakola and Armenakis (2011) defined antecedents to change as: “reasons for the reaction rather than the reaction itself” (Oreg, Vakola & Armenakis 2011, p. 479). The authors argued that such antecedents were directly related to the explicit reactions of employees to change. The authors’ 2011 model (see Figure 2-3) identified two separate groups of pre-change antecedents, being made up of 1) change recipients’ characteristics and 2) the internal context. Additionally, three change antecedents were also identified, consisting of 1) the change process, 2) perceived benefit/harm for the change recipients, and 3) the change content. In this section, the literature on the pre-change and change antecedents are reviewed, as the relations between these two sets of change antecedents are the focus of this study.

2.5.3 PRE-CHANGE ANTECEDENTS

Many researchers found individuals’ characteristics had an influence on how they reacted to imposed changes (e.g., Bouckenooghe & Devos 2008; Fugate, Kinicki & Prussia 2008; Oreg & Sverdlik 2011; Rafferty, Jimmieson & Armenakis 2013; Seppälä et al. 2012; Vakola, Tsausis & Nikolaou 2004). According to Oreg et al. (2011), these characteristics, include individual traits, employees’ coping mechanisms, employees’ desire for motivational needs fulfilment, and to a lesser degree, socio-demographic characteristics.

A large number of individual characteristics have been identified in the literature as pre-change antecedents. Those that have been most commonly related to change recipient reactions, include employees’ internal locus of control (e.g., Lau & Woodman 1995), self-efficacy (e.g., Cunningham et al. 2002) or perceived ability (e.g., Smollan 2013), coping styles (e.g., Ashford 1988), sense of control (e.g., Bordia et al. 2004b),
dispositional affective states (e.g., Oreg 2006), dispositional assessments toward change (e.g., Judge et al. 1999), motivational needs (e.g., Caldwell, Herold & Fedor 2004), commitment (e.g., Madsen, Miller & John 2005), and socio-demographic variables (e.g., Whelan-Berry 2013) among a large number of other factors investigated. Each of these antecedents and their established relations to the change process outcomes are briefly reviewed here, as they are precursors to the focal change related beliefs in the current study (see Section 2.6).

**Internal locus of control.** Researchers found a range of perceived ability variables (i.e., internal locus of control and self-efficacy) to be positively related to explicit employee reactions to change. Internal locus of control was defined as the employee’s faith in his or her own, perceived abilities and control over a given situation; their belief of being in control of their own destiny (Rotter 1966). It was found to have a strong positive correlation with the positive uptake of change (e.g., Fried et al. 1996; Lau & Woodman 1995; Näswall, Sverke & Hellgren 2005).

**Self-efficacy.** Employees’ self-efficacy was defined as a person’s confidence in his own abilities to be able to master a given situation (Wood & Bandura 1989). More specifically, change related self-efficacy was found to be predictive of increased acceptance levels during change (Herold, Fedor & Caldwell 2007; Wanberg & Banas 2000), participation in organisational change related tasks (Cunningham et al. (2002), and commitment of employees to the new ways of working (Herold, Fedor and Caldwell (2007). Other researchers found change-related self-efficacy to have been positively related to the use of issue-coping strategies and adjustment abilities of the change recipients (e.g., Amiot et al. 2006; Ashford 1988; Judge et al. 1999). However, other researchers have found that self-efficacy alone was not enough. Potosky (2010)
found that self-efficacy needed to be combined with supervisor support and an appropriate organisational change design to positively impact change outcomes.

**A sense of control.** A number of researchers found a positive relationship between a person’s sense of control and favourable attitudes towards organisational change (Bordia et al. 2004a; D'Annunzio-Green & Francis 2005; Hockly & Caan 2012; Mantere, John & Hämäläinen 2007; Speer 2000). For example, a moderate positive correlation was found between an increased belief of control and improved acceptance and positive behaviour during change (Wanberg & Banas 2000). Other investigations found a sense of control to enhance the psychological well-being of staff members. In essence, these staff members had higher levels of expectancy of positive personal consequences from the change (Bordia et al. 2004b).

**Coping styles.** Employees’ coping styles as an antecedent to change were also subjects of academic research (Ben-Ari & Hirshberg 2009). These authors found in their 2009 study a strong, statistically significant relationship between participants’ coping styles, their style of attachment to the organisation and conflict perceptions, also during times of change. Cunningham et al. (2002) reported a greater readiness for change, and greater overall contribution to the change effort amongst employees with a problem focused coping style. Whereas Jurie (2000) found employees’ coping styles during times of capacity building to have been directly related to employee needs fulfilment.

**Dispositional affective states.** Dispositional affective states are defined as those future oriented emotions that have the potential to affect employees’ reactions to change. Baumgartner, Pieters and Bagozzi (2008) explained such emotions as either anticipatory, i.e., the current feelings towards a future event (e.g., hope or fear) or an anticipation of emotions that will be experienced due to the future event (e.g., joy or regret). Such emotions were the focus of a number of organisational change
investigations that assessed the impact of employees’ negative or positive dispositional affective states towards organisational change (e.g., Fugate, Prussia & Kinicki 2012; Oreg & Sverdlik 2011; Vakola, Tsaisis & Nikolaou 2004). These investigations found support for the existence of a strong relationship between positive disposition toward change and employees’ ability to cope with the change (Judge et al. 1999), as well as their acceptance of change (Iverson 1996), whereas a negative disposition was significantly related to job linked mental health issues and low levels of job satisfaction (Näswall, Sverke & Hellgren 2005).

**Dispositional assessments toward change.** Employees’ disposition towards change has been described as an individual’s mental map that served to understand varying change attributes, as well as the interconnectedness of change events (Lau & Woodman 1995). These predispositions were proposed to have a significant influence on the employee’s reactions to the change (e.g., Judge et al. 1999). Judge et al. (1999) developed a scale that included seven personality traits that were combined into two distinct factors: the positive self-concept (e.g. locus of control, self-esteem, positive affectivity) and the individual’s risk tolerance factor (e.g. openness to experience, risk aversion).

Following on from this research, Oreg (2003) found four behavioural and emotional antecedents for resistance to change: routine seeking, cognitive rigidity, short term focus, and the emotional reaction to the imposed change. Oreg (2003) then developed a resistance to change scale, which served to measure an employee’s dispositional inclination to resist change. The employees’ dispositional assessment of the need for change and the resulting benefits of the change were later integrated in an organisational change recipients’ belief scale by Armenakis et al. (2007). This scale in particular will be discussed in greater detail in section 2.6.
Motivational needs fulfilment. Motivational needs were examined when researching employees’ reactions to change (Caldwell, Herold & Fedor 2004). These authors (2004) found learning-oriented individuals, who had the need for mastery of their situation, reacted more favourable towards change. This was particularly the case where such transformations allowed for better fit between the employee and his or her role in the organisation. A study by Coyle-Shapiro and Morrow (2003) found that employees with strong higher-order needs, for example achievement, were notably more in favour of a new total quality management system, whereas Miller, Johnson and Grau (1994) found significant relationships between these higher-order needs and favourable affective behaviour of employees in their roles. Motivational needs had previously been proposed to be a direct result of a person’s values priorities (Rokeach 1973). However, this proposition was not considered in these investigations.

Commitment. Meyer and Allen’s (1991) seminal study proposed that organisational commitment should be seen as a three-component construct, consisting of affective (emotional) commitment (i.e. employees stay at their jobs because they want to stay), continuance commitment (i.e. employees stay because they must stay), or normative commitment (i.e. employees stay because they feel that they should). A significant number of studies showed that employees with high organisational commitment of any of these types were considerably more receptive and open to organisational change than employees with low levels of any of these organisational commitment types (e.g., Madsen, Miller & John 2005; Iverson 1996).

While commitment to the organisation was argued to have the strongest influence on commitment to change (Herscovitch & Meyer 2002), other forms of commitment have been identified and their influences have been measured. These commitment types included commitment to sub-units or teams (Becker, Ullrich & van Dick 2013),
commitment to specialised activities (Ford et al. 1998; Potosky 2010) or commitment to employee relations (Vakola & Nikolaou 2005). Whilst some examinations found that personal expectations such as the utilisation of abilities, should result in more positive work attitudes (Hackman & Oldham 1976; Hulin & Blood 1968), mixed results were reported when person-environment-fit hypotheses (Kristof-Brown, Zimmerman & Johnson 2005) in relation to organisational commitment were investigated (Meglino, Ravlin & Adkins 1989; Stumpf & Hartman 1984; Cook & Wall 1980).

Socio-demographic variables. Socio-demographic variables and their potential role as antecedents to change were subject of a number of investigations and meta-analyses (e.g., Chapman et al. 2005; Meyer et al. 2002; Oreg, Vakola & Armenakis 2011; Whelan-Berry 2013). These variables had been found to have little or no impact on the investigated constructs, in particular that of perceived values-congruence (e.g., Amos & Weathington 2008). As such socio-demographics were only included in the current research as control variables. However, considering their inclusion in a large number of investigations, it was decided here to briefly report on the most commonly researched socio-demographics.

Employee age. Employees’ age had only a weak relationship with levels of general commitment (Angle & Perry 1981; Morrow & McElroy 1987; Pierce & Dunham 1987), attraction criteria to an organisation (Chapman et al. 2005), commitment to the organisation (Meyer et al. 2002), and organisational identification (Riketta 2005). Change related work values were analysed by Jin and Rounds (2012), who reported an age-related correlation between rank-order intrinsic and extrinsic work values. Intrinsic work values were most important to people between 18 – 22 years old, whereas extrinsic work values were more important for the older generations.
Tenure. Tenure was found to have had a moderate relationship with person-job fit (Kristof-Brown, Zimmerman & Johnson 2005). This result was supported by the findings of Oreg, Vakola and Armenakis (2011) as well as Iverson (1996), who proposed links between tenure, education levels, union membership and organisational change acceptance levels, even though these were also statistically non-significant.

Other antecedents that have been found to influence whether an employee will resist or support change include:

- A reluctance to lose control: Change may be resisted because employees feel that their control over situations has been removed from them (e.g., Bovey & Hede 2001).

- Cognitive rigidity: Some researchers investigated cognitive processes in relation to organizational change. Bartunek and Moch (1994) proposed that dogmatism can predict how an employee approaches change. Dogmatic people were said to be rigid and closed-minded and therefore would be less open to adapt to new challenges. Even though research by Lau and Woodman (1995) did not support this hypothesis, it seemed likely that such cognitive rigidity could affect resistance to change.

- A lack of a psychological resilience: Some authors suggested that change created stress, and depending on an individual’s psychological resilience to this stress, employees were more or less equipped to deal with changed situations (e.g., Ashforth & Lee 1990; Judge et al. 1999). Wanberg and Banas’ (2000) study confirmed that stress-resistant employees were indeed more willing to partake in organisational change. Kanter (1985) suggested that change might bring on a feeling of failure of the old ways and this in turn could lead to a loss of face. Such loss of face then required a resilient psyche to be able to cope with change.
• **Intolerance to the required adjustment period during times of change:** Research by Kanter (1985) put forward that some individuals resisted change due to the increased workload that came with the new ways of working. This author (1985) proposed that some employees were more willing than others to endure the extra work, whereas others resisted the change because they were unwilling to endure the required adjustment period.

• **Preference for low levels of stimuli or novelty:** It was proposed that people who did not value the stimulation of new methods and processes would be more susceptible to resist change (Frances 1995). Frances’ research found that individuals’ valuation of stimuli and novelty varied greatly. Similarly, a study by Kirton (1981) found differences in the tolerance for ambiguity affected readiness for change.

• **Reluctance to let go of old habits:** Research by several authors found that reluctance to give up ingrained habits was a major source for resistance to change (Bullock & Stewart 1984; Ford, Ford & D’Amelio 2008; Hon, Bloom & Crant 2014; Oreg 2003; Tichy 1983).

*Internal context antecedents*

Other pre-change antecedents involved the internal context of an organisation. Positive correlations with change acceptance were found for *organisational support* (Cunningham et al. 2002), *trust in the organisation* (Kiefer 2005), *work atmosphere* (Miller, Johnson & Grau 1994), *job characteristics* (Eby et al. 2000), *dispositional assessments* (Judge et al. 1999) and *values-congruence* (Branson 2008). Values-congruence in particular will be discussed in detail in section 2.7. A brief summary of other internal context antecedents follows next.
**Organisational support.** Employees who thought their organisations were unsupportive displayed higher levels of negative emotions, cynicism, and ultimately, were more likely to resist change (e.g., Kiefer 2005). Other researchers found workers who had a positive and supportive environment displayed significantly higher levels of willingness and receptiveness to changes (Coyle-Shapiro & Morrow 2003; Cunningham et al. 2002; Wanberg & Banas 2000).

**Trust in the organisation.** Zeffane and Connell (2003) found that trust was a direct positive result of mutual respect and shared goals during times of change. Further, Mishra and Spreitzer (1998) found that trust in the organisation was an important factor that influenced whether employees would exhibit withdrawal during change projects. In these authors’ 1998 research, trusting employees showed significantly fewer signs of withdrawal. A similar reaction was found in an investigation by Kiefer (2005) who had proposed that trust in the organisation was an emotionally based reaction. The author found that this reaction could manifest in resistance to change behaviours when trust was lacking, especially in organisations where common goals were not identifiable.

**Work atmosphere.** A positive work atmosphere was found to support and enhance readiness to change (Rafferty, Jimmieson & Armenakis 2013). Such positive atmosphere also increased openness, and improved adjustment attitudes to change (Miller, Johnson & Grau 1994; Walker, Armenakis & Bernerth 2007).

**Job characteristics.** Workplace job-characteristics that allowed for creativity and flexibility of skills applied on the job enhanced readiness for change (Eby et al. 2000). Similarly, Cunningham et al. (2002) reported increased levels of readiness, participation, and a feeling of making a significant contribution to change where job roles entailed high levels of decision making and psychological demand.
In sum, a large number of pre-change antecedents, together with dispositional assessments, were investigated throughout the literature, including employees’ characteristics and change environments. However, the integration of this literature was difficult, due to the lack of a common definition of terms and the interrelatedness of variables that were often examined in isolation. Notable throughout the current review, however, was the reoccurrence of psychological factors affecting pre-change antecedents, employee reactions, and the resulting beliefs and attitudes of employees toward organisational change. The next section reviews factors that were considered to be those pre-conditions to change that were organisation, rather than person related, titled change antecedents (Oreg, Vakola & Armenakis 2011).

2.5.4 CHANGE ANTECEDENTS

The most commonly investigated change antecedents include the change process variables of employee participation (Valleala et al. 2015), organisational communication (Tucker, Yeow & Viki 2013), change agent support (Caldwell, Herold & Fedor 2004) and management competence (Rafferty & Griffin 2006). Also examined in the literature are perceived benefits or harm resulting from the change (Vakola 2016) and the change content (Self, Armenakis & Schraeder 2007) itself. Change content, however, is outside the scope of this literature review. The selected change antecedents that are discussed here were chosen for their relevance for the formation of the change recipients’ beliefs, which are central to this thesis, will be discussed in section 2.6.

Employee participation. The most often researched change antecedent was the change implementation process itself (Oreg, Vakola & Armenakis 2011). Dominant throughout this research were investigations that analysed the importance of employee participation in the change process (e.g., Alas 2008; Bordia et al. 2004a; Devos, Buelens & Bouckenoooghe 2007; Nielsen & Randall 2012; Nurick 1982; O'Connor 1995; Sverke et
Armenakis and Bedeian (1999) found that participation gave employees a sense of ownership, part-control and contribution over the change implementation. Employees who participate in the change process have been found to have lower levels of stress than in non-participating employees; and to have resulted in significant increases in staff-support for the change (Coch & French 1948; Amiot et al. 2006; Coyle-Shapiro & Morrow 2003).

**Communication of change related information.** Supportive and effective change directed information and communication had a strong correlation with change readiness, acceptance and support (e.g., Axtell et al. 2002; Bernerth 2004; Wanberg & Banas 2000). Perceived quality of communication provided for lower levels of uncertainty and anxiety, which then often resulted in more trust in the leadership (e.g., Ashford 1988; Bordia et al. 2004a). However, Oreg (2006) found that too much information had the potential to result in increased resistance to change. This was explained by arguing that information that provided insights into the negative consequences of the change, i.e., the employees had something to lose from the change, would bring about increased resistance. Oreg (2006) argued that information content was as important as information adequacy. It should be noted that in the current study the quality of communication was viewed at the macro level only.

**Change agent support.** Noticeable support for employees by change agents was found to positively enhance these employees’ change-adaptation rates (Caldwell, Herold & Fedor 2004), readiness for change (Armenakis & Harris 2002; Cinite, Duxbury & Higgins 2009; Vakola 2013), and resulted in lower perceptions of potential negative effects of the change (Amiot et al. 2006; Eby et al. 2000). Oreg (2006) suggested that such principal support could significantly reduce affective and behavioural resistance to change.
Change leaders’ competence. Having competent managers significantly reduced employee stress levels during times of change (Amiot et al. 2006), caused fewer negative reactions, and reduced uncertainty levels among staff (Rafferty & Griffin 2006). Competence amongst managers was also found to positively overcome scepticism towards the change efforts (Stanley, Meyer & Topolnytsky 2005).

Perceptions of benefit or harm from the change. Employee anticipation of personal advantages from a change was found to positively influence organisational members’ attitudes towards change (Vakola 2014). Generally, if positive outcomes were expected then employees’ readiness for, and acceptance of change was increased considerably (e.g., Bartunek et al. 2006; Turner Parish, Cadwallader & Busch 2008; Nielsen, Randall & Albertsen 2007). In contrast, studies evaluating employees’ reactions and behaviours when negative consequences were expected found significant increases in stress and withdrawal amongst personnel (Axtell et al. 2002; Fried et al. 1996). Employees anticipating negative outcomes became less involved in the change processes and exhibited low levels of job satisfaction during times of change in comparison with staff who foresaw positive personal results (Hall, Rabinowitz & Morgan 1978).

A number of the pre-change and change antecedents discussed in the preceding sections formed the basis for the development of an organisational change recipients’ beliefs scale by Armenakis et al. (2007). These beliefs are introduced next.

2.6 Organisational Change Recipients’ Beliefs

Armenakis et al. (2007) proposed that many of the above listed pre-change and change antecedents provided the basis for change recipients’ beliefs in the necessity, appropriateness, own abilities, managerial support, and potential benefits of the change. These beliefs provided the basis for employees’ readiness for change. These authors
(2007) combined much of the pre-change and change antecedent literature findings to develop a model of five beliefs that they argued to be determining of employees’ cognitive, emotional, and intentional reactions to organisational change.

The research by Armenakis and colleagues (2007) followed the recommendations of Rogers (2003), who had proposed that it was the beliefs of the change recipients that had to be swayed in order to achieve a successful change implementation. The success or failure to create these beliefs was argued to result in varying levels of employee readiness for change, leading to either resistant or supportive behaviours of individuals affected by organisational change. These five, supposedly essential beliefs were proposed to be:

- **Discrepancy.** One of the most often agreed on requirement for successful change was the change recipients’ beliefs that the change was indeed necessary to occur (e.g., Bartunek et al. 2006; Coch & French 1948; Kotter 1995; Nadler & Tushman 1989; Rousseau & Tijoriwala 1999). Kotter (1995) described the necessity to create a sense of urgency for a change. In the Coch and French study (1948), the managers presented a cheaper and better competitor product to the staff in an effort to make them understand that change is inevitable in order to survive. Discrepancy related to an employee’s belief that an urgent need for change exists (Armenakis et al. 2007, p. 485). Discrepancy in this thesis is termed ‘need to change or ‘necessity to change’.

- **Appropriateness.** Appropriateness referred to the need for the employees to believe that the change will be effective, that is, that the right actions were chosen to adequately address the discrepancies that are faced (Rafferty & Griffin 2006). For example, in a study by Bartunek et al. (2006), shared governance was announced in a number of American hospitals, and as part of this, nurse
autonomy was introduced. Here, nurses with the best knowledge about patients’ needs were expected to influence care delivery strategies, a move that was accepted as appropriate by the staff. A study by Cole, Harris and Bernerth (2006) found that managers’ job satisfaction, turnover intentions, and role ambiguity could be predicted by perceived appropriateness, the clarity of the change vision, and implementation execution. As Armenakis et al. (2007) pointed out, a major risk with appropriateness had always been that some change agents sought a ‘quick fix’ by applying strategies that were successful for other organisations, and were adopted without proper analysis of the relevance for their own situation (Ghoshal & Bartlett 1996).

• **Efficacy.** The belief in efficacy refers to the self-efficacy as discussed in the earlier pre-change antecedent section. An employee must believe that he or she will be capable of performing the new tasks and duties that the change will bring (Amiot et al. 2006; Eby et al. 2000; Jimmieson, Terry & Callan 2004).

• **Principal support.** Similar to the previously described change agent support, Armenakis and colleagues (Armenakis & Harris 2002; Armenakis et al. 2007) explained the belief in principal support, as the support of top management and/or change leaders, as the confidence of all employees that required resources as well as the open commitment from their leaders are available. Armenakis and Harris (2002) propose that this belief is of particular importance if previous change efforts failed due to a perceived lack of support. This proposition was supported by the findings of a number of investigations that found leadership support to greatly improve organisational change implementation successes (e.g., Allan et al. 2014; Nutt 1986).
Valence. The final belief argued to be essential for change success was that of personal valence. Valence was postulated to be the employee’s belief that the change will bring positive rewards for participants, may these be extrinsic or intrinsic in nature (Armenakis et al. 2007). A significant number of organisational change researchers agreed that the ‘what’s in it for me?’ question to be of high significance for employees’ evaluation of change events (e.g., Antoni 2004; Buch & Tolentino 2006; Holt et al. 2003; Lau & Woodman 1995; Vakola 2014).

Research by Buch and Tolentino (2006), for example, found that the concept of valence was directly related to change recipients’ beliefs that their participation would lead to valued outcomes for themselves. These authors (2006) found expected extrinsic outcomes to have been rated significantly lower by the employees than intrinsic, social, and organisational results. It was assumed for the current study that the fulfilment of employees’ higher order, intrinsic needs was most closely related to individuals’ need to realise their values.

Employee readiness for change

The above five beliefs reflect a number of similarly defined concepts and were investigated in context with a variety of change related outcomes, in particular their effect on change participants’ readiness to change (Armenakis, Harris & Mossholder 1993; Armenakis & Bedeian 1999; Bernerth 2004; Holt et al. 2007b; Self 2007; Vakola 2014). A large and growing number of organisational change researchers agree that the development of employee readiness to change is equally, if not more important than to expect and counter employee resistance to change (Bernerth 2004). Readiness to change has been defined as the state of a workforce where they can enter the “unfreeze” (Lewin 1947) stage and begin the transformational process (Armenakis, Harris & Mossholder
Readiness to change has been proposed to be an indicator for the development of either commitment or resistance to change (Bouckenooghe & Devos 2008).

The concept of readiness to change has often been proposed to be the direct result of the beliefs that are under investigation in this report (e.g., Holt et al. 2007a). In view of the previous research that appeared to support the importance of these five beliefs for employee readiness to change, and overall, positive change implementation outcomes, it was decided for the current research to define these beliefs as the outcome variables under investigation. The concept of readiness for change, however, was beyond the scope of the current paper and was not included in the investigation. The current research is primarily designed to investigate the direct and indirect effects of employee perceived values-congruence with their organisation and its sub-units, and the five beliefs about organisational change, being discrepancy, appropriateness, principal support, self-efficacy, and valence. Additionally, the effects of employees’ value orientations on these beliefs are investigated.

**Summary and discussion of the organisational change literature**

The large body of organisational change literature provides further evidence that change implementations are a complex undertaking, involving a large number of factors with the potential to affect the outcomes (Oreg, Vakola & Armenakis 2011). Most researchers investigated one or two of these variables and their potential impact on a vast variety of change related outcomes. Notably scarce within these investigations has been a consideration for the employee’s values and their perceived values-congruence within their organisations, and how these factors impact employees’ beliefs about organisational change. These beliefs in turn have been argued to manifest in a person’s readiness for proposed change (Rafferty, Jimmieson & Armenakis 2013).
This lack of investigation into values-congruence related change readiness is a gap in the literature that provide the basis for the current research. Values and values-congruence findings in relation to organisational change research are introduced next.

2.7 PERSONAL VALUES

Past research found that employees’ personal values and their perceived values-congruence played an important role in a variety of job related processes and outcomes (e.g., Meglino, Ravlin & Adkins 1989). The current thesis explored the potential impact of employees’ perceived values-congruence on change recipients’ beliefs. It is assumed that perceptions of congruence are based on the underlying values of the individual, which may also impact their change related beliefs, and consequently, their readiness to change. The next section focuses on personal values and their potential role as motivational goals relating to organisational change. This is followed by a review of the existing literature into values-congruence and its potential to affect organisational change outcomes (Section 2.8).

The current section begins by defining values (Section 2.7.1) and their structure (Section 2.7.2) as proposed by Schwartz (1992). The values section concludes with an introduction to the 10 universal values as they were identified by this author, their definitions, and the potential importance of some of them during times of organisational change implementations (Section 2.7.3).

2.7.1 DEFINING VALUES

Values are motivational life goals that guide people’s attitudes and behaviours (Rokeach 1973). At an individual level, values are personal psychological constructs, whereas at the cultural level, they are seen as shared norms (Hofstede 2001) or latent normative variables (Schwartz 2014). This section explores the importance of individuals’ values
and their potential effects on employee beliefs affecting organisational change implementations. Cultural values are briefly introduced to provide the basis for the differentiation of these concepts.

**Cultural values.** Cultures distinguish themselves from each other by the way they solve common problems (Trompenaars 1994). Within these systems of shared meanings, values perform a principal role (e.g., Lehman, Chi-yue & Schaller 2004). These cultural values were considered normative, latent constructs, not directly measurable (Schwartz 2014). However, most commonly, individuals’ values are aggregated to the country level, as a proxy for cultural values. Cultural values measured in this way continue to show clear, cohesive differences between countries. Notably though, recent research has clearly shown that individuals values vary more within countries than across them (Fischer and Schwartz 2011). As such, the focus of the current research is on personal rather than cultural values.

In particular, the literature around the importance of values in the workplace during times of organisational change is reviewed. A detailed exploration of the importance of individuals’ values’ during times of organisational change follows next. It should be noted that throughout this thesis, the terms *personal values* and *individual values* have been used interchangeably.

**Personal values.** Rokeach (1973, p. 5) defined values as: “...an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.” Rokeach (1973) argued that a person determined the importance of any value by their desired self-concept and would assign the highest importance to those values that would allow them to realise this concept. He proposed that all humans place at least some importance on all values, but their rank order of importance varies. He also argued that personal values
were influenced, but not determined, by a person’s cultural, social, personal, and occupational environment. These arguments are still recognised as relevant in most modern day values research (e.g., Calogero, Bardi & Sutton 2009; De Clercq, Fontaine & Anseel 2008; Rohan 2000; Singh et al. 2011).

2.7.2 The Structure of Values

In 1992, Schwartz proposed and found that personal values formed a circular structure that indicated the relatedness of values, based on the motivational continuum that underlie them (see Figure 2-4). Based on this theory, neighbouring values in the circle share compatible motivations and opposing values have conflicting motivations. Schwartz (1992) divided the motivational continuum into 10 basic universal values. He described their relationship with four higher-order-values at opposing ends of two bipolar dimensions: Self-transcendence vs Self-enhancement and Openness-to-Change vs Conservation values (see Figure 2-4). On the first dimension, Self-transcendence describes the extent to which values “motivate people to transcend selfish concerns and promote the welfare of others, close and distant, and of nature”, whereas Self-enhancement describes the extent to which values motivate people to enhance their own personal interests, even at the expense of others (Schwartz 1992, p. 10). On the second dimension, Openness-to-Change described the extent to which values motivate people toward an exciting, independent and challenging life, whereas Conservation described the extent to which values motivate people toward the status quo, the acceptance of traditional customs and ideas, as well as self-discipline and obedience (Schwartz 1992). From this, it seems clear that the Openness-to-Change versus Conservation dimension appears to be most applicable to the current research.
2.7.3 INDIVIDUAL VALUES AND ORGANISATIONAL CHANGE

Schwartz’s (1992) values theory built on earlier values-research from the fields of psychology (Rokeach 1973) and anthropology (Kluckhohn 1951). These research areas provided the bases for the understanding of values-dependent behaviours in organisations (e.g., Amis, Slack & Hinings 2002; Argandoña 2003; Auster & Freeman 2013; Cohen 2012; Feather 1995; Gruys et al. 2008; Michael, Neubert & Michael 2012; Michie & Gooty 2005). As Schwartz (1994, p. 21) reasoned, individuals who attempted to cope with the realities of the social context, “cognitively transform the necessities inherent in human existence and express them in the language of specific values about which they then can communicate.” Schwartz went on to explain that values, in the form of conscious goals, were expressions of individuals and societies in an attempt to cope with universal requirements of life. These needs were those of the biological organism, the interaction of societies, and the smooth functioning of groups, which is directly relevant to organisations.
The following section offers definitions and potential consequences of Schwartz’s (1992) values during times of organisational change. The relationships between values and employees’ behaviours during change were supported through research by Bardi and Schwartz (2003), who found a direct relationship between values and values-expressive behaviours. These behaviours formed an almost identical structural continuum as did the values in Schwartz’s earlier research (1992; 1994). This was particularly the case for tradition and stimulation values, whereas the other behaviours still reflected their associated values, however more weakly, and were argued to have been influenced by the norms of the groups they were expressed in (Bardi & Schwartz 2003).

As previously argued, the Conservation to Openness-to-Change dimension is likely to be the most relevant to the current research. However, both dimensions are discussed in relation to the organisational change literature.

Conservation Values

Conservation values were proposed to express the conformance of individuals to the needs of societies and the groups that they belong to (Schwartz 1992). These values emphasise submission and self-restriction, the defence against actions that could cause instability or actions that threatened traditional practices. The values that belong to the conservation values-dimension are labelled tradition, conformity, and security.

Tradition values. These values are defined as the acceptance, commitment and respect for traditional customs and ideas (Schwartz, 1994). Individuals high on tradition values are expected to exhibited behaviours that reflect respect and commitment, as well as subordination to the persons of authority with whom the individual recurrently interacts, such as religious or cultural leaders, parents, teachers, and superiors at work (Schwartz 1992; Schwartz et al. 2012). Research by Calogero, Bardi and Sutton (2009) found
support for their proposition that a significant relationship between tradition values and closed-mindedness existed. Tradition values might be expected to inhibit the acceptance of change.

Researchers found a negative effect of tradition values on collaboration, which is proposed to be an important part of organisational change success (Fjeldstad et al. 2012). Further, Levay (2010) proposed that charismatic, tradition bound leadership could encourage employees to resist change. Finally, Hibbert and Huxham (2010) suggested that tradition values were incompatible with the new direction and could have a direct negative effect on progress and conflict with the new directives in an organisational setting.

**Conformity values.** Schwartz (1992) defined conformity values as those values that were likely to lead to the restraint of impulse actions that could have the potential to upset or harm others or violate social expectations. Individuals guided by conformity values typically exhibited behaviours of self-restraint, consistent with the expectations of social and group norms, in an effort to provide a smooth functioning of the entity they are part of (Schwartz et al. 2012). These authors (2012) considered conformity values as closely related to tradition values. Their investigations showed that individuals guided by conformity values displayed self-restraint, obedience, and the honouring of elders and supervisors. Conformity values might be expected to inhibit the acceptance of change.

Some research found that conformity values impacted a variety of organisational change outcomes. Early research by Kegan (1971) found that organisational development was met with hostility from employees with strong traditional values of conformity and obedience. Curdt-Christiansen and Silver (2012) found cultural clashes to occur where major educational reforms, promoting independent and critical thinking, went against
conformity values and respect for authorities. Further, Ng et al. (2007) found support for a direct, negative relationship between conformity, as well as tradition values, and an employee’s job mobility, that is, his or her preparedness to take on new roles or follow new processes.

**Security values.** Security values were defined as those that emphasise safety, harmony and stability (Schwartz, 1994). Kluckhohn (1951) proposed that the security values-type should be understood as a two-faceted category, encompassing the individual’s as well as the group’s need for security. In contrast, Schwartz et al. (2012) suggested that even the group’s desire for safety is ultimately an extension of the want for security for the self and those with whom one identifies. Security values might be expected to inhibit the acceptance of change.

French and Delahaye (1996) found that individuals reacted negatively to organisational change efforts if their previously successful processes, patterns, and habits were changed by the new directions. These authors (1996) suggested that greater predictability, especially of the change outcomes, reduced resistance by security valuing employees. In line with this, Kasof et al. (2007) found security values to stifle creativity.

**Openness to Change Values**

Individuals who favoured conditions that allowed for independent thought and action were proposed to display greater openness to change than those attributing a lower value to such conditions (Schwartz 1994). Employees who sought self-direction and stimulation in the workplace were argued to embrace changes in the workplace more openly and willingly if these changes offered the opportunity for the enactment of such values-related endeavours (e.g., McCartt & Rohrbaugh 1995; Oreg & Berson 2011; Seppälä et al. 2012). The openness to change values dimension entailed the self-
direction and stimulation values types (Schwartz 1992). These values are discussed
next.

**Self-direction values.** Self-direction values were defined as those that support
independent thought and action (Schwartz, 1994). Some research has linked aspects of
self-direction to acceptance of change in an organisational setting. For instance, a study
by Gagné, Koestner and Zuckerman (2000), based on self-determination theory (e.g.,
Deci, Connell & Ryan 1989), found that autonomy valuing employees were far more
accepting of organisational change practices if they were allowed autonomy of thought
and action during the process. Similarly, Weber and Weber (2001) found a significant
increase in supervisory support for change efforts when autonomy of input was allowed.
Further support for favourable implications of this values type for organisational change
came from Van Emmerik, Bakker and Euwema (2009), who found that employees who
were allowed job control and opportunities for professional development, evaluated
organisational transformations more favourably than when this was not the case.
Additionally, Turner Parish, Cadwallader and Busch (2008) found a significant
correlation between allowed role autonomy and affective commitment to change.

**Stimulation values.** Stimulation values were defined as the assumed need of individuals
to seek variety and stimulation in their lives in order to achieve optimal inspiration
(Schwartz 1992). According to Schwartz (1992), this values type was representative of
novelty- and excitement-seeking, or daring behaviour. Some investigations have shown
that employees with such openness to new experiences displayed significantly less
resistance to change behaviours than individuals low on stimulation values (e.g.,
Saksvik & Hetland 2009). A study by Wille, De Fruyt and Feys (2010) suggested that
excitement-seeking individuals were significantly more likely to seek a job change.
Further to this, research concerned with innovative learning found that a novelty-seeking attitude was an essential prerequisite for the creation of new knowledge (Fenwick 2003). Ho (1999) suggested that a challenge-seeking attitude amongst change leaders was a fundamental building block for a “learning organization” (p. 169), where the trying out of new ideas and acceptance of failure during the process were essential for success. Additionally, a study by Azmi (2008) found the predisposition among employees to challenge existing ideas to have been important for the learn-unlearn-relearn process during organisational change.

*Self-enhancement Values*

Self-enhancement values refers to those values that motivate an individual to seek enhancement of their own, personal interests, even if this is achieved at the expense of others (Schwartz 1992, pp. 43-44). The values that form this dimension are achievement and power.

**Achievement Values.** Schwartz (1992; 1994; Schwartz et al. 2012) define this values type as the pursuit of success in accordance with the normative standards. The achievement values type described individuals that were ambitious, influential, capable, successful, intelligent, and self-respecting. Most of the change literature examined how achievement values of leaders were related to change implementation outcomes, rather than employees in general (e.g., Battilana et al. (2010).

**Power Values.** Schwartz (1992; 1994) define power values as the importance of social status and control over people and resources. Again, most of the change literature examined how power values of leaders were related to change implementations outcomes. For instance, Ndofor et al. (2009) found that change leaders who had gained prestige from previous, successful change implementations, were particularly in favour of implementing organisational change when entering new roles. Church, Burke and
Van Eynde (1994) found that the exertion of power and the reaping of rewards were the most dominant motivators for change leaders implementing organisational development strategies.

**Self-transcendence Values**

Individuals that were motivated by the self-transcendence values were argued to transcend their own, selfish concerns in exchange for putting first the welfare of close and distant others as well as for nature as a whole (Schwartz 1992, p. 44). These values include universalism and benevolence.

**Universalism Values.** Schwartz (1992, p. 12) defines universalism values as the “understanding, appreciation, tolerance, and protection for the welfare of all people and for nature”. Some academics suggested that a tolerant, non-judgemental, and accepting attitude was a favourable pre-condition for overcoming resistance to organisational change (e.g., Coghlan 1993). However, most of the research in this area has been related to particular types of organisational change, notably those related to corporate social responsibility (e.g., Cooper, Parkes & Blewitt 2014), or gender integration (Kemp, Keenan & Gronow 2010).

**Benevolence Values.** Schwartz (1992) defines benevolent individuals as those persons who attribute importance to the welfare of other members of their in-group. People who valued benevolence typically display a responsible, honest, genuine and friendly character, are willing to help others and easily forgive mistakes (Schwartz 1994). In the organisational context literature, benevolence has been associated with involvement in participation programs (e.g., Graham & Verma 1991), and work group diversity management (Gotsis & Kortezi 2013).
In sum, the literature has related values to a range of factors associated with organisational change. However, in terms of employees’ beliefs or readiness for change, the dimension of Openness-to-Change to Conservation appears to be more relevant than Self-enhancement to Self-transcendence.

The impact of values could take different forms (Marginson 2009). First, acceptance of change was likely to be a values-expressive behaviour, most strongly related to the openness to change, (i.e. self-direction, stimulations), and conservation (i.e., tradition, conformity and security) values-dimensions. Those who placed a high importance on being open to change were expected to be more receptive (e.g., Seppälä et al. 2012), and those who placed a high importance on conservation were expected to be less receptive to change (e.g., Hubbell 1993).

Second, values-behaviour relations were found to be influenced by normative pressures (Bouckenooghe et al. 2005), which potentially promoted a positive reaction to change, if there were strong positive norms around change. Such norms could be found where the organisation was perceived to place a high importance on openness to change.

Third, organisational change outcomes were also found to have been impacted by perceived values-congruence (Lamm, Gordon & Purser 2010), which is discussed in the next section. In this thesis, it is argued that employee-perceived values-congruence is a relevant factor in the organisational setting, as values have been shown to be relevant to both individuals and organisations.

2.8 VALUES-CONGRUENCE

Values-congruence has been found to be a predictor of a number of important employee attitudes and behaviours and organisational outcomes. For instance, values-congruence has been found to impact on affective commitment to an organisation (Verquer, Beehr & Wagner 2003), organisation related emotional outcomes and optimism about the
future (Harris & Mossholder 1996), overall satisfaction and commitment (Meglino, Ravlin & Adkins 1989), and job satisfaction, intention to resign and organisational commitment (Lamm, Gordon & Purser 2010). Further, values-congruence in an organisation has been suggested to be a factor in reducing resistance to change (Smollan & Sayers 2009).

Past research found a direct positive effect of employees perceived values-congruence on reactions to change, including behavioural support for change (e.g., Lamm, Gordon & Purser 2010), employee acceptance of change (Burnes & Jackson 2011), and change-related job satisfaction (e.g., Ostroff, Shin & Kinicki 2005). However, potential mediating factors between perceived values-congruence and employees’ beliefs about the change, or the resulting readiness for the change have not been examined.

Values-congruence has also been shown to affect a number of variables that are linked to reactions to change, such as trust and quality of communication. For instance, Edwards and Cable (2009) proposed and found that trust and quality of communication in an organisation mediated the relationship between values-congruence and job satisfaction, organisational identification, and an employee’s intent to stay in the organisation. Edwards and Cable (2009) included two additional factors in their investigation that showed only small (interpersonal attraction), or no effect (predictability). These authors (2009) found these correlations over and above the influence of needs fulfilment, i.e., needs that were acquired through learning or socialisation, rather than being based on biological needs of employees (Cable & Edwards 2004).

While the investigation by Edwards and Cable (2009) was not specifically concerned with organisational change, it should be noted that separate investigations found the outcome variables of job satisfaction, organisational identification, and an employee’s...
willingness to remain with the organisation to have been favourable conditions for the readiness of an organisation and its employees to implement change (e.g., Rafferty, Jimmieson & Armenakis 2013).

The current study examines whether these construct of trust and quality of communication mediate the relationship between perceived values-congruence and organisational change recipients’ beliefs about the change. These relations have not previously been studied.

**Measurement of values-congruence**

Cable and DeRue’s (2002) research found support for the notion that perceptions of similarities (i.e., subjective fit) was a better predictor for people’s choices than the actual congruence between them as seen by a third party (i.e., objective fit; see Kristof-Brown, Zimmerman & Johnson 2005). As such, they suggested the modelling of subjective, perceived values-congruence, rather than objective values-congruence as rated by supervisors or peers. This was in line with the suggestion by Saks and Ashforth (1997) who proposed that a person who perceives a good fit with their organisation will, at least in part, define themselves in terms of this organisation.

**2.9 CHAPTER SUMMARY**

In sum, values-congruence has been found to positively influence reactions to organisational change, as well as a number of potential antecedents to these change reactions, such as trust, and quality of communication in an organisation. Where the research has fallen short is in examining these potential antecedents as mediators of the values-congruence to reactions-to-change relationship. While the current study focuses on perceived values-congruence, it also acknowledges that certain personal values may also impact employees’ beliefs about organisational change. The
proposition development leading to the suggested model is presented in the next chapter.

The research issues chapter introduced the reader to the parent theories of organisational change, values and values-congruence research. This was followed by a discussion of the existing literature on antecedents and reactions to organisational change. Particular focus was given to individuals’ perceived values-congruence within their organisation and its potential effects on employees’ beliefs about change. An apparent gap in the literature, relating perceived values-congruence to organisational change recipients’ beliefs was identified. Resulting from this insight, a model and theme-related hypotheses were developed and presented.
Chapter Three

3 Model Development

3.1 INTRODUCTION

This brief chapter is a guide to the development of the proposed relationships between employees’ perceived values-congruence in an organisation, and the resulting employee beliefs about change. It is proposed here that these relationships are mediated by employees’ felt trust, and quality of communication within an organisation.

3.2 PROPOSITIONS AND PATH MODEL DEVELOPMENT

Figure 3-1 provides a graphical visualisation of the proposed model. The exogenous, mediator, and endogenous variables are operationally defined and discussed in the following sections.

3.2.1 EXOGENOUS CONSTRUCTS

Perceived values-congruence

Perceived values-congruence is defined here as the match of values as they seem to an employee to exist between him or her, the organisation, co-workers, or both. Perceived values-congruence within an organisation can be between the employee and the organisation as a whole (e.g., Finegan 2000), the employee and their supervisors (e.g., Meglino, Ravlin & Adkins 1991) and between the employee and their peers or workgroup (e.g., Adkins, Ravlin & Meglino 1996). It is most commonly measured as a subjective evaluation. Cable and DeRue (2002) found subjective values-congruence was a better predictor of people’s choices than was an objective one. The current model focused on the employee’s perceived values-congruence (PVC) rather than values-congruence (VC) as rated by a third party. In the suggested model, perceived values-
congruence between the employee and the organisation (H1a), the employee and the supervisor (H2a) and the employee and the work group (H3a) positively impacts perceptions of trust. Similarly, perceived values-congruence between the employee and the organisation (H1b), the employee and the supervisor (H2b) and the employee and the work group (H3b) positively impacts perception of quality of communication.

3.2.2 Endogenous Constructs

Mediator Constructs

Trust in the organisation

Trust in the organisation was defined as the preparedness to rely on the actions of others with the expectation that these actions will bring no harm to the self (Hosmer 1995; Mayer, Davis & Schoorman 1995; Whitener et al. 1998; Williams 2001). Earlier organisational research identified trust in the organisation as an important contributor to the outcomes of organisational interactions (McAllister 1995). In topic-related studies, trust had been investigated as an antecedent to communication and interaction (Wells & Kipnis 2001), organisational socialisation (Eberl, Clement & Möller 2012), and its effects on job performance and job satisfaction (Jo & Shim 2005). Trust was also examined in view of the potentially negative consequences of trust-betrayal in an organisation (Elangovan & Shapiro 1998). For the current research, trust in the organisation in its active form was regarded as an expression of confidence in the leadership’s ability to act reliably and honestly during change. Passive trust referred to the absence of suspicion or worry (Zeffane & Connell 2003).
Figure 3-1: Perceived Values-Congruence, and the Mediated Effects on Beliefs about Change (Mediator Model)
Perceived values-congruence’s effect on trust

It has been proposed that perceived values-congruence denotes the alignment of motivational goals between employees, their work groups, supervisors, and organisations, and resulted in the belief that no harm will come to the employee by those entities that exhibit similarities in their values (Enz 1988). Past research has found that values-congruence supported the development of trust in the work environment (e.g., Christiansen, Villanova & Mikulay 1997; Enz 1988; Lau, Liu & Fu 2007) and Martin (1999) proposes that trust in management enhanced the perception of equivalence in values between employees and their leaders that lets them react more positively to changes in organisational direction. A study by Tucker, Yeow and Viki (2013) found a notable positive relationship between an increase in trust and communication, namely the perceived understanding of the change decisions. The importance of communication during change will be discussed next.

Quality of communication in the organisation

Quality of communication in an organisation was defined as the way in which employees openly shared formal and informal information between themselves and the other entities in the organisation (Goldhaber et al. 1978). It was proposed that during times of change the success of the intervention depends, at least in part, on the quality of the information that is provided, that it matters what is said and how it is communicated to the stakeholders (Armenakis & Harris 2002). Bouckenooghe and Devos (2008) suggested the quality of communication to play a major part in justifying the need for change, reducing employee anxiety, and creating employee readiness for the change.

Communication in the organisation has been researched in relation to a number of organisational behaviours and outcomes. These investigations included communication
as a precedent to trust in management (Tucker, Yeow & Viki 2013), employee involvement (Thomas, Zolin & Hartman 2009), or as a tool to create and maintain a learning organisation (Barker & Camarata 1998). Communication was investigated by analysing its role in overcoming uncertainty during change (Allen et al. 2007), and communication as “a form of (internal) strategic stakeholder management” (Lies 2012, p. 2545) during times of change. Findings by Allen et al. (2007) suggested that immediate supervisors were the preferred source for job and change-implementation related information where employees relied on their senior managers to convey strategic knowledge about the transformations.

Additionally, Claiborne et al. (2013) found a significant correlation between employees’ satisfaction with communication about the change and their self-reported readiness to change. This finding was further supported through research by Armenakis, Harris and Mossholder (1993) who found such readiness, namely the employee’s beliefs, attitudes and intentions towards the change, were positively related to a well communicated and understood message of the reasons for change.

**Perceived values-congruence’s effect on communication**

Quality of communication was theorised to benefit from perceived values-congruence because shared values and their underlying motivational goals assisted in establishing a common understanding of the importance of events; and how to describe, classify, and understand events, such as organisational change (Erdogan, Kraimer & Liden 2004; Meglino & Ravlin 1998; Schall 1983).

In sum, each of the above discussed mediator variables (trust and quality of communication) was suggested to impact on organisational change recipients’ beliefs about the change, including a) the discrepancy between the current and desired state, b)
the appropriateness of the change, c) principal support for the change, d) felt efficacy, and e) valence or the belief about a positive outcome (H4a – H4e, and H5a – H5e).

These above listed beliefs in turn are argued to affect employees’ readiness towards the change. Readiness to change has been found to be precursors for the extent of an employee’s participation in change (Armenakis, Harris & Mossholder 1993; Choi 2011; Erwin & Garman 2010; Foster 2010; George & Jones 2001; Herold et al. 2008; Herscovitch & Meyer 2002; Iverson 1996; Kumar 2012; Oreg 2006; Oreg & Sverdlik 2011; Oreg, Vakola & Armenakis 2011; Turner Parish, Cadwallader & Busch 2008; Reichers, Wanous & Austin 1997; Thomas & Hardy 2011). It should be noted, however, that the effects beyond the beliefs-constructs (i.e., readiness to change) are outside the scope of the current investigation. The investigated outcome variables are discussed next.

Employees’ change related beliefs

A belief is “an opinion or conviction about the truth of something that may not be readily obvious or subject to systematic verification” (Armenakis et al. 2007, p. 483). It was recognised early in the literature (e.g., Björkman 1989) that organisational change without a change in employees’ belief systems had a high probability of failing. Carlisle and Baden-Fuller (2004) proposed that beliefs played a primary role in rewarding the behaviours of employees and further, that beliefs that were influenced by an individual’s intrinsic values had a significant impact on workers’ acceptance of change. Research further supported the notion that change was likely to fail where beliefs and values of the workforce opposed the direction of change (e.g., Greenwood & Hinings 1996).

Armenakis et al. (2007) combined much of the pre-change and change antecedent literature findings to develop a model of five beliefs that they argued to be determining
of employees’ cognitive, emotional, and intentional reactions to organisational change. The definitions for each of the five beliefs, which are the outcome variables in the proposed model, are:

- **Discrepancy** is defined as the need or necessity for change.
- **Appropriateness** is defined as the belief that the change will be effective and the right actions were chosen to adequately address the discrepancies that are faced.
- **Efficacy** is defined as the belief that the employee will be capable to perform the new tasks and duties that the change will bring.
- **Principal support** is defined as the belief that management will provide the required resources and commitment.
- **Valence** is defined as the belief that the change will bring positive outcomes for participants.

**Trust and organisational change recipients’ beliefs**

Trust in the supervisor and organisation was found to have a strong positive influence on change recipients’ beliefs in their own control over changing circumstances, and that this trust further mediated the belief in positive supervisory support and affective organisational commitment (Neves & Caetano 2006). Whitener et al. (1998) found employees’ belief that they could trust in their management to have been associated, amongst other factors, with the individuals’ values, their self-efficacy, the expected costs of change, as well as organisational structures and cultures. Mishra and Spreitzer (1998) argued that trust in the organisation and its management positively influenced employee assessments of change during organisational downsizing. It is proposed here that trust in the organisation, the supervisors, and work groups will have a direct
positive effect on employees’ beliefs in the discrepancy (H4a), appropriateness (H4b), principal support (H4c), their self-efficacy (H4d), and valence (H4e).

Quality of communication and organisational change recipients’ beliefs

Nelissen and van Selm (2008) found a strong correlation between organisational change recipients’ positive responses to change and their satisfaction with management communication before and during the change process. Similarly, Claiborne et al. (2013) found significant positive correlations between employees’ satisfaction with communication and their perceived readiness for organisational change. Past research found that beliefs-directed content of communication during times of change shaped employees’ attitudes towards change, resulting in either readiness for change (positive), or resistance to change (negative) (Armenakis & Bedeian 1999; Armenakis, Harris & Mossholder 1993; Armenakis & Harris 2002). Other findings provided evidence that a lack of effective communication resulted in negative beliefs about a change, including cynicism about the change (e.g., Reichers, Wanous & Austin 1997), or employees’ exaggeration of the negative consequences of the proposed change (Bordia et al. 2004a).

It is proposed here that the quality of effective change related communication between the organisation’s entities has a direct positive effect on employees’ beliefs about the discrepancy (H5a), appropriateness (H5b), principal support (H5c), their self-efficacy (H5d), and valence (H5e).

In sum, beliefs have been recognised throughout the organisational change literature to perform a pivotal role in employees’ behaviours during times of change (Armenakis et al. 2007; Björkman 1989; Burkhardt 1994; Drazin, Glynn & Kazanjian 1999; Meglino & Ravlin 1998). Oftentimes these beliefs were linked to an individual’s intrinsic values (e.g., Carlisle & Baden-Fuller 2004; Schein 1984) and were proposed to be a determining factor for an employees’ attitude towards change.
Readiness to accept change

Whilst the final stage of readiness to accept change is beyond the measurement scope of the current paper, it was deemed appropriate to briefly introduce the construct to the reader in order to complete the discussion of employee attitudes to change. Readiness to accept change has been defined as a readiness of the individual to exhibit attitudes consistent with the belief that a change is needed and that the organisation has the capacity and capabilities to successfully implement change (Armenakis, Harris & Mossholder 1993, p. 681). Armenakis et al. (2007) defined acceptance of change as a two-factor concept: a) the degree of buy-in amongst change recipients and, b) the presence of deficiencies in specific beliefs that can adversely affect successful organisational change implementations.

Readiness to accept change (Armenakis, Harris & Mossholder 1993) has also been referred to as readiness for change (e.g., Leiter & Harvie 1998), and openness to change (e.g., Devos, Buelens & Bouckenooghe 2007; Wanberg & Banas 2000). Acceptance of change, as an extension of commitment to change, was recognised by Miller, Johnson and Grau (1994) as the essential pre-requisite for successful organisational change. Wanberg and Banas (2000) defined such openness to change as the employee’s willingness to support change, and to have a positive effect on potential change consequences.

3.3 HYPOTHESES

H1: The perceived values-congruence between employees and their organisation relates positively to their perception of:

a) Trust in the organisation.

b) Quality of communication in the organisation.
H2: The perceived values-congruence between employees and their supervisor relates positively to their perception of:

a) Trust in the organisation.

b) Quality of communication in the organisation.

H3: The perceived values-congruence between employees and their work groups relates positively to their perception of:

a) Trust in the organisation.

b) Quality of communication in the organisation.

H4: Perceived trust in the organisation relates positively to employees’ beliefs about:

a) Discrepancy.

b) Appropriateness.

c) Principal support.

d) Efficacy.

e) Valence.

H5: Perceived quality of communication relates positively to employees’ beliefs about:

a) Discrepancy.

b) Appropriateness.

c) Principal support.

d) Efficacy.

e) Valence.
3.4 Chapter Summary

The proposition development chapter provided the definitions and justifications for the selection of the variables in the proposed model. First, the importance of perceived values-congruence for positive organisational change outcomes was presented. This was followed by the potential of PVC to affect the selected mediator constructs of trust and the quality of communication, and how these mediators in turn are likely to affect organisational change recipients’ beliefs. The following chapter describes the method used to test the proposed relationships of the presented constructs.
Chapter Four

4 The Research Approach and Methodology

4.1 Chapter Overview

This Chapter outlines and explains the approach used to test the suggested model. A quantitative research approach was chosen because of the availability of well-established constructs and well-validated scales and previously suggested relationships in other contents. Consequently, this Chapter also discusses the data collection and data analysis techniques that were used in the present investigation. It is divided into three main sections that discuss:

1. A justification for and description of the scales that were used (Section 4.2).

2. The data collection procedures used and the sample obtained (Section 4.3).

3. A justification for and a description of the data analysis techniques used (Section 4.4).

The suggested model, which is shown again in Figure 4-1, is based on prior research that suggested organisational change was complex and, potentially, affected by a number of variables, often with mediating relationships (e.g., Fugate, Kinicki & Prussia 2008). Employees’ attitudes towards change thought to be formed by, among other factors, the constructs included in the presently suggested model (e.g., Bordia et al. 2004a; DiFonzo & Bordia 1998; Nelissen & van Selm 2008; Neves & Caetano 2009; Smollan 2011; Tucker, Yeow & Viki 2013).
Figure 4-1 focuses on perceived values-congruence as an antecedent to readiness to change. It suggests perceived values-congruence between employees in their respective work groups, between employees and their supervisors, and between employees and their organisation have a direct positive effect on their trust in their organisation and their perceptions about the quality of communication in their organisation. These mediators are suggested to have a direct effect on the outcome variables of interest (i.e., organisational change recipients’ (respondents’) beliefs) (OCRB).

Following the most commonly used method to obtain information for a quantitative investigation (Spector & Meier 2014), a questionnaire was developed. The survey design and individual scales that were used in the study are described in the next section.
4.2 Survey Design

The questionnaire was programmed in Qualtrics, a program designed to collect quantitative data online. The survey was designed to take approximately 20 minutes to complete in an effort to reduce participant fatigue and maximise the response rate. The questionnaire had three focal sections.

1. Following a screening question to ensure participants had experienced a recent organisational change implementation (within the previous six months), the first section collected data about respondents’ values using an extended version of the Schwartz Values Best-Worst Scaling (SVBWS) scale (Lee, Soutar & Louviere 2008; Lee et al. 2016). The next questions measured respondents’ perceptions of their values-congruence with their organisation and its staff, using the Cable and DeRue (2002) approach.

2. Respondents were then asked about their views on the organisational change process they had experienced. They were asked about the type of change they had experienced, using categories included in Burke and Litwin’s (1992) organisational performance and change model. They were then asked about their organisation’s quality of communication (Edwards & Cable 2009), and trust (Robinson 1996). Finally, respondents were asked about their beliefs about the change (Armenakis et al. 2007).

3. The final section of the questionnaire asked for information about respondents’ background, including some general socio-demographic questions (e.g., age, gender and education) and some general employment-status related questions (e.g. tenure and position in the organisation).
4.3 THE CONSTRUCTS

This section describes the scales that were used to obtain the needed information and justifies their selection. Most of the measures used multiple-item scales that had been found to have good reliabilities in their original applications. A secondary justification for the use of multiple-item scales was the advantages such scales have over single item measures, as they enable reliability and validity to be assessed in well-developed ways (Hair et al. 2014; Kumar & Dillon 1990). Table 4-1 provides information about the constructs presented to respondents, including the number of items used to measure the various constructs, the answer formats used and their sources.

Table 4-1: The Constructs Used in the Study

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Answer Format</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schwartz’s Personal Values Best-Worst Survey</td>
<td>21 sets</td>
<td>Best-Worst</td>
<td>Lee, Soutar and Louviere (2008); Lee et al. (2016 under review)</td>
</tr>
<tr>
<td>Perceived Fit Scale</td>
<td>9</td>
<td>7-point Likert</td>
<td>Cable and DeRue (2002)</td>
</tr>
<tr>
<td>Trust in the organisation</td>
<td>7</td>
<td>5-point Likert</td>
<td>Robinson (1996)</td>
</tr>
<tr>
<td>Communication in the organisation</td>
<td>6</td>
<td>5-point Likert</td>
<td>Edwards and Cable (2009), adapted from Goldhaber et al. (1978)</td>
</tr>
<tr>
<td>Organisational change recipients’ belief scale</td>
<td>27</td>
<td>5-point Likert</td>
<td>Armenakis et al. (2007)</td>
</tr>
</tbody>
</table>
Most of the scales used traditional Likert-type rating scales on which participants ranked their agreement with a series of statements from strongly disagree (1) to strongly agree (using 5 or 7 point scales). However, respondents’ values were assessed through a Best-Worst scaling approach (Louviere, Hensher & Swait 2000), in which the frequency of choice of a series of values-statements indicated these respondents’ values orientation. This was achieved by identifying the values they judged as the most and the values that they judged as least important in their lives from an appropriate balanced incomplete block design.

4.4 The Scales

The order within each set of items in the first two sections of the questionnaire was randomised across respondents to minimise order issues. A detailed account of the scales is provided in subsequent sections.

4.4.1 Personal Values

The first part of the questionnaire was designed to measure respondents’ values. As noted earlier, respondents’ values were obtained using an extended version of the SVBWS instrument. Justification for this approach came from earlier personal values investigations that had used Likert-type scales (e.g., Schwartz 1992; 1994; Schwartz et al. 2012). A number of biases have been identified that potentially influence results when measuring values through Likert-type items (Lee, Soutar & Louviere 2007; Van Herk, Poortinga & Verhallen 2004). These include acquiescence bias, which leads people to endorse most values as important in their lives (Schwartz & Bardi 2001) and extreme response bias, which leads people to restrict answers to the extreme ends of a scale (Lee, Soutar & Louviere 2007).
A BWS approach largely eliminates such biases, as respondents can only select one best (most important) and one worst (least important) choice from each set of items that are part of a pre-defined ‘master set’ (Lee, Soutar & Louviere 2008). The SVBWS asks respondents to choose the MOST and LEAST important options from 21 sets of five items. The 21 sets were derived from an appropriate balanced incomplete block design that was used to measure Schwartz’s refined values (Lee et al. 2016; Schwartz et al. 2012). Each value was scored on -1 to 1 scale, by taking the number of times the value was chosen as least important from the number of times it was chosen as most important and dividing this result by the number of times it appeared. Thus, scores for each value increased with the importance attached to that value (Lee, Soutar & Louviere 2008). The SVBWS sets were introduced with the following text:

In this section, we will ask you to pick the MOST and LEAST important from each set of principles that guide your life. While more than one principle may be important or unimportant, please choose the MOST and the LEAST important to YOU as a guiding principle in YOUR life. In total there will be 21 small sets of a large range of guiding principles. While some sets have statements in common, each set also introduces some new statements. It is important that you answer all sets.

The 20 values statements and one additional item (# 4) that was later removed to reduce ipsatisation problems with the analysis, from which respondents were asked to select the most and least important to them, were:

1. Developing your own original ideas and opinions.
2. Being free to act independently.
3. Having all sorts of new and exciting experiences.
4. Explaining my ideas clearly to others.
5. Taking advantage of every opportunity to enjoy life’s pleasures.


7. Having the power that money and possessions can bring.

8. Having the authority to get others to do what you want.

9. Protecting your public image and avoiding being shamed.

10. Living and acting in ways that ensure that you are personally safe and secure.

11. Living in a safe and stable society.

12. Following cultural, family, or religious practices.

13. Obeying all rules and laws.

14. Making sure you never upset or annoy others.


16. Being a completely dependable and trustworthy friend and family member.

17. Helping and caring for the wellbeing of those who are close.

18. Caring and seeking justice for everyone, especially the weak and vulnerable in society.

19. Protecting the natural environment from destruction or pollution.

20. Caring for the welfare of animals.

21. Being open-minded and accepting of people and ideas, even when you disagree with them.

Each set was presented to respondents as is shown in Figure 4-2.
4.4.2 The Multiple-Item Scales

Rating scales were seen as appropriate for the collection of data for the remaining constructs, as the biases noted in prior values research are not as evident for these constructs. All of the scales had previously been used successfully to collect data in related research areas. Further, rating scales are topic-focused, offer a number of possible responses for each question and force respondents to derive their responses from the same stimuli; providing ease of comparison and interpretation of results (Smith et al. 2003). Brief descriptions of the scales used are provided in subsequent sections. In most cases, respondents rated each item in terms of their agreement with the item using a scale that ranged from “Strongly disagree” to “Strongly agree”. When this was not the case, the scale end-points used are identified.

Perceived Values-Congruence

The second part of the questionnaire measured respondents’ perceptions of the similarities between their values and their peers, supervisors, and the organisation as a whole, using scales developed by Cable and DeRue (2002). The scale has been used and found to be helpful in a number of studies (Hinkle & Choi 2009; Meyer et al. 2010; Piasentin & Chapman 2007). The scale was reduced from 18 items to 9 items, as it
excluded items from the original instrument that asked about additional types of fit (i.e.,
needs-supply fit and demand-abilities fit) that were not examined in the current study.
The same set of three questions (shown below) was repeated with the term ‘work group’
being replaced by ‘supervisor’ or ‘organisation’.

1. The things that I value in life are very similar to the things that my (work
   group) values.

2. My personal values match my (work group’s) values and culture.

3. My (work group’s) values and culture provide a good fit with the things that
   I value in life.

Perceptions of the quality of communication within the organisation

Perceived communication quality was measured using a six-item scale used by Edwards
and Cable (2009) that was adapted from earlier research (Goldhaber et al. 1978;
Goldhaber & Rogers 1979). Prior studies have used this scale to examine the impact
communication quality has on trust and employee involvement (Thomas, Zolin &
Hartman 2009), organisational commitment (Allen 1992), peer relationships in the
workplace (Sias 2005), and the effectiveness of work-team communication during
restructuring (Grice et al. 2006). The items were measured on a seven point Likert type
scale from “Never” to “All of the time”. The six items asked were:

1. People in this organisation understand what I say.

2. Communication is open with others in this organisation.

3. I understand what people in this organisation say to me.

4. I have clear conversations with people in this organisation.

5. I have honest discussions with other people in this organisation.

6. Other people in this organisation understand me.
Trust in the organisation

Trust was measured through a scale developed by Robinson (1996), which was based on trust dimensions suggested by Gabarro and Athos (1976). The seven items asked were measured on a seven point Likert type scale from “Strongly disagree” to “Strongly agree” and were as follows:

1. I believe my employer has high integrity.

2. I fully trust my employer.

3. I can expect my employer to treat me in a consistent and predictable fashion.

4. My employer is always honest and truthful.

5. In general, I believe my employer’s motives and intentions are good.

6. I don’t think my employer treats me fairly.

7. My employer is open and upfront with me.

The organisational change recipients’ belief scale (OCRBS)

The scale used was developed by Armenakis et al. (2007) to assess change recipients’ beliefs about discrepancy (the need for the change), appropriateness (the unique attributes of an organisation’s situation have been properly identified), efficacy (how well people feel they can cope with the new demands), principal support (support by change leaders and agents) and valence (whether change will be positive or negative). Doyle, Logue and McNamara (2011) used the scale to examine relationships between readiness to change, job satisfaction and the work environment. Another study used the OCRBS to examine the effects a change communication plan had on employees’ receptivity to new structures, motivation to make the change a success and pessimism
about the change (Torppa & Smith 2011). The twenty-six items in their various subscales were measured on a seven point Likert type scale from “Strongly disagree” to “Strongly agree” and were as follows:

Valence

1. This change will benefit me.
2. With this change in my job, I will experience more self-fulfilment.
3. I will earn higher pay from my job after this change.
4. The change in my job assignments will increase my feelings of accomplishment.
5. My fringe benefits will remain the same after this change.

Principal Support

1. Most of my respected peers embrace the proposed organisational change.
2. The top leaders in this organisation are “walking the talk”.
3. The top leaders support this change.
4. The majority of my respected peers are dedicated to making this change work.
5. My immediate manager is in favour of this change.
6. My immediate manager encourages me to support the change.

Appropriateness

1. I believe the proposed organisational change will have a favourable effect on our operations.
2. The change in our operations will improve the performance of our organisation.
3. The change that we are implementing is correct for our situation.

4. When I think about this change, I realise it is appropriate for our organisation.

5. This organisational change will prove to be best for our situation.

**Efficacy**

1. I have the capability to implement the change that is initiated.

2. I can implement this change in my job.

3. I am capable of successfully performing my job duties with the proposed organisational change.

4. I believe we can successfully implement this change.

5. We have the capability to successfully implement this change.

**Discrepancy**

1. We need to change the way we do some things in this organisation.

2. We need to improve the way we operate in this organisation.

3. We need to improve our effectiveness by changing our operations.

4. A change is needed to improve our operations.

5. We need to improve our performance by implementing an organisational change.

**Background questions**

The final section obtained information about respondents’ social and demographic backgrounds. These questions asked about the status of their employment, tenure, position, age, gender, education, country of origin and years lived in Australia. A typical representative of these questions is: “In what year were you born? (see Appendix B for the wording of these items).
4.5 DATA COLLECTION PROCEDURES AND SAMPLE SIZE

4.5.1 DATA COLLECTION PROCEDURE

Some consideration was given to suggestions that data could be obtained through data mining administrative records. However, as Smith (2013) has noted, while these techniques show promise, they are not yet able to provide better results than more traditional data collection methods. Therefore, this method was not used. After consideration of prior research that had examined differences between an online data collection approach and a mail-out approach, it was decided to use an online survey for the reasons noted in subsequent paragraphs.

1. **Response rates**

Most studies have found response rates of online surveys to be similar to mail out surveys. Fan and Yan (2010) found web-based surveys had an 11% lower response rate than did mail out surveys. However, others have suggested online surveys have higher response rates than do pen and paper surveys (Knapp & Kirk 2003), while Chuah, Drasgow and Roberts (2006) reported similar response rates. Further, Whitaker (2007) found no difference between male and female response rates, no matter which data collection method was used. Prior research suggests other factors are likely to lead to differing response rates, such as method of contacts, target population characteristics and the length of questionnaire and incentives offered (Fan & Yan 2010).

2. **Completion times**

One of the major advantages of internet based surveys is the reduced time it takes for survey completion. Truell et al. (2002) found e-mail distributed surveys
were returned six days faster than surveys distributed by conventional mail. Other researchers supported the notion that web-based surveys obtained data in a shorter period of time and provided immediate access to results (Fleming & Bowden 2009; Hayslett & Wildemuth 2004). Indeed, Fleming and Bowden (2009) suggested online surveys saved time and money, while reducing data entry costs and coding errors.

3. **Participant convenience**

Davis (1999) suggested web-based surveys were more convenient to participants because responses could be entered at the individual’s, rather than the researcher’s, convenience. Similarly, Bell, Huber and Viscusi (2011) found providing people with the option to respond in the comfort of their own home increased their willingness to complete a survey.

4. **Participant anonymity**

Knapp and Kirk (2003) suggested participants felt more comfortable with answering online due to perceived anonymity (i.e., participants could not be identified) rather than confidentially (i.e., there was an issue of perceived possibility of identification). They suggested the difference was based on participants’ concern about possible consequences if their answers were accessible to non-disclosed third parties. Joinson, Woodley and Reips (2007) found there was a significant increase in non-disclosure to sensitive questions (e.g., salary) when participants felt they could be identified.

5. **Costs**

A reduction in cost has been identified as an advantage for online surveys in a number of studies (e.g., Boyer et al. 2002; Klassen & Jacobs 2001; Schleyer &
Hayslett and Wildemuth (2004) found web-based surveys had clear cost and speed advantages over mail-out surveys, while Klassen and Jacobs (2001) noted that, if internet access was “free” to participants, there were limited costs associated with the distribution and collection of online survey data.

6. **Data completeness**

While Truell, Bartlett and Alexander (2002) found data collected from web-based surveys were more complete than data collected from other approaches, Hardré, Crowson and Xie (2012) and Lin and Van Ryzin (2012) found no significant difference between web-based and paper-based data completeness. However, internet based surveys can “force” respondents to complete a question before moving on to the next question.

7. **Technological efficiencies**

Technological efficiencies are an advantage reported throughout the literature. Examples include structured branching, through which subsequent questions can be based on previous responses ((Boyer et al. 2002) and the automated tracking and tabulating of completed surveys (Klassen & Jacobs 2001). Further, real time data verification can be achieved through a range of allowable responses or through the restriction of the number of possible selections (Boyer et al. 2002). However, possible deficiencies should also be noted. Schleyer and Forrest (2000) found issues can arise through password or ID confusions and server time-outs, while Zhang (2000) suggested questionnaire lay-outs on low-tech machines, an inability to return to earlier parts of the questionnaire and low-
speed modem downloads were all potential disadvantages. In recent years however, most of these deficiencies have been minimised.

In sum, a large number of studies have compared differing forms of data collection. It appeared no one technique offers substantial benefits over another. While many acknowledge response times were initially faster for online surveys, this advantage often evaporates by the time all responses were received. Response rates, convenience, anonymity, and data completeness did not appear to be significantly affected by the mode used. However, the one factor researchers agreed on was the cost advantage of online data collection.

In light of these findings, and considering the limited budget that was available for the present study, it was decided to use a web-based approach. A professional survey panel was approached to undertake the data collection task, due to the relative ease of obtaining an adequate sample size at a relatively low cost.

Sample size

If a sample is too small, it can result in too little statistical power to adequately identify significant relationships or can result in “over-fitting” the data, producing a good fit but no generalisability, whereas if a sample is too large it can result in an oversensitivity of results (Hair et al. 2010). Budget considerations meant that this was a significant issue. However, the use of an online panel provider meant it was possible to obtain a sample of at least 200 respondents, which was seen as sufficient to estimate the suggested model (Bagozzi & Yi 2012).
4.6 THE DATA ANALYSIS APPROACH

Hair et al. (2014, p. 2) describes multivariate data analyses as “the application of statistical methods that simultaneously analyse multiple variables.” The data analysis for the current research followed Hair et al.’s (2010) recommendations to apply a step by step approach to multivariate analysis by:

1. Evaluating the assumptions underlying the analysis technique.

2. Estimating the model.

3. Interpreting the variates.

4. Validating the model.

Hair et al. (2010) also suggest the data should be examined before undertaking any multivariate data analysis by checking for:

• Missing data.

• Suspicious response patterns.

• Outliers.

• Normality.

• Reliability.

• Convergent validity.

• Discriminant validity.

The Statistical Package for the Social Sciences (SPSS 2013) was used to examine these issues, which are discussed in subsequent sections.
Missing data

The online data collection method used meant respondents had to answer all of the questions in a section before they could proceed. Consequently, there were no missing data in the responses used in this case.

Suspicious response patterns

Straight lining of answers throughout a questionnaire is seen as suspicious (Hair et al. 2014). This pattern is apparent when a respondent answers most, or even all of the answers, with the same response, often in the middle or with one extreme of the response choices. This pattern occurs when people want to complete a questionnaire as fast as possible and such responses are excluded (Hair et al. 2014). Thus, any respondent who answered all of the questions with the same response for any section (e.g., Never or Always) was removed from the sample.

Outliers

Outliers are “observations with a unique combination of characteristics identifiable as distinctly different from the other observations” and should be examined (Hair et al. 2010, p. 64). Here, standardised scores were used to see whether there were any univariate outliers and Mahalanobis distances of relevant sections were used to see whether there were any multivariate outliers.

Data distributions

Univariate normality was examined by computing Kolmogorov-Smirnov statistics for each item (Hair et al. 2010), while multivariate normality was examined through the multivariate normality test suggested by DeCarlo (1997), which can be undertaken through a macro procedure in SPSS. Partial Least Squarers (PLS), which was used to
estimate the suggested model, is not as affected by non-normal data as are other Structural Equation Modelling (SEM) procedures (Hair et al. 2014).

The Initial Analysis

Descriptive statistics were computed for the various background items to obtain a feel for the sample and for each of the constructs’ individual items. This data analysis phase included an examination of frequencies, means, and standard deviations where this was relevant.

An appropriate examination of the constructs’ measurement properties is also crucial before estimating any structural model (Hair et al. 2010). Consequently, the measurement (outer) model aspects were used to gain an understanding of all of the constructs’ measurement properties. This data analysis phase included an examination of the unidimensionality, reliability, convergent, and discriminant validity of the constructs using information provided in the WarpPLS program that was used in this case (Kock 2012).

Unidimensionality

Unidimensionality was tested through the Rohatgi-Székely (Rohatgi & Székely 1989) and Klaassen-Mokveld-van Es (Klaassen, Mokveld & van Es 2000) statistics. These statistics were computed by WarpPLS (Kock 2012).

Reliability

The multiple item scales’ internal consistency, or reliability, needed to be confirmed before the scales could be used in subsequent analysis. Two measures were computed to confirm the reliability of the measures: Cronbach’s (1951) alpha and composite
reliability (CR). Both reliability measures vary between 0 and 1 and a score of above 0.70 is generally considered satisfactory (Hair et al. 2014).

Convergent Validity

The extent to which one item correlates positively with another item measuring the same construct is referred to as convergent validity (Hair et al. 2010) and loadings scores of above 0.70 are deemed acceptable. Additionally, average variance extracted (AVE) scores were examined to ensure that they were above 0.50, as such scores confirm there is more information than noise in the construct (Fornell & Larcker 1981).

Discriminant Validity

Discriminant validity refers to the absence of confusion that could result from items that are not clearly associated with their expected construct. A model has good discriminant validity when all question-statements are only associated with any one particular variate (Hair et al. 2014). Discriminant validity between two constructs was assessed by comparing the square roots of their AVE scores with their correlation. If the square root of their AVE score is greater than their correlation, discriminant validity can be assumed (Fornell & Larcker 1981).

4.6.2 Assessing the Structural Model

The evaluation of the structural model followed recommendations that have been made by a number of researchers (e.g., Bagozzi & Yi 2012; Hair et al. 2010; Hair, Ringle & Sarstedt 2011; Hair et al. 2014; Kock 2012; Malhotra, Kim & Patil 2006; Orth & Kahle 2008; Reinartz, Haenlein & Henseler 2009; Rigdon 2012). Structural model estimation provides information about a model’s predictive ability and insight into the nature of the relationships between the modelled constructs. Hair et al. (2014, p. 169) have suggested this evaluation phase should include an assessment of:
1. Multicollinearity issues.

2. The significance and relevance of the structural relationships.

3. Any $R^2$ statistics, which measure the proportion of variance explained in a model’s endogenous constructs.

4. Effect sizes.

5. Predictive relevance.

Assessing multicollinearity issues

Multicollinearity occurs when a potential explanatory construct can be explained by one or more other potential explanatory constructs, which makes it difficult to identify the effects of any of these constructs (Hair et al. 2010). An assessment of possible multicollinearity issues was required, as path coefficients in PLS are estimated using ordinary least squares (OLS) procedures (Hair et al. 2014). Multicollinearity issues can be detected by computing variance inflation factor (VIF) scores, which is done in the WarpPLS program (Kock 2012). Kock and Lynn (2012) have suggested full collinearity VIF statistics, which are computed in WarpPLS, can be used to test for multicollinearity. Full collinearity VIF statistics scores that are below 3.3 (or perhaps 5) suggest multicollinearity is not a problem and that a researcher can have confidence in the estimated path coefficients.

Assessment of the significance and relevance of the structural model relationships

WarpPLS computes standardised path coefficients, as is usual in PLS programs (Kock 2012). The estimates generally range from -1 to 1, with values close to these figures suggesting strong negative (-1) or strong positive (1) relationships. However, as has been pointed out by Hair et al. (2014), a coefficient’s significance depends on its
standard error. As PLS is often used with non-normal data, these standard errors are generally obtained through nonparametric bootstrapping procedures (e.g., Efron & Tibshirani 1986), rather than through traditional OLS procedures. These bootstrap standard errors enable the path coefficients’ significance to be determined without assuming multivariate normality.

*Coefficient of determination (R²)*

The coefficient of determination (R²) is a measure of a model’s predictive accuracy. It shows the combined effects predictor variables have on a model’s endogenous constructs (Hair et al. 2014). R² values ranged from 0 to 1 and Hair, Ringle and Sarstedt (2011) have suggested values above 0.75 are substantial, values of 0.50 to 0.75 are moderate, and values between 0.25 and 0.50 are weak.

*Assessing effect size (f²)*

Cohen (1988) suggests a path coefficient’s effect size (f²) is an indication of its importance and developed a procedure to compute this. He and others have suggested an f² score below 0.02 is too weak to be considered, an f² score above 0.02 but below 0.15 is weak, an f² score above 0.15 but below 0.35 is moderate, while an f² score above 0.35 is strong. The WarpPLS program computes effect sizes that are similar to those suggested by Cohen (1988) and have the same interpretation, although a slightly different approach is used, as Cohen’s procedure “tends to cause changes in the weights linking latent variable scores and indicators (in a PLS analysis), thus biasing the effect size measures” (Kock, 2015, p. 56).

*Assessing the predictive relevance of the structural model*

The Stone-Geisser Q² statistic is generally used to determine a model’s predictive relevance (Geisser 1974; Stone 1974). This is a nonparametric procedure that uses a
blindfolding approach to compute the desired score (Hair et al. 2014). A value that is greater than zero suggests acceptable predictive validity (Kock 2015).

Assessing unimodality and normality

Kock (2015a) has suggested constructs’ unimodality and normality should be assessed and has included tests in WarpPLS to examine these issues. He has argued that a lack of unimodality and normality in even one of a model’s constructs suggests it may be more appropriate to use a PLS procedure when estimating that model.

Goodness of fit

While PLS procedures do not have the fit indices found in covariance based approaches, Tenenhaus et al. (2005) have suggested the GoF index as a way to evaluate a PLS model’s overall fit. While Henseler and Sarstedt (2013) have argued that this index may not differentiate valid models, it is still seen by others as a useful index and so was reported here. A GoF is considered small if the value is equal to or greater than 0.1, medium when equal to or greater than 0.25 and large if equal to or greater than 0.36 (Wetzels 2009). There are a number of other fit indices that have been suggested when examining PLS models, including the average path coefficient (APC), the average R-squared (ARS) and the average adjusted R-squared (AARS). As Kock (2015a) has pointed out, these measures are, as a whole, less important for hypothesis testing and are more useful for model comparisons.

4.6.1 Estimating the Model

Following the assessment steps, the PLS-SEM model needed to explain the variation in the dependent constructs (Hair et al. 2014). The PLS-SEM algorithm finds which predictor variables explain the most variance in the outcome variables. This is achieved by determining individual construct scores and then establishing loadings for reflective
measurements. The path coefficients show the strength of the relationship between the various constructs (Hair et al. 2014; Kock 2012).

4.7 Control Variable Assessment

Following the main data analysis, the impacts of some possible socio-demographic control variables were examined, including age, gender, education, position, employment mode (i.e., fulltime or not fulltime employed) and personal values. Each of these variables was formed into two groups and differences between these groups were assessed. The impact of personal values on the model was assessed by first taking the Conservation score from the Openness-to-Change score for each individual. The result of this calculation was then median-split (Kock 2012), which resulted in two groups: one high on Openness-to-Change and low on Conservation and the other high on Conservation and low on Openness-to-Change.

4.8 Chapter Summary

The present chapter introduced well established scales that were used to measure the constructs of interest. This was followed by a discussion of different methods and justification for the use of an online survey to achieve the required minimum sample size of 200 respondents (Bagozzi & Yi 2012). A description of the data analysis approach was also provided. The next chapter outlines the results obtained.
Chapter Five

5 Results

5.1 CHAPTER OVERVIEW

This Chapter presents the results of the data analysis and is subdivided into three sections, namely:

1. A discussion of the sample’s characteristics and some descriptive statistics (Section 5.2).

2. An examination of the constructs’ measurement properties (Section 5.3).

3. A discussion of the results obtained when estimating the model (Section 5.4).

5.2 SAMPLE CHARACTERISTICS AND DESCRIPTIVE STATISTICS

As was noted in Chapter Four, the data were collected through PureProfile (www.pureprofile.com), a commercial online data collection service. In this case, all respondents, who were located in Australia, were paid a small monetary reward for completing the survey. A total of 1993 individuals started the survey. However, only 18% (351 respondents) had been involved in an organisational change in the six months prior to undertaking the survey. This is at odds with some suggestions that organisational change is commonplace (e.g., Bernerth 2004; Self, Armenakis & Schraeder 2007).

An examination of the 351 responses that looked for suspicious response patterns or incomplete response-sets, which is discussed in section 5.2.1, resulted in a reduction of the sample to a final usable size of 251. Of these, 121 respondents (48%) were females
and 130 respondents (52%) were males. The mean average age of all respondents was 48 years. Other sample characteristics of note were respondents’ employment status, as 59% were employed full-time, 24% were employed part-time and 17% were casually employed. Of these respondents, 53% worked in non-supervisory roles, 16% were employed in supervisory positions and 31% were mid-level or senior managers. Education levels were mixed, with approximately half of the respondents having undertaken university education (52%) and 44% having a trade or technical qualification or at least having completed high school. Only 4% of the respondents had not completed high school.

Thirty-six percent of the respondents had experienced, or were still experiencing, an organisational structure change (12% a technological system change, 11% a leadership change, 10% a change in organisational culture, 10% a change in mission and strategy, 9% a change in policies and procedures, 8% a change in management practices and 4% a change in work unit climate). It seems people experience many types of organisational change.

5.2.1 SOME DESCRIPTIVE STATISTICS

Missing data and response patterns

Eight of the 351 respondents who had recently experienced or were experiencing an organisational change were removed from the data-set, as they had not completed a significant portion of the questionnaire. There were no missing data in the remaining cases, as the data were obtained in an online environment in which prompts were provided to ensure there were responses to all of the items.

Participants’ response patterns were examined. Ninety-two cases that showed clear evidence of straight lining (i.e. all in the middle of the scales or at either end) and/or
failing to answer the screening questions, which asked them to choose the “strongly disagree” option to show that they were reading the survey. These respondents were removed from the data-set.

After their removal, Mahalanobis distances were computed for each of the remaining respondents to see if there were any outliers. As none were significant at the 0.05 level, all responses were retained for further analysis. While the Kolmogorov-Smirnoff statistics confirmed that most items were not normally distributed, this was not considered a major issue, as Partial Least Squares (PLS), which was used to estimate the suggested model, uses a bootstrapping approach to assess significance. Consequently, normality was not seen as a crucial issue (Kock 2012).

The means and standard deviations of each of the items obtained from the various ratings scales can be seen in Appendix C. The highest means were for the various values-congruence items (e.g. “My work group’s values and culture provide a good fit with the things that I value in life” had a mean of 4.70 on the five-point scale, while “My organisation’s values and culture provide a good fit with the things that I value in life” had a mean of 4.59). Many of the lowest means were for the items that asked about change (e.g. “I will earn higher pay from my job after this change” had a mean of 2.29, while “With this change in my job, I will experience more self-fulfilment” had a mean of 2.97). Thus, it seems respondents were positive about their values-congruence, but less positive about their organisational change experiences.

There was a reasonable amount of variation in respondents’ assessments, with standard deviations ranging from 0.82 (“The top leaders support this change”) to 1.59 (“My supervisor’s values and culture provide a good fit with the things that I value in life”). Thus, it was apparent there was enough information in the data to make further analysis worthwhile. Consequently, the constructs’ measurement properties were computed.
using the WarpPLS program (Kock 2012) and the results obtained are discussed in the next section.

*The construct’s measurement properties*

An initial analysis of the constructs’ measurement properties suggested a small number of items did not relate as well to their constructs as had been expected, as they had low loadings (less than 0.50). These items were removed iteratively until this problem was resolved. The removal of these items did not materially change the nature of the relevant constructs, as the correlations between the original and revised scales ranged from 0.86 to 0.98, which suggests the revised scales can be safely used (Thomas, Soutar & Ryan 2001). The number of original and remaining items in each scale and their means and standard deviations can be seen in Table 5-1.

The highest means were for the three values-congruence constructs (congruence with the work group mean was 4.63, congruence with the supervisor mean was 4.46 and congruence with the organisation mean was 4.52), whereas the lowest mean was recorded for one of the organisational change recipients’ beliefs constructs (valence mean was 2.84). These results suggest participants generally rated their values-congruence as high in all three categories, but their perception of the expected positive outcomes from the change for themselves was generally lower.

Standard deviations (SD) were highest for the values-congruence constructs (work group SD was 1.45, supervisor SD was 1.53 and organisation SD was 1.54), but the SDs were lower for the other constructs, fluctuating between quality of communication within the organisation (0.74) and the organisational change recipients’ beliefs’ appropriateness dimension (1.05). Overall there was sufficient variation in the constructs to suggest further analysis was likely to be worthwhile.
Internal consistency was assessed for each of the revised constructs by computing the Composite Reliability (CR) and Cronbach’s alpha coefficients, which are also shown in Table 5-1. The results suggested all of the constructs were reliable, with alpha coefficients ranging from 0.77 (OCRB Principal Support) to 0.98 (values-congruence with organisation), with most over 0.90, similarly the CR coefficients ranged from 0.87 (OCRB Principal Support) to 0.99 (values-congruence with the organisation), with most over 0.90. As all exceeded the suggested minimum of 0.70 (Kock 2012), most by a considerable margin, all of the constructs were considered reliable and retained at this stage.

As was noted in Chapter Four, convergent validity was assessed by computing the constructs’ average variance extracted (AVE) scores, as suggested by Fornell and Larcker (1981). They argued an AVE score of 0.50 or more implied there was more information than noise in the construct, which is seen as a good measure of convergent validity. The AVE scores, which are also provided in Table 5-1, ranged from 0.69 (OCRB Discrepancy) to 0.96 (values-congruence with the organisation). Clearly all of the AVE scores are considerably higher than the recommended minimum of 0.50, suggesting all of the constructs had convergent validity and that they should be retained for further analysis.
Table 5-1: The Constructs’ Descriptive Statistics and Measurement Properties

<table>
<thead>
<tr>
<th>Construct</th>
<th># original items</th>
<th># final items</th>
<th>Mean</th>
<th>SD</th>
<th>Alpha</th>
<th>CR</th>
<th>AVE Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values-congruence with workgroup</td>
<td>3</td>
<td>3</td>
<td>4.63</td>
<td>1.45</td>
<td>0.95</td>
<td>0.97</td>
<td>0.91</td>
</tr>
<tr>
<td>Values-congruence with supervisor</td>
<td>3</td>
<td>3</td>
<td>4.46</td>
<td>1.53</td>
<td>0.97</td>
<td>0.98</td>
<td>0.95</td>
</tr>
<tr>
<td>Values-congruence with organisation</td>
<td>3</td>
<td>3</td>
<td>4.52</td>
<td>1.54</td>
<td>0.98</td>
<td>0.99</td>
<td>0.96</td>
</tr>
<tr>
<td>Trust in the organisation</td>
<td>7</td>
<td>5</td>
<td>3.36</td>
<td>1.00</td>
<td>0.96</td>
<td>0.96</td>
<td>0.82</td>
</tr>
<tr>
<td>Communication within the organisation</td>
<td>6</td>
<td>6</td>
<td>3.71</td>
<td>0.74</td>
<td>0.92</td>
<td>0.94</td>
<td>0.71</td>
</tr>
<tr>
<td>Organizational Change Recipients' Beliefs (Discrepancy)</td>
<td>5</td>
<td>5</td>
<td>3.64</td>
<td>0.80</td>
<td>0.89</td>
<td>0.92</td>
<td>0.69</td>
</tr>
<tr>
<td>Organizational Change Recipients' Beliefs (Appropriateness)</td>
<td>5</td>
<td>5</td>
<td>3.35</td>
<td>1.05</td>
<td>0.97</td>
<td>0.97</td>
<td>0.88</td>
</tr>
<tr>
<td>Organizational Change Recipients' Beliefs (Principal Support)</td>
<td>6</td>
<td>3</td>
<td>3.81</td>
<td>0.75</td>
<td>0.77</td>
<td>0.87</td>
<td>0.70</td>
</tr>
<tr>
<td>Organizational Change Recipients' Beliefs (Efficacy)</td>
<td>5</td>
<td>3</td>
<td>3.64</td>
<td>0.85</td>
<td>0.83</td>
<td>0.89</td>
<td>0.75</td>
</tr>
<tr>
<td>Organizational Change Recipients' Beliefs (Valence)</td>
<td>5</td>
<td>3</td>
<td>2.84</td>
<td>0.98</td>
<td>0.89</td>
<td>0.93</td>
<td>0.76</td>
</tr>
</tbody>
</table>
Discriminant validity was also assessed using Fornell and Larcker’s (1981) approach. They suggested discriminant validity could be assumed between two constructs if the square root of their AVE scores were greater than the correlation between them. This information is shown in Appendix D. Unfortunately, not all of the construct pairs met the Fornell and Larcker requirement, suggesting discriminant validity could not be assumed for each of the model’s constructs. In particular, the correlation between valence and appropriateness was very high (0.90), while the square root of the valence construct was 0.82. Thus, multicollinearity was likely to be a problem and this issue was examined further.

While a number of suggestions have been made as to how the presence of multicollinearity might be assessed, Kock (2015b) has recently suggested the use of a full collinearity test in which variance inflation factor (VIF) scores are computed for each construct. When a common factor approach to estimating the “outer model” is used, any value above 5.00 suggests multicollinearity is likely to be an issue (Kock & Lynn 2012). This test is provided in the WarpPLS software package that was used here. This step suggested there were issues for two of the endogenous constructs (appropriateness (VIF = 8.72) and valence (VIF=6.99)), which was not surprising as their correlation was 0.90, as was noted earlier. These results suggested the suggested OCRB subscales (Armenakis et al. 2007) might not be distinct in the current research context. It was therefore decided to use exploratory factor analysis (EFA) to examine these subscales in more detail before estimating the model.

An EFA of the OCRB’s 26 items found four factors with eigenvalues greater than one, whereas the original scale had five dimensions. However, a parallel analysis (Horn 1965) suggested three factors, as did Velicer’s (1976) minimum average partial test. Consequently, a three factor solution was seen as appropriate in this case; a position
supported when an ICLUST procedure was undertaken to see whether the three factor solution was “optimal” (Revelle 1979; Cooksey & Soutar 2006). The three factors in this case had coefficient betas of 0.79 or more, suggesting the factors were indeed unidimensional and that homogeneity could be safely assumed. After rotating the factors to obtain a simple structure, the factor loadings that are shown in Table 5-2 were obtained. As is clear from the Table, and not surprisingly, the appropriateness and valence subscales that were problematic were largely combined, along with some items from the efficacy subscale, although the discrepancy and principal support factors remained largely intact.

Consequently, the OCRB dimensions were estimated in this way in the present study, with three, rather than five, OCRB subscales being included in the estimated model, although only 19 items were retained, as the other seven items had low loadings. The first factor combined items from the originally suggested appropriateness, efficacy, and valence subscales and was termed a “positive views” factor (*Positive Views*). This new construct had a mean of 3.17 and a standard deviation of 0.94, suggesting an average positive view with enough variation to warrant further analysis. The construct also had a Cronbach’s alpha and composite reliability coefficient of 0.96 and an AVE score of 0.71, suggesting it had good measurement properties and should be retained. As noted earlier, the *Discrepancy* and *Principal Support* subscales were found to be separate constructs and were retained in this way in the subsequent analysis.
Table 5-2: Factor Loadings of the OCRB Items

<table>
<thead>
<tr>
<th>Positive Views</th>
<th>Discrepancy</th>
<th>Principal Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>This change will benefit me.</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>With this change in my job, I will experience more self-fulfilment.</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>This organisational change will prove to be best for our situation.</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>The change in my job assignments will increase my feelings of accomplishment.</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>I believe the proposed organisational change will have a favourable effect on our operations.</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>The change that we are implementing is correct for our situation.</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>When I think about this change, I realise it is appropriate for our organisation.</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>The change in our operations will improve the performance of our organisation.</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Most of my respected peers embrace the proposed organisational change.</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>I will earn higher pay from my job after this change.</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>The majority of my respected peers are dedicated to making this change work.</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>The top leaders in this organisation are “walking the talk”.</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>I am capable of successfully performing my job duties with the proposed organisational change.</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>I can implement this change in my job.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the capability to implement the change that is initiated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We need to improve the way we operate in this organisation.</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>We need to improve our performance by implementing an organisational change</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>We need to change the way we do some things in this organisation.</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>We need to improve our effectiveness by changing our operations.</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>A change is needed to improve our operations.</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>My immediate manager is in favour of this change.</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>My immediate manager encourages me to support the change.</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>The top leaders support this change.</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

All loadings of less than 0.50 are hidden to help interpretation
The final issue examined was whether the revision had solved the discriminant validity issue. Consequently, the square roots of the relevant AVE scores were compared to the correlations between the combined factor and the model’s other constructs. The results, which can be seen in Appendix E, suggested the revision had removed the problem, as all of the correlations were now less than the square roots of the relevant AVE scores. Further, all of the full collinearity VIF scores were less than 5.00, supporting this suggestion. Appendix F provides information about the number of indicator items, full collinearity VIFs and AVE scores for the model’s revised constructs. These preliminary steps resolved the potential multicollinearity issues, allowing the suggested model to be estimated.

5.3 ASSESSING THE MODEL

5.3.1 THE SIGNIFICANCE AND RELEVANCE OF THE MODEL’S RELATIONSHIPS

As noted earlier, the WarpPLS program (Kock 2012) was used to estimate the relationships between employees’ perceived values-congruence and their beliefs relating to an organisational change and to see whether these beliefs were mediated by trust and the quality of communication in the organisation. The first step was to estimate a model in which values-congruence directly affected the outcome variables relating to employees’ beliefs. Following this, a model was estimated in which such values-congruence was mediated through the suggested constructs. All of the model’s constructs are identified in italics.

The direct, non-mediated model

This initial model had a reasonable fit, with a GoF (Tenenhaus et al. 2005) of 0.31. All three types of values-congruence significantly impacted on some, but not all of the change recipients’ beliefs. However, the inclusion of the PVCGroup construct led to a
Simpson’s Paradox, i.e., a correlation was positive, but the relevant path coefficient was negative (Kock 2016). As the PVCGroup construct did not have a significant effect on the outcome variables, it was decided to exclude it from further analysis. This resulted in the direct model shown in Figure 5-1, in which an * suggests a relationship significant at least at the 0.05 level, an ** suggests a relationship significant at least at the 0.01 level and an *** suggests a relationship that is significant at least at the 0.001 level.

As can be seen in the Figure, PVC Organisation impacted significantly on the Positive Views, Principal Support, and Discrepancy constructs. The path coefficients for these relationships were 0.39 for positive views and 0.22 for principal support (p < 0.001), whereas the remaining construct (Discrep) was only weakly impacted by PVCOrg construct with a path coefficient of 0.13 (p < 0.05). PVCSuper only affected the Positive Views factor with a path coefficient of 0.14 (p < 0.05).
These results suggested employees’ perceived values-congruence with their organisation and supervisors directly affected some of their beliefs about organisational change. In particular, perceived values-congruence with the organisation and with the supervisor influenced employees’ positive views about the change. These positive views related to a belief that the situational change strategy was appropriate for the organisation’s situation, employees possess the capacity to perform change-related tasks and that the change would lead to positive employee outcomes. These findings extend earlier research by Cable and Edwards (2004) that found employees’ values-congruence had a direct, positive effect on employees’ attitudes towards their organisation.

Additionally, perceived values-congruence with their organisation, but not with their supervisor, appeared to positively affect employees’ beliefs that they received support from their supervisors and managers during the change initiative. For Discrepancy and Psupport only PVC with the organisation was a significant predictor. However, three of the hypotheses were not supported (i.e. H1c, H2c, and H3c), as perceived values-congruence with the work group did not affect organisational change recipients’ beliefs.

As the current analysis was designed to investigate the effect the mediator constructs had on employees’ change related beliefs, it was decided to retain both PVC constructs (i.e. PVC Organisation and PVC Supervisor) in subsequent analyses, despite the limited impact of PVC Supervisor. The revised, mediated model included direct paths between the PVC constructs and the outcome variables that had been significant in the initial analysis. These direct paths were added to see whether the additional relationships were fully or partially mediated. This analysis followed suggestions made by Baron and Kenny (1986) and Frazier, Tix and Barron (2004) to assess mediation, namely:
1. All of the exogenous indicators (the PVC constructs) and mediating variables (trust and communication) should be significantly related to the outcome variables (OCR).B.

2. The exogenous constructs (PVC constructs) should have a significant relationship with the mediating constructs.

3. The relationship between the exogenous and endogenous constructs should not be significant, or should be significantly reduced for partial mediation, when the mediators are introduced into the model.

Table 5-3 suggests Trust and the Quality of Communication were reasonably well predicted by the PVC constructs, as they had $R^2$ values of 0.59 and 0.35 respectively. Further, both PVC constructs had significant positive effects on each of the mediating constructs. None of the relationships between PVC Supervisor and the OCRB constructs were significant, suggesting they were fully mediated. While the path between PVC Organisation and Discrepancy was significant, it had an incorrect sign, suggesting it should also be removed, as it created a Simpson’s paradox. Consequently, the fully mediated model was estimated (Appendix G).

As can be seen in Table 5-3, the results provide support for the suggestion that the relationships between PVC Organisation and PVC Supervisor and the various OCRB constructs can best be modelled as being fully mediated through Trust and Quality of Communication. The model provides support for H1 and H2, as well as for H4 and H5, as these paths were all significant and in the expected direction. Thus, all but one of the hypotheses from the original model were supported. The effects perceived values-congruence with the work group was expected to have on the outcome variables (H3) were not supported.
Table 5-3: Path Coefficients and $R^2$ Statistics for the Revised Model

<table>
<thead>
<tr>
<th>Construct</th>
<th>PVC Supervisor</th>
<th>PVC Organisation</th>
<th>Trust</th>
<th>Communication</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>0.32***</td>
<td>0.48***</td>
<td></td>
<td></td>
<td>0.59</td>
</tr>
<tr>
<td>Communication</td>
<td>0.17*</td>
<td>0.45***</td>
<td></td>
<td></td>
<td>0.35</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>-0.25***</td>
<td>0.47***</td>
<td>0.11</td>
<td></td>
<td>0.17</td>
</tr>
<tr>
<td>Positive Views</td>
<td>-0.03</td>
<td>-0.12</td>
<td>0.64***</td>
<td>0.16*</td>
<td>0.43</td>
</tr>
<tr>
<td>Principal Support</td>
<td>-0.12</td>
<td>0.41***</td>
<td>0.09</td>
<td></td>
<td>0.16</td>
</tr>
</tbody>
</table>

Tenenhaus GoF = 0.50

Note: * $p < 0.05$, *** $p < 0.001$

Interestingly, employees’ Positive Views were best predicted ($R^2 = 0.43$), while Discrepancy and Principal Support were less well predicted, as their $R^2$ values were 0.14 and 0.15 respectively. This was mainly due to the difference in the impact of Trust, as can be seen in the regression coefficients in Table 5-4. The Table also makes it clear that the Quality of Communications was much less important in understanding attitudes towards change, as it only had a significant influence on Positive Views (and this only at the $p = 0.04$ level). Further, all of $Q^2$ statistics were positive and well above the zero level, confirming the predictive relevance of the model’s paths (i.e. Trust: 0.51, Communication: 0.34, Discrepancy: 0.11, Positive Views: 0.47, and Principal Support: 0.22).
Table 5-4: Path Coefficients and $R^2$ Statistics for the Final Model

<table>
<thead>
<tr>
<th>Construct</th>
<th>VC Supervisor</th>
<th>VC Organisation</th>
<th>Trust</th>
<th>Communication</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>0.32***</td>
<td>0.48***</td>
<td></td>
<td></td>
<td>0.59</td>
</tr>
<tr>
<td>Communication</td>
<td>0.17*</td>
<td>0.45***</td>
<td></td>
<td></td>
<td>0.35</td>
</tr>
<tr>
<td>Discrepancy</td>
<td></td>
<td>0.30***</td>
<td>0.10</td>
<td></td>
<td>0.14</td>
</tr>
<tr>
<td>Positive Views</td>
<td></td>
<td>0.53***</td>
<td>0.15*</td>
<td></td>
<td>0.42</td>
</tr>
<tr>
<td>Principal Support</td>
<td></td>
<td>0.33***</td>
<td>0.08</td>
<td></td>
<td>0.15</td>
</tr>
</tbody>
</table>

Tenenhaus GoF = 0.50

Note: * p < 0.05, *** p < 0.001

Examining Some Potential Moderating Effects

The investigation turned to the evaluation of additional factors that were suggested to have a potential moderating effect on the model’s relationships. The first examined were people’s personal values (in particular their Openness-to-Change and Conservation values-orientations, as outlined in Chapter Two), after which the impacts of some socio-demographic factors were examined.

Schwartz’s higher order dimensions for the Openness-to-Change and Conservation values were computed, following Schwartz et al. 2012. As indicated in section 4.7, after subtracting CO from OC, a median split was conducted to produce two groups: an openness to change group (N = 127), and a conservation group (N = 124). The revised model was estimated for each group and the structural (inner model) paths in each case were compared using the approach suggested by Kock (2014). Contrary to expectations, there were no significant differences in any of the paths, suggesting personal values did not impact the relations between constructs in the model. This is at odds with findings from earlier research that suggested personal values influence employees’ willingness to change (e.g., Seppälä et al. 2012; Oreg & Berson 2011). As
these prior studies had looked at direct relationships, rather than moderating effects, this aspect was also examined. However, once again, no significant effect was found; supporting the suggestion that personal values did not impact on the OCRB constructs examined in this study.

It seems that it is not people’s values-orientations that affect their beliefs about organisational change but, rather, their perceptions about the similarities between their own values and those of their organisation and/or supervisor. The potential implications of the current findings are expanded on in the conclusions chapter.

*Socio-demographic factors*

The socio-demographic control variables were gender, age, education, and position in the organisation. These control variables were initially used to group the sample into two groups (e.g. older versus younger respondents) based on a median split and potential moderating impacts were examined in the same way as for the two values-orientation groups. However, no significant differences were found in any of the paths, suggesting the background variables examined did not have a moderating effect in this case. As these variables were also potentially control variables, models were also estimated with these background variables included as direct influences on the three OCRB constructs. However, in each case, no significant differences were found, suggesting background differences did not impact in this case and could be safely ignored in subsequent discussion.

5.4 **CHAPTER SUMMARY**

This Chapter provided evidence that the scales used were reliable and had convergent validity. However, there was a lack of discriminant validity in the OCRB scales that needed to be corrected. This led to a reduction in the number of OCRB dimensions
(from five to three), which resolved the problem. The initial analysis also suggested the PVC Work Group construct did not add value to the model; which led to it being removed.

The final model supported the original hypothesis that Trust and the Quality of Communication in an organisation mediated the relationships between perceived values-congruence and organisational change recipients’ beliefs. Interestingly, perceived values-congruence with the organisation had a significant influence on employees’ trust in their organisation and trust in particular improved beliefs about organisational change. It was also evident that people’s personal values and backgrounds did not influence any of the relationships in the model or any of the outcome constructs. The implications of these results are discussed in the final chapter.
Chapter Six

6 Conclusions and Implications

6.1 CHAPTER OVERVIEW

The present study set out to investigate the impact employees’ perceived values-congruence within their organisation had on their beliefs about organisational change. These beliefs are important as they have previously been suggested to influence the success or failure of organisational change implementations (e.g., Armenakis et al. 2007; Self 2007; Vakola 2014). The preceding chapters provided the foundations for the current investigation. After the research problem was outlined, relevant prior research in organisational change, values-congruence, and values were discussed. Following the proposition development, the methods used to test suggested relationships were then outlined and the results of the data analysis undertaken were presented. This final chapter, which draws some conclusions and suggests theoretical, as well as practical, implications, is divided into four sections:

1. The academic implications of the present study (Section 6.2).

2. The practical implications of the present study (Section 6.3).

3. Limitations and future directions (Section 6.4).

4. Concluding remarks (Section 6.5).
6.2 **Academic Implications of the Present Study**

The present research sought to answer a number of questions related to employees’ perceptions of their values-congruence with their organisation, their values-orientations and how these factors influenced employees’ beliefs about an organisational change. Briefly reiterated here, the research issue investigated was:

*Does perceived values-congruence between employees and their organisation and/or their personal values impact on these employees’ beliefs about organisational change implementation?*

While the current study suggests there was a significant relationship, in particular between the PVC constructs, trust and the change context beliefs, the sub-categorisation of these beliefs suggested by Armenakis et al. (2007) was not supported. The combination of three of the five beliefs (appropriateness, efficacy, and valence) that was needed might be explainable by employees feeling a change is appropriate only if they can expect a personal benefit or gain (valence) and if they feel they can perform the new tasks (efficacy). Even though a combination of some of the beliefs was seen as appropriate for the current research, it should be noted that the scale items used to measure the OCRBs were largely retained and found to be relevant, as is discussed next.

The specific questions investigated are re-stated here and the outcomes obtained are presented:

1. *Do employees’ perceived values-congruencies with their organisation, supervisors, and work group impact their beliefs about organisational change? If so, which values-congruence (i.e., congruence with the organisation, supervisor, or work group) impact most on employees’ beliefs about change?*
6.2.1 FINDINGS

The study supported Burnes and Jackson (2011) research that found values alignment within an organisation had a significant influence on employees’ acceptance of change. Further, Adkins, Ravlin and Meglino (1996) research was largely confirmed, as they found values-congruence in a work group was only relevant to group-task related work outcomes. Additionally, these outcomes supported research undertaken by Lamm, Gordon and Purser (2010), who found values-congruence with the organisation was more important for employee support for organisational change than was values-similarities within the work group. However, some of the expected effects employees’ values-orientation had on their change-related beliefs were not found in the current study. These findings are at odds with some previous research and are discussed in greater detail subsequently.

6.2.2 CONCLUSIONS

The current study provided support for the idea that employees’ perceived values-congruence with their organisation, as well as with their supervisors, influenced their beliefs about organisational change. Therefore, the two hypotheses relating perceived values-congruence to employee beliefs about organisational change were supported.

The study extended earlier research into the importance of values-congruence between employees and their organisation to the formation of positive, work related attitudes and behaviours (Amos & Weathington 2008; Burnes & Jackson 2011; Kalliath, Bluedorn & Strube 1999; Seong & Kristof-Brown 2012). As Kroeger (1995) noted, many people seek employment with organisations that reflect their own values, which, in turn, increases their job satisfaction and commitment to the organisation. Indeed, this relationship has been confirmed in a number of previous studies (Cable & Judge 1996;
Lauver & Kristof-Brown 2001; Ostroff 1993; Ostroff, Shin & Kinicki 2005; Posner 1992; Saks & Ashforth 1997). Thus, the current investigation adds support to the suggestion that employees’ values-congruence with their organisation has a significant influence on their beliefs about organisational change. However, the relationship between employees’ perceived values-congruence with work group members and beliefs about change was not significant.

*Perceived values-congruence with the organisation and OCRBs*

Employees’ values-congruence with their organisation had a strong direct influence on their *Positive Views* about change. As noted earlier, this construct resulted from combining the OCRB Appropriateness, Valence and Efficacy subscales. A significant relationship was also found between perceived values-congruence with the organisation and employees’ beliefs that they received support from their supervisors and managers (Principal Support). Perceived values-congruence between employees and their organisation also influenced employees’ recognition that there was a need for the change (Discrepancy).

*Perceived values-congruence with the supervisor and OCRBs*

The present study supports the results of prior research into the importance of perceived employee-supervisor values-congruence. As was the case in prior research, employee-supervisor values-congruence influenced beliefs towards organisational change, even though these effects were smaller than had been the case for perceived organisational values-congruence (Davis & Rothstein 2004; Meglino, Ravlin & Adkins 1989; Posner 2010). Prior studies had suggested PVC with the supervisors and work groups were of less importance to organisational outcomes than was PVC with the organisation (Lamm, Gordon & Purser 2010; Ostroff, Shin & Kinicki 2005) and this was the case here.
While there was evidence for the direct influence perceived values-congruence had on organisational change recipients’ beliefs, a further investigation was undertaken to see whether these influences were mediated by trust in the organisation or the quality of communication within the organisation. The research question asked was:

2. *Does employees’ perceived values-congruence affect the model’s suggested mediators? If so, which are impacted most by the various perceived values-congruence constructs (i.e., organisation, supervisor or work group)?*

The study suggested employees’ perceived values-congruence with their organisation strongly influenced their trust in the organisation and their perception of the quality of communication within the organisation, supporting previous suggestions made by Edwards and Cable (2009). Notably, there were differences between the types of perceived values-congruence categories, as is discussed subsequently.

*Perceived values-congruence and trust*

The results provide an important insight into the role perceived values-congruence plays in an organisation and the development of employees’ felt trust during times of organisational change. More than half of the variance in employees’ trust in the organisation during such times was explained by their perceived values similarities with their organisation and/or their supervisors.

This is an important outcome for organisational change investigators, because, even though previous research suggested trust was enhanced by similarities in values (Elangovan & Shapiro 1998; Mayer, Davis & Schoorman 1995; Sitkin & Roth 1993), the current results suggest trust in a changing work environment is strongly related to perceptions of values-congruity between employees and their organisation and
supervisors. This values-based trust appears to be of particular importance to the formation of change related beliefs, which is discussed in detail subsequently.

*Perceived values-congruence and the perception of quality of communication*

Perceived values-congruence between employees and their supervisor and/or organisation also had a significant effect on perceptions of the quality of communication during organisational change. This is an important outcome when considered in light of the findings of many qualitative and quantitative organisational change researchers, who agree good communication is an important and even essential part of creating employee involvement (Thomas, Zolin & Hartman 2009) and successfully implementing organisational change (Allen et al. 2007; By 2007; Lies 2012; Nelissen & van Selm 2008; Salem 2008; Tucker, Yeow & Viki 2013).

These findings are of particular significance because, even though most prior investigations found support for the importance of change-related communication (e.g., Bernerth 2004), no previous studies were found that investigated the source of employees’ perception of the quality of communication. The present results suggest such perception is influenced to some extent by perceived values-congruence.

3. *If perceived values-congruence affects employees’ beliefs about organisational change, is this relationship mediated by employees’ felt trust, and/or their perception of quality of communication within their organisation?*

*The model’s mediating effects*

The relationship between employees’ perceived values-congruence with their organisation and their change-related beliefs was fully mediated by their trust in their organisation and their perception of the quality of the organisation’s communication. Not surprisingly, trust had more influence on employees’ beliefs that the change was
appropriate, that they received principal support during the change, that they had the required efficacy to change and that they benefited from the change. The results supported the suggested relationships between perceived values-congruence and employee beliefs about a change, although these relationships were fully mediated within the model. The importance of these mediating constructs is discussed next.

**Trust and organisational change recipients’ beliefs**

Trust, in particular, seemed to enhance employees’ ‘Positive Views’, and explained more than half of the variance in these endogenous variables. Trust also had notable effects on the remaining two endogenous variables of Principal Support and the belief in the necessity to change (Discrepancy).

Trust had previously been found to be an important mediator between values-congruence and positive organisational outcomes (Edwards & Cable 2009). The results of the current analysis expand on these findings by providing strong support for the suggestion that employees’ felt trust during periods of organisational change positively influenced their beliefs about that organisational change. These beliefs, in turn, have been found to be an important determinant of employees’ readiness for change (Caldwell 2011; Vakola 2014), and determined whether people were committed to or resisted a change (Armenakis, Harris & Mossholder 1993; Armenakis et al. 2007; Oreg, Vakola & Armenakis 2011).

The present findings support previous results from investigations into trust and its effect on change related outcomes (Ashford 1988; Bordia et al. 2004b; Neves & Caetano 2009). However, no prior research has investigated the perceived values-congruence > trust > change-related beliefs relationship that was examined here.
Quality of communication and organisational change recipients’ beliefs

Quality of communication during times of change also influenced employees’ beliefs. Whilst this impact was less than that of the Trust construct, it was significant and explained, at least in part, a strengthening of the three investigated beliefs constructs (i.e., Positive Views, Principal Support, and Discrepancy).

This outcome is a notable contribution to past research that investigated the importance of communication during organisational change (Allen et al. 2007; Bordia et al. 2004b; Claiborne et al. 2013; Qian & Daniels 2008; Salem 2008; Sias 2005). Even though many studies considered communication as important for successful change implementation, no previous research has investigated the mediating effect of the quality of communication.

4. Which personal values-orientations, if any, influence employees’ development of positive beliefs about organisational change implementations?

Individuals’ values and organisational change recipients’ beliefs

Even though much of the reviewed values literature suggested there could be relationships between an individual’s values-orientation and their organisational change related beliefs, the existence of such a connection was not supported here. Previous research had suggested and found relationships between an employee’s values and factors that have the potential to affect organisational change implementations (Amis, Slack & Hinings 2002; Azmi 2008; Bohns & Flynn 2013; Bouckenooghe et al. 2005; Calogero, Bardi & Sutton 2009; Curdt-Christiansen & Silver 2012; Fjeldstad et al. 2012; Gorgievski, Ascalon & Stephan 2011; Hornung & Rousseau 2007; Levay 2010; Marginson 2009; McCartt & Rohrbaugh 1995; Ng et al. 2007; Oreg & Berson 2011;
Van Emmerik, Bakker & Euwema 2009). However, no prior research has explored the relationships between the values dimensions included in the current analysis (i.e. Openness-to-Change, and Conservation values) and the organisational change recipients’ beliefs that were investigated here.

This seems to suggest that, while values have been found to impact on some change related attitudes and behaviours; they had little impact on the formation of beliefs about organisational change. The current analysis suggests it is more important to have value similarities than what these values actually are. This offers opportunities for future research, which are discussed in a later section.

*Socio-demographic variables*

As expected from the results of earlier research (Oreg, Vakola & Armenakis 2011), none of the socio-demographic factors had a significant influence on any of the organisational change related outcomes.

In sum, the current study improved our understanding of the factors that affect organisational change implementations. In particular, it provided strong support for the importance of employee perceived values-congruence with their organisation and their supervisors, and the development of change related trust and employee perception of quality of communication. These two factors had a strong, positive correlation with the outcome variables that defined employees’ change related beliefs. In particular, trust had a significant influence on how employees formed positive beliefs about the necessity for change, the principal support they would receive, as well as positive views in relation to the appropriateness of the change, their own ability to perform the new tasks and the personal rewards they would gain from the change. Communication quality also affected change recipients’ beliefs, although to a lesser extent.
Importantly, it was respondents’ perception of values-congruence, rather than their actual values, that influenced beliefs about change. It seems that, as long as employees believe their values are congruent with those of their organisation and supervisors, it does not matter what those values are. These results contribute to the organisational change-literature by offering a new perspective on the role perceived values-congruence plays in the development of beliefs about a change, which is a pre-requisite for employees’ change readiness (Armenakis & Harris 2009; Armenakis et al. 2007; Bernerth 2004; Gondo, Patterson & Palacios 2013; Mazur, Rothenberg & McCreery 2011; Self 2007; Vakola 2014).

6.3 PRACTICAL IMPLICATIONS OF THE RESULTS

The results suggest employees’ perceived values-congruence with their supervisors and organisations should be considered when planning an organisational change strategy. As perceived values-congruence had a number of positive effects, it should be treated as an important additional change antecedent and measured prior to planning change. The completion of a simple questionnaire, similar to the one used here, would be useful and the collection of some qualitative information (e.g. through interviews with managers and staff) could prove helpful (e.g., Armenakis & Harris 2009). Additionally, the results of the current study for the effects of PVC with the workgroup should not be neglected.

The lack of influence of PVC on the workgroup level suggests that monies and energy spend on team-building during organisational change might be better spend by ensuring that the organisation’s values (or the values it wishes to project following the change) will be aligned with those of its employees.

Even though employees’ personal values did not affect the investigated outcomes, it would also be useful to understand employees’ values as they would suggest the extent of their similarity with the organisation. When differences in values are identified,
Change leaders would be well advised to address these gaps when designing change messages and vision and mission statements (Agnew & VanBalkom 2009; Bouckenooghe, Devos & Van den Broeck 2009; Cole, Harris & Bernerth 2006). This would help to improve the perception of values-alignment that is so important.

Further, trust must be considered. Previous investigations have found trust is vital to achieving change-related goals (Eby et al. 2000; Morgan & Zeffane 2003). Importantly, trust reduces employees’ anxiety (Mishra & Spreitzer 1998), ensuring they are ready and open to organisational change (Devos, Buelens & Bouckenooghe 2007). As values-congruence influences employees’ trust (Smollan 2013), there is an additional reason to be concerned about values alignment.

Change-related communications should include information that supports the formation of positive organisational change beliefs, as this will assist the change process. This recommendation is in line with previous suggestions about the necessity of including these beliefs when composing messages that need to be conveyed during an organisational change (Armenakis et al. 2007; Bernerth 2004; Self 2007; Vakola 2014).

As previous studies have found, people’s perceptions of their values-congruence with an organisation can change (Cable & Parsons 2001), particularly during organisational transformations (Lamm, Gordon & Purser 2010), it would be advisable for change leaders to incorporate a picture of a desirable values future for their organisation in their change messages. This would be especially true in situations in which there was little values alignment, because, as Neves and Caetano (2009) have noted, people who feel intended organisational values after the change would be congruent with their own values are likely to display increased commitment and enthusiasm.

Additionally, human resource managers should target new employees whose values are congruent with the “future” organisation’s values (Cable & Judge 1997). This could be
achieved by actively managing the information made available to job applicants (Swider, Zimmerman & Barrick 2015). Based on the current findings, such a strategy, when combined with an internal socialisation strategy designed to align existing employees’ values (De Cooman et al. 2009), would be likely to result in positive organisational change (Kristof 1996; Yu 2014).

In sum, the current study made important contributions to our understanding of the role perceived values-congruence and employees’ values play in the implementation of organisational change. In particular, the study suggested two important change antecedents (trust and quality of communication) were influenced by the perceived values-alignment between employees and their organisations and supervisors. Consequently, change leaders need to understand values-congruence before planning any change and to take appropriate measures to remedy such misalignments if they occur. Organisations would benefit from improved trust and improved perceptions about the quality of communications, which would help develop positive, change related beliefs.

6.4 LIMITATIONS AND FUTURE RESEARCH

As is the case with all research, there were a number of limitations that should be considered when reviewing the results. Firstly, the online data collection method used resulted in self-report, quantitative data, which meant there was no opportunity to probe deeper. This limitation offers an opportunity for future researchers to collect qualitative data collection to add to the information suggested in this study.

Further, time and money constraints, combined with the online data collection method used, did not allow data to be collected from any particular organisation that was implementing a specific type of organisational change. Future research is needed to see whether outcomes are influenced by the context of the change (e.g. organisational
conditions or content related factors, factors that are related to the nature of the change). Moreover, the sample in the present study was a ‘one-shot’ sample of workers in Australia and longitudinal data and/or data from other locations might be usefully collected to see whether the results are replicated in those additional settings. A longitudinal study would help us see whether perceived values-congruency changes if the practical recommendations that have been suggested here were implemented. Following this approach, it would also be interesting to see whether long-term change outcomes are affected by changes in perceptions of values-congruence.

Lastly, while the study showed non-significant relationships between people’s personal values and their organisational change related beliefs, there may be personal values related effects within organisational change processes and these potential influences should be explored.

6.5 CONCLUDING REMARKS

The present study provides strong support for the suggestion that organisational change is a complex endeavour. It seems clear that perceived values-congruence has a significant effect on the factors that determine the success or failure of any organisational change implementation and, consequently, needs to be carefully considered. Further, it seems the development of trust and quality communications can significantly influence employees’ beliefs about a change process. These factors should, therefore, not be neglected.
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### Appendices

**APPENDIX A: PERSON-ORGANISATION FIT AND VALUES-CONGRUENCE IN THE ORGANISATIONAL CHANGE LITERATURE SUMMARY**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Topics covered</th>
<th>Methodology</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person-Environment (P-E) fit research:</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cable and Edwards (2004)</td>
<td>Complementary and supplementary fit: A theoretical and empirical integration</td>
<td>Examination of the traditional assumptions of complimentary and supplementary fit between a person and their environment.</td>
<td>Path analysis by descriptive statistical means.</td>
<td>Integrative model dominates the individual models in a way that both traditions simultaneously predict outcomes in different ways.</td>
<td>The use of intraperson data (potential to inflate overall correlations) Subjective data collected. External validity questionable.</td>
</tr>
<tr>
<td>Seong and Kristof-Brown (2012)</td>
<td>Testing multidimensional models of person-group fit</td>
<td>Investigation into the multidimensionality of P-G fit. Proposal that fit could be values, personality or KSA-based, or an aggregate of the three. Proposal that perceived fit predicts commitment to the team, employee voice, and knowledge sharing. All affecting employee task performance</td>
<td>Longitudinal study analysed with SEM</td>
<td>Values-fit predicted team commitment, personality-fit influenced voice behaviour and KSA-fit influenced knowledge sharing. The aggregate model was not supported.</td>
<td>Some multicollinearity present. Basic approach to determine the aggregate constructs. Data collected in a collectivistic country (Korea).</td>
</tr>
<tr>
<td>Kristof-Brown, Zimmerman and Johnson (2005)</td>
<td>Consequences of individuals’ fit at work: A meta-analysis of person-job (P-J), person-organisation (P-O), person-group (P-G), and person-supervisor (P-S) fit</td>
<td>Investigation into the relationship between pre-entry and post-entry individual-level criteria and the different types of fit. Dependent variables of job satisfaction, organisational commitment and intention to resign were investigated.</td>
<td>Meta-analysis</td>
<td>PJ fit found to have strong correlations with job satisfaction, organisational commitment and intentions to resign (-). Similar results were found for P-O fit which also included a moderate relationship with trust in management. Only moderate correlations between P-G and the dependent variables. Reliabilities are not reported for all studies. Acknowledgement that reviewed studies almost always contain methodological flaws that can affect the reliability of the results.</td>
<td>Reliabilities are not reported for all studies. Acknowledgement that reviewed studies almost always contain methodological flaws that can affect the reliability of the results.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Topics covered</td>
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<td>Findings</td>
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<tr>
<td>Muchinsky and Monahan (1987)</td>
<td>What is person-environment congruence? Supplementary versus Complementary Models of Fit</td>
<td>Proposition that P-E fit can be either supplementary or complimentary. Supplementary fit was proposed as the congruence between people in a given environment; complimentary fit was the match between an employee’s talents and an organisation’s needs.</td>
<td>Theory development rather than Theory testing.</td>
<td>Supplementary fit indices are such variables as individual satisfaction, performance, and tenure, whereas complimentary fit is judged by organisational level variables.</td>
<td>The authors warn against measuring variables only because they are present but might not have relevance to the outcomes. A lack of environmental measures that could be matched to individual variables.</td>
</tr>
<tr>
<td>Nyambega, Daniels and Sparrow (2001)</td>
<td>Why Fit Doesn’t Always Matter: The Impact of HRM and Cultural Fit on Job Involvement of Kenyan Employees</td>
<td>Investigation into person-organisation fit of human resources management with employees’ preferences (values orientations) and the impact on levels of job involvement in sub-Saharan Africa</td>
<td>Multiple Regression Analysis</td>
<td>Acknowledgement that results might not be applicable to developed countries Small statistical power due to sample size</td>
<td>P-O fit partially predicted job involvement, but individual values seemed of higher importance than P-O fit</td>
</tr>
<tr>
<td>Tsui and O'Reilly I. I. (1989)</td>
<td>Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads</td>
<td>Examination of six demographic variables: age, gender, race, education, company &amp; job tenure</td>
<td>Multiple regression analysis. One- and two-way ANOVA.</td>
<td>Increased dissimilarity in superior-subordinate characteristics associated with lower effectiveness, less personal attraction &amp; increased role ambiguity</td>
<td>None reported. Sample from one organisation in the US only.</td>
</tr>
</tbody>
</table>

**Person-Organisation (P-O) fit research:**

(Bretz & Judge 1994) Expansion of the Theory of Work Confirmatory Factor | Results provided new support for Self-report data variances had the
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Topics covered</th>
<th>Methodology</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person–Organization Fit and the Theory of Work Adjustment - Implications for Satisfaction, Tenure, and Career Success</td>
<td>Adjustment (TWA) to specific organisational environments, including perspectives form the P-O fit theories that posited that this fit has a direct influence on job satisfaction, tenure, career success and job level attained.</td>
<td>Hierarchical Regression Analysis.</td>
<td>the efficacy of the TWA. Support for the hypothesized influences of fit on tenure and job satisfaction. It appeared that salary and job level attained were indirectly affected by P-O fit.</td>
<td>potential to bias the observed relations. Follow up survey was not possible due to monetary constraints. Difference scores potentially failed to account for independent effects of person or environment. Absence of longitudinal data.</td>
<td></td>
</tr>
<tr>
<td>Cable and DeRue (2002)</td>
<td>Do employees develop perceptions about three different types of fit: person-organisation, needs-supply, and demands-abilities?</td>
<td>Confirmatory Factor analysis.</td>
<td>Strong support found that employees differentiate between the three types of fit.</td>
<td>Antecedents to fit perceptions not investigated. Possible two-component structure (supplementary &amp; complimentary) of person-organisation fit not investigated.</td>
<td></td>
</tr>
<tr>
<td>Chatman (1989)</td>
<td>Individual values are compared to organisational values to determine fit and changes in values, norms and behaviour</td>
<td>Q-Sort Method consisting of the Organisational Culture Profile and the Knowledge, Skills and Abilities Profile (which was not discussed in the current paper)</td>
<td>P-O fit can provide an index for specific values and norms. This enables the prediction of changes in individual values and behaviour as well as organisational values and norms,</td>
<td>Theory development leaves several questions unanswered, e.g.: How enduring are individual characteristics? How strong need values be to influence different types of people</td>
<td></td>
</tr>
<tr>
<td>De Cooman et al. (2009) Person-organization fit: Testing socialization and attraction-</td>
<td>Use of the attraction-selection-attrition (ASA) framework to investigate relationships between</td>
<td>Multivariate correlation. Paired T-tests. One-predictor logistics</td>
<td>Results indicated that lower perceived fit between the individuals and</td>
<td>Limited external validity due to similar educational backgrounds of</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Topics covered</td>
<td>Methodology</td>
<td>Findings</td>
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</tr>
<tr>
<td>Kristof (1996)</td>
<td>employees’ work values and organisational value (person-organisation fit)</td>
<td>model.</td>
<td>organisational values resulted in a higher likelihood that employees left the organisation. Conclusion that socialization and attrition mechanism were present simultaneously.</td>
<td>participants.</td>
<td></td>
</tr>
<tr>
<td>Posner (1992)</td>
<td>Definition and model development of P-O fit, incorporating supplementary and complimentary fit perspectives. Distinction made between perceived and actual fit.</td>
<td>Recommended methodologies for fit measures are a combination of traditional measures (e.g., D, D squared, Q-sort) and polynomial regression analysis</td>
<td>Substantial support found for a positive relationship between all types of P-O fit and individuals’ preferences for organisations. Support found for the notion that perceived fit, as opposed to actual fit, is more important for organisation selection decisions.</td>
<td>Theory development leaves several questions unanswered, e.g.: potential conflict if fit exists on one concept but not another</td>
<td></td>
</tr>
<tr>
<td>Bouckenooghe et al. (2005)</td>
<td>Research into P-O fit (values congruency) and the moderating impact of demographic variables</td>
<td>ANOVA, Multiple regression analysis</td>
<td>P-O values congruency was directly related to positive work attitudes. Demographics (e.g., age, gender, ethnic background, etc.) did not moderate the relationship.</td>
<td>Clarification needed on what factors cause people to align their values with their organisation’s values</td>
<td></td>
</tr>
</tbody>
</table>

**Values-congruence research:**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Topics covered</th>
<th>Methodology</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bouckenooghe et al. (2005)</td>
<td>Investigation into the relationships among stress, values, and</td>
<td>Hierarchical Regression</td>
<td>People with high value conflict reported higher</td>
<td>Non-experimental research</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Topics covered</td>
<td>Methodology</td>
<td>Findings</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The Prediction of Stress by Values and Value Conflict</td>
<td>Analysis levels of stress. Gender differences observed between the value types and stress where women experienced higher levels of stress during value conflict.</td>
<td>value conflict. Values dimensions investigated were: Openness to Change, Conservation, Self-transcendence, and Self-enhancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finegan (2000)</td>
<td>Exploration of the relationship between personal and organisational values and the effects on organisational commitment</td>
<td>Perception of values-congruence between employee and organisational values was found to increase organisational commitment.</td>
<td>Hierarchical Multiple Regression Analysis</td>
<td></td>
</tr>
<tr>
<td>Lamm, Gordon and Purser (2010)</td>
<td>The Role of Value Congruence in Organizational</td>
<td>Investigated the relationship between perceived value congruence and employee behavioral support for</td>
<td>Hierarchical Linear Regression Analysis</td>
<td>Results indicated that VC was positively associated with behavioural support for</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Topics covered</td>
<td>Methodology</td>
<td>Findings</td>
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</tr>
<tr>
<td>Change</td>
<td>organisational change</td>
<td></td>
<td>change. Only some but not all types of VC were significant.</td>
<td>self-report data and single method analysis. Possibly affected by change context.</td>
</tr>
<tr>
<td>Marginson (2009)</td>
<td>Value systems as a mechanism for organizational change</td>
<td>Investigation into the use of values as mechanism to change. Issues examined were purpose, implementation, and intended as well as unintended effects that might arise from using value systems as management control mechanism to effect change.</td>
<td>Mixed-Method Analysis. Interviews were the main source of data collection.</td>
<td>Overall findings suggested that the use of value systems to effect organisational change could be as problematic as it could be beneficial. Values systems might be useful for the communication of a set of specific values to effect change.</td>
</tr>
<tr>
<td>Ostroff, Shin and Kinicki (2005)</td>
<td>Multiple perspectives of congruence: relationships between value congruence and employee attitudes</td>
<td>Multiple types of VC with person-environment (P-E), person-person (P-P) and perceptual fit, and their relative importance across two hierarchical levels (group &amp; manager) and across multiple dimensions of values.</td>
<td>Hierarchical polynomial regression analysis</td>
<td>P-E fit found to be most important for job satisfaction, organisational commitment and turnover intentions. P-P fit found to have no significant influence on these outcomes. P-E fit found most important with group but not with managers. Perceptual fit most important for fit with managers.</td>
</tr>
</tbody>
</table>
APPENDIX B: BACKGROUND QUESTIONS

Which of the following best describes your work status?

- □ Employed Full time
- □ Employed Part time
- □ Casual

How many years have you worked for this organisation?

What best describes your position at work?

- □ In non-supervisory position
- □ Supervisor
- □ Mid-management
- □ Senior Management

In what year were you born?

What is your gender?

- □ Male
- □ Female

What is the highest level of education you have completed?

- □ Some high school
- □ High School completed
- □ Trade or technical qualification
- □ Some University
- □ University Degree
### APPENDIX C: MEANS AND STANDARD DEVIATIONS OF SCALE ITEMS.

#### Values Congruence

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The things that I value in life are very similar to the things that my work group values.</td>
<td>4.60</td>
<td>1.51</td>
</tr>
<tr>
<td>My personal values match my work group’s values and culture.</td>
<td>4.61</td>
<td>1.53</td>
</tr>
<tr>
<td>My work group’s values and culture provide a good fit with the things that I value in life.</td>
<td>4.70</td>
<td>1.49</td>
</tr>
<tr>
<td>The things that I value in life are very similar to the things that my organisation values.</td>
<td>4.49</td>
<td>1.58</td>
</tr>
<tr>
<td>My personal values match my organisation’s values and culture.</td>
<td>4.49</td>
<td>1.58</td>
</tr>
<tr>
<td>My organisation’s values and culture provide a good fit with the things that I value in life.</td>
<td>4.59</td>
<td>1.58</td>
</tr>
<tr>
<td>The things that I value in life are very similar to the things that my supervisor values.</td>
<td>4.46</td>
<td>1.54</td>
</tr>
<tr>
<td>My personal values match my supervisor’s values and culture.</td>
<td>4.44</td>
<td>1.59</td>
</tr>
<tr>
<td>My supervisor’s values and culture provide a good fit with the things that I value in life.</td>
<td>4.47</td>
<td>1.59</td>
</tr>
</tbody>
</table>

#### Communication

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>People in this organisation understand what I say.</td>
<td>3.70</td>
<td>0.85</td>
</tr>
<tr>
<td>Communication is open with others in this organisation.</td>
<td>3.55</td>
<td>1.02</td>
</tr>
<tr>
<td>I understand what people in this organisation say to me.</td>
<td>3.88</td>
<td>0.80</td>
</tr>
<tr>
<td>I have clear conversations with people in this organisation.</td>
<td>3.77</td>
<td>0.87</td>
</tr>
<tr>
<td>I have honest discussions with other people in this organisation.</td>
<td>3.73</td>
<td>0.89</td>
</tr>
<tr>
<td>Other people in this organisation understand me.</td>
<td>3.61</td>
<td>0.89</td>
</tr>
<tr>
<td>Trust</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
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<td>----------------</td>
</tr>
<tr>
<td>I believe my employer has high integrity.</td>
<td>3.41</td>
<td>1.10</td>
</tr>
<tr>
<td>I fully trust my employer.</td>
<td>3.13</td>
<td>1.19</td>
</tr>
<tr>
<td>I can expect my employer to treat me in a consistent and predictable fashion.</td>
<td>3.46</td>
<td>1.07</td>
</tr>
<tr>
<td>My employer is always honest and truthful.</td>
<td>3.18</td>
<td>1.13</td>
</tr>
<tr>
<td>In general, I believe my employer’s motives and intentions are good.</td>
<td>3.56</td>
<td>1.01</td>
</tr>
<tr>
<td>I don’t think my employer treats me fairly.</td>
<td>3.35</td>
<td>1.20</td>
</tr>
<tr>
<td>My employer is open and upfront with me.</td>
<td>3.27</td>
<td>1.12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organisational Change Recipients' Beliefs</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This change will benefit me.</td>
<td>3.08</td>
<td>1.16</td>
</tr>
<tr>
<td>Most of my respected peers embrace the proposed organisational change.</td>
<td>3.32</td>
<td>1.09</td>
</tr>
<tr>
<td>I believe the proposed organisational change will have a favourable effect on our operations.</td>
<td>3.33</td>
<td>1.12</td>
</tr>
<tr>
<td>I have the capability to implement the change that is initiated.</td>
<td>3.52</td>
<td>0.98</td>
</tr>
<tr>
<td>We need to change the way we do some things in this organisation.</td>
<td>3.80</td>
<td>0.90</td>
</tr>
<tr>
<td>With this change in my job, I will experience more self-fulfilment.</td>
<td>2.97</td>
<td>1.13</td>
</tr>
<tr>
<td>The top leaders in this organisation are “walking the talk”.</td>
<td>3.25</td>
<td>1.08</td>
</tr>
<tr>
<td>The change in our operations will improve the performance of our organisation.</td>
<td>3.33</td>
<td>1.19</td>
</tr>
<tr>
<td>I can implement this change in my job.</td>
<td>3.61</td>
<td>0.96</td>
</tr>
<tr>
<td>We need to improve the way we operate in this organisation.</td>
<td>3.74</td>
<td>0.97</td>
</tr>
<tr>
<td>I will earn higher pay from my job after this change.</td>
<td>2.29</td>
<td>1.09</td>
</tr>
<tr>
<td>The top leaders support this change.</td>
<td>4.02</td>
<td>0.82</td>
</tr>
<tr>
<td>Organisational Change Recipients' Beliefs</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------------------------</td>
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<td>----------------</td>
</tr>
<tr>
<td>The change that we are implementing is correct for our situation.</td>
<td>3.37</td>
<td>1.09</td>
</tr>
<tr>
<td>I am capable of successfully performing my job duties with the proposed organisational change.</td>
<td>3.78</td>
<td>1.01</td>
</tr>
<tr>
<td>We need to improve our effectiveness by changing our operations.</td>
<td>3.59</td>
<td>0.94</td>
</tr>
<tr>
<td>The change in my job assignments will increase my feelings of accomplishment.</td>
<td>3.00</td>
<td>1.09</td>
</tr>
<tr>
<td>The majority of my respected peers are dedicated to making this change work.</td>
<td>3.44</td>
<td>1.00</td>
</tr>
<tr>
<td>When I think about this change, I realise it is appropriate for our organisation.</td>
<td>3.36</td>
<td>1.12</td>
</tr>
<tr>
<td>I believe we can successfully implement this change.</td>
<td>3.58</td>
<td>1.01</td>
</tr>
<tr>
<td>A change is needed to improve our operations.</td>
<td>3.55</td>
<td>1.02</td>
</tr>
<tr>
<td>My fringe benefits will remain the same after this change.</td>
<td>3.46</td>
<td>1.04</td>
</tr>
<tr>
<td>My immediate manager is in favour of this change.</td>
<td>3.72</td>
<td>1.01</td>
</tr>
<tr>
<td>This organisational change will prove to be best for our situation.</td>
<td>3.35</td>
<td>1.08</td>
</tr>
<tr>
<td>We have the capability to successfully implement this change.</td>
<td>3.61</td>
<td>0.94</td>
</tr>
<tr>
<td>We need to improve our performance by implementing an organisational change</td>
<td>3.55</td>
<td>0.98</td>
</tr>
<tr>
<td>My immediate manager encourages me to support the change.</td>
<td>3.70</td>
<td>0.87</td>
</tr>
</tbody>
</table>
**APPENDIX D: CORRELATIONS BETWEEN THE CONSTRUCTS AND THE SQUARE ROOTS OF THE AVE SCORES**

<table>
<thead>
<tr>
<th>Construct</th>
<th>PVCW</th>
<th>PVCS</th>
<th>PVCO</th>
<th>TRUST</th>
<th>COMM</th>
<th>DIS</th>
<th>APP</th>
<th>PSUP</th>
<th>EFF</th>
<th>VAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perc. Values-congruence with work group (PVCW)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Perc. Values-congruence with supervisor (PVCS)</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Perc. Values-congruence with organisation (PVCO)</td>
<td>0.79</td>
<td>0.74</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust in the organisation (TRUST)</td>
<td>0.56</td>
<td>0.61</td>
<td>0.67</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication within the organisation (COMM)</td>
<td>0.44</td>
<td>0.50</td>
<td>0.54</td>
<td>0.705</td>
<td>0.84</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational Change Recipients’ Beliefs (Discrepancy) (DIS)</td>
<td>0.13</td>
<td>0.10</td>
<td>0.13</td>
<td>0.27</td>
<td>0.24</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational Change Recipients’ Beliefs (Appropriateness) (APP)</td>
<td>0.34</td>
<td>0.41</td>
<td>0.46</td>
<td>0.63</td>
<td>0.50</td>
<td>0.56</td>
<td>0.94</td>
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<tr>
<td>Organisational Change Recipients’ Beliefs (Principal support) (PSUP)</td>
<td>0.13</td>
<td>0.20</td>
<td>0.23</td>
<td>0.39</td>
<td>0.35</td>
<td>0.42</td>
<td>0.53</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational Change Recipients’ Beliefs (Efficacy) (EFF)</td>
<td>0.27</td>
<td>0.31</td>
<td>0.36</td>
<td>0.54</td>
<td>0.49</td>
<td>0.46</td>
<td>0.69</td>
<td>0.53</td>
<td>0.86</td>
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<tr>
<td>Organisational Change Recipients’ Beliefs (Valence) (VAL)</td>
<td>0.37</td>
<td>0.38</td>
<td>0.47</td>
<td>0.61</td>
<td>0.51</td>
<td>0.43</td>
<td>0.82</td>
<td>0.37</td>
<td>0.61</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Note: Square roots of average variances extracted (AVEs) shown on diagonal.
### Appendix E: Correlations Among Latent Variables with Square Roots of the AVEs and P-values

<table>
<thead>
<tr>
<th>Construct</th>
<th>VCSuper</th>
<th>VCOrg</th>
<th>Trust</th>
<th>Communi</th>
<th>Discrep</th>
<th>Positive</th>
<th>Psupport</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCSuper</td>
<td>0.96</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>VCOrg</td>
<td>0.76***</td>
<td>0.97</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.64***</td>
<td>0.70***</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communi</td>
<td>0.53***</td>
<td>0.57***</td>
<td>0.75***</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrep</td>
<td>0.12*</td>
<td>0.16*</td>
<td>0.31***</td>
<td>0.28***</td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>0.44***</td>
<td>0.50***</td>
<td>0.69***</td>
<td>0.57***</td>
<td>0.60***</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>Psupport</td>
<td>0.23***</td>
<td>0.27***</td>
<td>0.46***</td>
<td>0.39***</td>
<td>0.49***</td>
<td>0.62***</td>
<td>0.76</td>
</tr>
</tbody>
</table>

Note: Square roots of average variances extracted (AVEs) are shown on the diagonal.

Note: * p < 0.05, ** p < 0.01, *** p < 0.001
## Appendix F: Final Model Constructs’ Number of Indicator Items, Full Collinearity VIFs, and AVE Scores

<table>
<thead>
<tr>
<th>Construct</th>
<th># original items</th>
<th># final items</th>
<th>Full coll. VIF</th>
<th>AVE Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values-congruence with supervisor</td>
<td>3</td>
<td>3</td>
<td>2.51</td>
<td>0.92</td>
</tr>
<tr>
<td>Values-congruence with organisation</td>
<td>3</td>
<td>3</td>
<td>2.91</td>
<td>0.93</td>
</tr>
<tr>
<td>Trust in the organisation</td>
<td>7</td>
<td>6</td>
<td>3.79</td>
<td>0.79</td>
</tr>
<tr>
<td>Communication within the organisation</td>
<td>6</td>
<td>6</td>
<td>2.35</td>
<td>0.65</td>
</tr>
<tr>
<td>Organizational Change Recipients’ Beliefs (Discrepancy)</td>
<td>5</td>
<td>5</td>
<td>1.71</td>
<td>0.62</td>
</tr>
<tr>
<td>Organizational Change Recipients’ Beliefs (Positive) (combined)</td>
<td>5+5+5</td>
<td>11</td>
<td>3.11</td>
<td>0.71</td>
</tr>
<tr>
<td>Organizational Change Recipients’ Beliefs (Principal Support)</td>
<td>6</td>
<td>3</td>
<td>1.71</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Source: WarpPLS Results table (Kock 2012)
APPENDIX G: THE FINAL MODEL (MEDIATOR MODEL)