Universiteit Leiden

What's in a message?

The effect of framing change communication messages on change resistance in professional employees

Masters thesis

Author: Joanne Langkamp (s1783343)

Supervisor: Joris van der Voet

Second reader: Sandra Groeneveld

TABLE OF CONTENTS

CHAPTER 1

1.1 INTRODUCTION

A recent review of change management literature within the field of public administration research showed that employee resistance to organisational change is still an important issue within both the broader area of change management and also specifically within the field of public administration (Kuipers et al., 2014). This is not surprising given that employee reactions towards organisational changes are seen to play a pivotal role within the success or failure of organisational change efforts within the public sector (Fernandez & Rainey, 2006).

Although there has been significant research into potential antecedents to employee change resistance (Oreg, Vakola, & Armenakis, 2011), there is still no consensus on what actually causes change resistance and how to overcome it (Kuipers et al., 2014). One issue that can be noted in previous research within this area is the prominent use of similar research methods, in particular large N survey designs, interviews and/or focus groups (Oreg et al., 2011). Although this has established a number of seemingly influential relationships with employee change resistance, they are limited in their ability to establish causality. As such, this study aims to use an experimental method in order to establish if causality exists between a specific antecedent and employee change resistance.

When looking at potential antecedents to change resistance that have been studied in the field of public administration, one factor that is commonly agreed amongst scholars to influence employee change resistance is the way in which public managers implement and lead change initiatives (Fernandez & Pitts, 2007). Within this, one of the key ways through which public managers interact with their employees during an organisational change is through communication (Lewis, 1999). Communication plays a number of roles during organisational change including providing information to employees about the change which assists in building understanding about the change and providing an avenue for employees to participate in the change (Lewis, 2006b). In general, research

suggests that the provision of effective communication during a change process is associated with more positive change reactions from employees and lower levels of change resistance in both direct and indirect relationships (Lewis, 1999, 2006b; van der Voet, Kuipers, & Groeneveld, 2016; Wanberg & Banas, 2000) although again causality cannot be assumed from these studies.

What is also interesting, is that most studies account for change communication by either it's presence or absence during the implementation of an organisational change rather then making any judgment on the quality or content of the change communication being provided (Oreg et al., 2011). This has also been highlighted in one study that found that the provision of change communication information actually correlated with higher levels of change resistance exhibited in employees, against what was initially hypothesised (Oreg, 2006). The explanation provided within this study for this finding was that the content or quality of the information being provided was also likely to impact this relationship (Oreg, 2006). In practice, this difference could be an important factor for public managers because the content of change communication messages is something that is within their control when communicating with their employees (Lewis, 1999). This issue of communication content has also previously been raised in the field of public administration as a potential factor in employee resistance during large scale IT projects (Vann, 2004). This study proposed that the difference in the distinctive language styles and jargon between bureaucratic public organisations and private sector contractors could be a factor in employee resistance observed during these projects.

Within public organisations, another challenge faced by managers when communicating organisational change is the diversity of employees that can exist within one organisation or even one team (Rainey, 2009). With employees in different occupations also comes differing levels of professionalism (Snizek, 1972) which can influence the values and professional norms held by individual employees (L. B. Andersen, 2005). Within the field of public administration research, a recent study has looked at how differing professional norms and values can influence how communication messages are perceived (S. C. Andersen

& Jakobsen, 2016). This research looked specifically at how communication messages were framed and suggests that when policy messages are framed in a way that aligns with the professional norms of employees then a more favourable attitude toward the policy is observed in those employees.

1.2 PROBLEM DEFINITION AND RESEARCH QUESTION

The problem of employee resistance to organisational change initiatives is a well known issue in the study of change management however there is still no clear consensus within the literature of how this complex issue can be overcome (Kuipers et al., 2014). In addition, researchers in this area have predominately used methods that mean causality cannot be established between employee change resistance and potential antecedents even though numerous antecedents to change resistance have been identified through prior research efforts (Oreg et al., 2011). Although this diversity in change resistance antecedents exists, the key focus of this study will be on the affect and influence of change communication content as there is limited empirical evidence within the field of public administration that specifically examines this antecedent. Some researchers have however suggested that the content of communication could impact the level of employee change resistance experienced (Oreg, 2006; Vann, 2004). Within the public sector, another challenge faced by managers when communicating organisational change is the diversity of employees with whom they communicate (Rainey, 2009). As differing levels of professionalism exist between different occupations (Snizek, 1972), it is also likely that this could influence how they perceive and evaluate change communication content. One way in which communication content has when examined is through the concept of communication framing (S. C. Andersen & Jakobsen, 2016) and as such, the key research question for this study is:

How does the framing of change communication messages affect the level of change resistance in public employees in occupations with varying degrees of professionalism?

1.3 SCIENTIFIC/ACADEMIC RELEVANCE

This research will contribute to and build upon both current public administration and the broader field of organisational change research in a number of ways. Within the area of organisational change research, there has been significant efforts to investigate employee change resistance, yet there is still an ongoing need to understand how it occurs and how to overcome it (Kuipers et al., 2014). Although many antecedents to employee change resistance have been identified (Oreg et al., 2011), there have been limited efforts to establish causality within these relationships. The aim of this study is to go beyond the current understanding of the relationship between one of these antecedents to change resistance, change communication, by using an experimental method in order to establish potential causality within this relationship. The use of this method will also answer a recent call from leading public administration journals for increasing the use of experiments as a research method within the field.

In addition, it has been acknowledged that although scholars agree the provision of change communication has a relationship with employee change resistance, this relationship is more complex then just the presence or absence of communication about the change (Oreg, 2006). The quality and content of change communication is also likely to play a role within this relationship and it has been suggested that further research into the relationship between change resistance and change communication content be undertaken (Oreg et al., 2011). This research directly answers that call through examining how the differing content of change communication messages can impact observed levels of employee change resistance.

Within the field of public administration, professionalism is a well embedded concept that has a significant body of research (Adams, 2014). This study has included measures from two scales that have been developed within previously research (Hall, 1968; Snizek, 1972; van Loon, Heerema, Weggemans, & Noordegraaf, 2015). In addition to examining a previously un-researched

population with these scales, the use of both may also provide further evidence as to their compatibility and relevancy within this different setting.

1.4 READER'S GUIDE (THESIS STRUCTURE)

This thesis has been designed in a series of chapters to allow for ease of navigation and reading. In the next chapter, Chapter 2, a review of the relevant literature will be undertaken. This chapter will also detail the theoretical framework for this research. In Chapter 3, the design and empirical approach of the research will be outlined including the operationalisation of the study variables, sample selections and research limitations. Chapter 4 will then present the data results and analyses from the conducted research. The thesis will conclude with Chapter 5, which includes a discussion and summary of the research findings, implications for both academics and practitioners and suggestions for future research. A series of appendices finalise the document that also includes the reference list and relevant information from the research design.

CHAPTER 2:
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 ORGANISATIONAL CHANGE WITHIN THE PUBLIC SECTOR

Change is a pervasive theme within the organisational and management fields however within the field of public administration there are a few key areas of particular interest to this thesis. In their literature review of change management within public organisations, Kuipers et al. (2014) found that the focus of research within the field has predominately been on the content of change rather then how public organisations implement change. This has significant implications for the field because in general this means researchers and practitioners must rely on change implementation research and practices implemented in private sector organisations even though it has been noted that there are differences between public and private sectors (Rainey, 2009).

In his commonly cited reference book on the management of public organisations, Rainey (2009) lists three main areas of difference that are faced by public organisations including:

- Environmental factors (presence and intensity of political oversight; elaborate and intensive formal legal frameworks; and lack of economic market for organisational outputs)
- Organisational-environmental transactions (production of public goods; activities that are commonly monopolistic and unavoidable by the public; greater symbolic significance; and more intense public scrutiny on managers)
- Organisational roles, structures and processes (increased organisational goal ambiguity, conflict and multiplicity; differences in managerial roles such as increased interactions with politicians and external interest groups; increased levels of administrative regulations/rules; and more elaborate bureaucratic structures).

Although advances have been made in the study of organisational change within public organisations (Kuipers et al., 2014), there are still gaps where

practitioners have no choice but to rely on change management practices that have been developed within the private sector. It is therefore important for researchers within the field of public administration to continue to explore how these concepts apply within public organisations and how potential differences in the sector could influence the implementation of organisational change.

As discussed in the introduction, the focus of this thesis will be specifically on establishing causality in the relationship between change communication and employee change resistance in a population of professional public employees. The below literature review will explore a range of concepts including employee change resistance, change communication, framing and professionalism. Where possible, current studies within the field of public administration have been the focus of this review however literature from other fields such as change management, psychology, sociology and political science have also been referenced when relevant to explain key concepts. The theoretical framework for the research conducted as part of this thesis and a summary of the hypotheses finalises the chapter.

2.2 EMPLOYEE CHANGE RESISTANCE – AFFECTIVE, COGNITIVE, BEHAVIOURAL

The attitudes and behaviours of employees toward organisational change has long been recognised as a critical factor for change implementation and success (Fernandez & Rainey, 2006). Although there is a significant body of research into employee reactions to change, it has also been noted that this can encompass a broad range of possible concepts including the explicit reactions of individual employees and outcomes of reactions at both an organisational and individual level (Oreg et al., 2011). Employee reactions can vary from positive reactions like support and satisfaction in the change to negative reactions such as stress, anger or resistance toward the change (Oreg et al., 2011).

The phrase resistance to change is credited as being first used by Lewin (1947) during his studies of change within social systems and groups that saw the creation of his definition based on equilibrium theory. What is important to note is that in Lewin's definition of resistance, resistance can occur within any part of

the system (Dent & Goldberg, 1999). Although these early references and studies were focused on resistance across the whole system during a change event, the focus has since shifted from this systems concept to a psychological concept with a greater focus especially on resistance from employees during organisational change events (Dent & Goldberg, 1999) which is also the focus of this study.

Originally, researcher's viewed employee change resistance as conscious and undesirable actions by employees against change and a detrimental force that needed to be overcome (Watson, 1971). More recently however although employee change resistance is still classified as an explicit reaction from employees to change (Oreg et al., 2011), there has been a move to recognise change resistance as a more complex and multifaceted concept (Piderit, 2000). This has also seen a split in the research between the exploration of change resistance as an inherent dispositional personality factor rather then the explicit reaction to a specified organisational change (Oreg et al., 2008). Because the aim of this research is to examine specific reactions to change communication content, it will be these explicit reactions that will be explored in further detail.

This more in-depth research also saw a change in the way that explicit reactions to change were viewed and a definition of change resistance as a tripartite concept was developed (Piderit, 2000). This saw the distinction between three separate components that are thought to compromise change resistance – affective, cognitive and behavioural components, (Piderit, 2000). These components have been described as: (adapted from Oreg, 2006)
-   Affective component: relates to how an employee feels about a change.
-   Cognitive component: relates to how an employee thinks about a change.
-   Behavioural component: relates to the actions or the intentions for action of an employee in response to a change.

Although the study of change resistance as a tripartite concept offers a promising angle to understand the complexities of this employee reaction to change, there is still only a few studies that have examined all three components within a single study (Oreg et al., 2011). The study of employee change resistance has more commonly occurs through the focus on a single or sometimes two of the

tripartite components and the theme or wording of the operationalization of the concept can then been aligned to one of the three components (Oreg et al., 2011).

One study which did look specifically at the change reaction as a tripartite was a study by Oreg (2006) who found that the different components of resistance had different relationships with both different antecedents and different outcomes. This study conceptualised change resistance through the developed of three subscales that aligned to each of the tripartite components. Results showed that a change personality trait was strongly associated with the affective component of change resistance, weakly associated with the behavioural component and had no significant association with the cognitive component. Whilst other antecedents involved with the change process such as trust in management and social influence concerning the change were more closely related to the behavioural and cognitive components. Likewise for relationships with outcomes, such as threats to job security and power, these had stronger relationships with affective and cognitive resistance and no relationship with behavioural resistance. This study has started to explore the interrelationships between these three components and how different antecedents have different relationships with individual components.

2.3 ANTECEDENTS TO CHANGE REACTIONS

While the above is important to explain the explicit reactions that employees show during organisational change, the majority of research look at how these reactions can be explained through relationships with different antecedents (Oreg et al., 2011). The review by Oreg et al. (2011) grouped these antecedents as either factors that exist before an organisational change is underway, which they classified as 'pre-change antecedents' or factors which occur during the implementation of a change, which they classified as 'change antecedents' (Oreg et al., 2011).

Pre-change antecedents include factors such as inherent characteristics of the employee involved in the change such as personality traits, intrinsic motivating factors, status within the organisation or demographic features such as gender

or education level (Oreg, 2006; Oreg et al., 2011; Straatmann, Kohnke, Hattrup, & Mueller, 2016; Wright & Christensen, 2013). They also include the characteristics of the organisation such as the organisational culture and job specific characteristics (Lewis, 1999; Oreg et al., 2011). These antecedents are classified as 'pre-change' because they are factors which already exist within employees or organisations and are not directly related to organisational change yet have been identified as factors which may influence how employees perceive or interact with organisational change (Oreg et al., 2011).

Although a significant body of research within the area of pre-change antecedents has been developed within the field of psychology (Oreg, 2003, 2006; Straatmann et al., 2016), one factor that has been specifically studied within employees in the public sector is public service motivation (PSM) (Naff & Crum, 1999; Wright & Christensen, 2013) which suggest a relationship between higher levels of PSM and lower levels of change resistance. For example, Naff and Crum (1999) found that employees with higher levels of PSM were less likely to exhibit negative attitudes toward national government reform efforts then employees with lower levels of PSM. Whilst more recently, Wright and Christensen (2013) studied the relationship between specific components of PSM and employee change attitudes. This study found that the different components of PSM have difference influences on change attitudes and it was suggested that this is likely because these employees are less likely to worry about how the change will affect them personally (Wright & Christensen, 2013).

The second group of antecedents identified in the review by Oreg et al. (2011) are 'change antecedents'. This group of antecedents include factors that are related specifically to the change process such as the leadership style undertaken during the change, communication approaches or the level of participation by employees (Blackburn, 2014; Lewis, 1999, 2006b; Oreg et al., 2011; van der Voet et al., 2016). These antecedents can also be factors that relate to the perceived outcomes of the change and the specific content of the change being undertaken (Kiefer, 2005; Kiefer, Hartley, Conway, & Briner, 2015; Oreg et al., 2011; Vann, 2004).

A 'change antecedent' that has a significant body of research across both the private and public sectors in relation to reduced levels of employee change resistance is the presence of communication about the organisational change (Oreg et al., 2011). There are a multitude of studies that have found a relationship between change communication and employee change reactions including:

- Allen, Jimmieson, Bordia and Irmer (2007) who studied organisational change across both the private and public sectors in a series of mixed method studies. Their results suggest that employees who received quality change communication about an organisational change were less likely to demonstrate a negative attitude towards that change.

- Lewis (2006) who researched employee perspectives on change communication in a variety of industries also across both the private and public sectors. This research suggested that employees who evaluated change communication to be of a higher quality were associated with a lower perception of resistance to that organisational change.

- van der Voet et al. (2016) who examined the role of transformation leadership during organisational change in a Dutch city works department. Results from their study indicated that transformational leadership had an indirect relationship on employee change resistance through the presence of communication activities. This research indicated that higher levels of transformational leadership behaviours were associated with higher levels of communication activities, which was associated with lower levels of employee change resistance.

- Wanberg and Banas (2000) who studied employees within public housing and community development associations in the United States. Their research found that increased information about an organisational change was associated with lower levels of change resistance.

Contrary to the above however, one study showed that the provision of additional information about an organisational change actually corresponded with negative employee evaluations of that change (Oreg, 2006) which was

against what was originally hypothesized within the study. The rationale provided for this finding was that the content of change information rather then the just the presence of information may be more influential in the relationship between change information and employee resistance (Oreg, 2006).

2.4 WHAT IS CHANGE COMMUNICATION

One of the key tools that public leaders have during an organisational change event is the provision of information and communicating with their employees (Fernandez & Rainey, 2006). In fact, one study suggests that 46% of employees evaluations of the success of an organisational change program can be accounted for by communication that has been undertaken during the implementation of that change (Lewis, 2006b). This statistic highlights the important that employees place on communication during the implementation of organisational change.

Change communication is commonly cited in both literature and popular management texts as a key component to successful change because it provides critical information to employees about the change and assists in creating and articulating the vision for the change (Elving, 2015; Lewis, 2006a). For example this was shown in Blackburn's (2014) case study of the implementation of a major change to streamline the delivery of public services across three service channels including the creation of one-stop-shops for the public in Tasmania, Australia. This showed that communicating the vision and objectives of a change was associated with higher understanding in employees of how these changes affect them and their subsequent support or resistance against the change (Blackburn, 2014).

Within the change management literature, there has been the distinction made between two types of change communication – programmatic change communication and participatory change communication (Russ, 2008). The focus of programmatic change communication is primarily about the top-down dissemination of information that is focused on telling employees about the change and why they should be committed to the change implementation.

Participatory change communication is focused on more dialogic approaches that invite input by employees and use involving and empowering techniques to gain insights from various stakeholders through the development, decision-making and/or implementation of organisational changes (Russ, 2008).

What is interesting to note is that there seems to be a disconnect between the focus of researchers investigating change communication and what is actually happening in practice. In his review of these two change communication types, Russ (2008) noted that research into participatory change communication approaches made up the largest category of research within the field. However two empirical studies by Lewis (1999 & 2006a) found that communication during change implementation appeared to be dominated by the dissemination of information to employees (programmatic change communication approach) rather then communication focused on soliciting input from employees (participatory change communication approach). Many studies have also suggested that the participatory approach is more effective in engaging employees during an organisational change and thus reducing change resistance (Russ, 2008) however a recent study into both approaches in the one study resulted in a different finding (Cao, Bunger, Hoffman, & Robertson, 2016). The results of this study in American public child welfare organisations suggested that participatory change communication strategies might be most effective in employee engagement when used in conjunction with programmatic change communication approaches (Cao et al., 2016).

One of the differences between public and private organisations identified by Rainey (2009) is the elaborate hierarchical bureaucratic structures that commonly exist within public organisations. Due to this structure, the flow of information could be expected to commonly occur from the top down and as this is a key feature of programmatic change communication (Russ, 2008), it can be expected that this communication style is still in use. This is also what was observed by Lewis (1999, 2006b) in her two studies of manager and employee perceptions into communication during organisational change that found information disseminating communication techniques were more prevalent then

participatory techniques. For these reasons, it will be programmatic communication approaches through the dissemination of information that will be studied in this thesis research.

As discussed above, within the study of change communication as an antecedent to employee change resistance, it has been noted that this has generally focused on the presence or absence of communication rather than the content or quality of the communication (Oreg et al., 2011). There are studies that show that the quality of change communication is an important factor (Lewis, 2006b). For example, Miller, Johnson and Grau (1994) found that change communication that contained information that perceived as useful and relevant to employees was associated with employees being more open to participate in the change and decreased resistance from those employees.

The characteristics of the change being implemented can also influence what choices are possible in developing a strategy for change communication (Armenakis & Harris, 2002). In their popular change readiness framework, Armenakis and Harris (2002) detail five key change message components which have the purpose of creating and enhancing change readiness within the organisation. These five components include (adapted from Armenakis & Harris, 2002):

- *Discrepancy*: relates to the employee view/belief of the necessity of a change to occur within the organisation
- *Appropriateness*: relates to the employee view/belief that the change proposed is the correct option for the given situation
- *Efficacy*: relates to the employee view/belief if a change can be implemented successfully by the organisation
- *Principle support*: relates to how committed leaders and managers (vertical change agents) are to the organisational change being proposed
- *Personal valence*: relates to view/belief of how beneficial the change will be to an individual recipient

In a qualitative study evaluating this model that involved managers in the British tourism industry, By (2007) found that the framework was highly relevant for the private sector. Another study in the private sector that used a comparative case study design also used this framework and found that the characteristics of an organisational change will influence the approach, content and communication channel that is used by change managers (Goodman & Truss, 2004).

Within the field of public administration, there is limited research into the content of change communication and it's role within change implementation or it's relationship with employee change resistance. For example, Vann (2004) examined the differences in language between bureaucratic public organisations and private sector developed project management frameworks within large scale IT projects. This article proposed that resistance to change may result from what it termed "clashing grammars". It proposed that the distinctive language style of public organisations that is embedded in bureaucratic jargon is not compatible with the language being used in these IT projects which is commonly based on project management tools developed within the private sector. It was suggested that this led to an environment where distorted or missed communication manifested in resistance from employees.

One of the main issues observed in the review of the literature within the field of change communication is that predominately empirical research has been conducted through large-N surveys, interviews and/or focus groups (Blackburn, 2014; Cao et al., 2016; Lewis, 1999, 2006b; V. D. Miller et al., 1994; Wanberg & Banas, 2000). Although this has been valuable in establishing the various relationships and factors that have been discussed above, such studies have methodological limitations in establishing casual inference. Recently, within the field of public administration however, researchers have used an experimental design in order to study the effect of communication content on employee support for different hypothetical policy changes (S. C. Andersen & Jakobsen, 2016). This design does allow for casual inference and as such, a similar method will be taken for this study. This research used the concept of framing of

communication messages in linkage with the professional norms of employees (L. B. Andersen, Andersen, Jacobsen, & Jakobsen, 2016; S. C. Andersen & Jakobsen, 2016) and this concept will be explored further in the next section.

2.5 FRAMING – 'GOOD FOR BUSINESS' OR 'GOOD FOR PEOPLE'?

The concept of framing was originally developed to research public opinion formation and in particular, how mass media influences the formation of public opinion (Chong & Druckman, 2007). The concept has been defined as:

"To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p. 52).

The basic premise of a framing effect is that when the presentation of information relating to an issue or event is changed then a resulting change in opinion can occur about that issue or event (Chong & Druckman, 2007).

An example of this is political science research that looked at whether people would favour or oppose a group holding a hate rally (Sniderman & Theriault, 2004). This research showed that 85% of respondents were in favour of the event when the question was prefaced with the phrase "Given the importance of freedom of speech" however when the question was prefaced with the suggestion "Given the risk of violence" only 45% of respondents were in favour. There are many similar cases about a variety of issues from research within the field of political science that show that an alternative phasing of the same basic issue can significantly alter the opinion that is held by respondents about that issue.

In order to fully understand the concept of framing, it is important to understand the theory that it is based within. Within the field of psychology the concept of framing is based in the expectancy-value model of attitude (Ajzen & Fishbein,

1980). This model states that a person's attitude toward an object will be the weighted sum of a series of beliefs toward that object. In equation form:

$A = \Sigma\, v_i * w_i$

where A is the attitude of a person toward an object (i), v_i represents the value or belief that a person gives to that object and w_i represents the subjective weight or importance that the person gives to that belief (Ajzen & Fishbein, 1980). It has been noted that this model implies that there are two possible ways in which a change can occur in attitude. This is through either changing a person's beliefs about an object (commonly thought of as traditional persuasion) or by changing how a person weighs or accounts for that object or information about an object (this is where framing fits in) (Nelson, Oxley, & Clawson, 1997).

This difference between framing and traditional persuasion is important to note. In an article examining this issue Nelson et al., (1997) determined one key issue that differentiates the two processes. Traditional persuasion is based on a standard model of persuasive communication where a source presents information about an object, which an audience could have an attitude about, to an audience. If the audience has a different attitude about that object and they both understand and believe the information that has been presented about the object, then attitude change in the direction of the information should occur (Jaccard, 1981). What is important to note is that there is an assumption that the information affects the opinion of the audience because it contains either new positive or negative information about the object that wasn't already part of the audience's belief structure. Framing is explained to be different because the information activates existing beliefs and places more importance on that belief (w_i in the above equation) rather then necessarily adding something new to the audience's beliefs (Nelson et al., 1997). What is also important to note is that people can have multiple values or beliefs about an object as expressed in the above equation. It is because of this that framing communication in a certain way can cause people with similar values, norms and beliefs to express differing attitudes toward that same object through a higher value being placed on the framed value or norm (Chong & Druckman, 2007).

This concept has also recently been used within the field of public administration to explore how the attitudes of public servants toward different policies influence their perceptions of those policies (S. C. Andersen & Jakobsen, 2016). This study used an experimental method to compare communication messages about a policy that had either been framed in alignment with professional norms of the targeted employees (teachers) or without alignment to the professional norms of those employees. The results of this research indicated that communication that is aligned to the professional norms of public employees are more likely to move the attitudes of those public employees in favour of the policy (S. C. Andersen & Jakobsen, 2016).

This research was also extended to see if these initial findings could be reproduced over a wider audience (L. B. Andersen et al., 2016). This study compared employees from both the public and private sectors and based the communication frames on organisational fit with a grand theory of society. This study also found that employees were more likely to be positive towards initiatives when communication frames aligned to the functional system of the organisation within which they operated rather then frames, which were not aligned. An additional interesting finding from this study was evidence of a boomerang effect, where some respondents exhibited a stronger negative reaction when the communication frame was not aligned to their organisation's functional system.

It is on this basis that the first two hypotheses for this study have been formed. As employee resistance to change is an attitude toward an organisational change and communication framing can influence attitude towards an object through alignment to a persons values or beliefs, it is therefore hypothesised that change communication messages framed in alignment to an employee's professional norms will influence their attitude toward a change. As such the first two hypotheses are:

Hypothesis 1: Employees exposed to change communication messages that are framed with their professional norms will exhibit lower levels of change resistance.

Hypothesis 2: Employees exposed to change communication messages that are framed with professional norms counter to their own professional norms will exhibit higher levels of change resistance.

In order to test the effect of change communication content on employee change resistance in this context, there is a requirement to link this to the professional norms within the study population. As such, an understanding this concept and the related concept of professionalism is required.

2.6 PROFESSIONALISM AND PROFESSIONAL NORMS

It is noted by Freidson (1984) that the study of professions and professionalism can be traced back over a century. Because of this, there is a significant body of research into professionalism across a range of research fields, which has resulted in a number of definitions of this concept. For example, Freidson (1984, p. 2) notes that "professions have been singled out as occupations that perform tasks of great social value because professionals possess both knowledge and skills that in some way set them apart from other kinds of workers". Although the original research into professions included a well established and clearly defined group of occupations, a broader range of occupational types have since been noted to be pushing to be recognised as fully-fledged professions (Hall, 1968). This process of professionalisation is generally attributed to have two basic characteristics including (adapted from Hall, 1968):
- Occupation structure: this includes attributes relating to formal education, professional associations and formal codes of ethics
- Attitudinal factors of occupational participants: this includes attributes relating to the belief in the occupation as a service to the public, belief in self-regulation and a sense of calling to the field.

This early research into professions and professionalism by Hall (1968) also saw the development of an attitudinal measurement scale for the degree of professionalism amongst practitioners. This scale included five theoretical dimensions of professionalism including using the professional organisational as

a major referent, belief in public service, belief in self regulation, sense of calling to the field and autonomy (Hall, 1968). This has since been further refined (Snizek, 1972) and scholars continue to use both structural and attitudinal considerations in measuring the degrees of professionalism across different occupations (Adams, 2014). This early research saw significant interest in the analysis of professions and professionalism and a theoretical framework has since been developed that is known as the sociology of professions (Adams, 2014; Roberts & Dietrich, 1999).

Within the field of public administration, the sociology of professions theory has been used to develop the following definition, "a profession can be described as an occupation with specialised, theoretical knowledge and intra-occupational norms" (L. B. Andersen, 2005, p. 23). People who ascribe to be a member of a certain profession will then be influenced in their behaviour and performance through the presence of commonly shared specialised knowledge and norms (L. B. Andersen & Pedersen, 2012). When compared to the previous definition of a profession, the focus on specialised knowledge and skill is still apparent and it is suggested that this focus should be maintained in the interpretation of professionalism (Evetts, 2011).

More recent research has also suggested that the traditional understandings of professions and professional work do not take into consideration organisational contexts (Noordegraaf, 2016). This has resulted in a growing push to recognise that different types of professionalism can exist (Evetts, 2009). In her analysis of professionalism and New Public Management (NPM), Evetts (2009) defines two different ideal forms of professionalism that have emerged within the knowledge-based service sectors such as those seen in the public sector. The first of these is occupational professionalism, which develops specific to an occupation type through the requirement to undertake a specific education or training. This type of professionalism derives its influence from authority rather then control because of the expectation of the knowledge and skill that the specific education and training has given those in the profession. Occupational identities and behaviours are developed through this education and typically are

enforced through professionally developed ethics monitored by professional associations. The second type of professionalism identified by Evetts (2009) is organisational professionalism, which develops from within an organisation and derives its influence through control-based structures such as hierarchies, standardised work processes and external forms of regulation and accountability. Evetts (2009) argues that this type is increasingly being observed in public organisations where NPM reforms have been used due to the emphasis on productivity and hands-on management. It is important to also note that these types of professionalism are seen as ideal types and as such, it is expected that a mixture of both types could exist at varying levels within the one organisation (Evetts, 2009).

As both of these types of professionalism can exist within the one organisation, it is reasonable to suggest that they will influence employees in different occupations in varying degrees. Those from occupations with higher levels of occupational professionalism (for example, veterinarians) are likely to ascribe more value to occupational professional norms then those from occupations with lower levels of occupational professionalism (for example, managers). This is also shown in a study by Schott, van Kleef and Steen (2016) who found that different employees will respond differently to a situation based on the value they place on different professional norms or motivating factors. It can also therefore be suggested that this is likely to influence the value they place on a communication frame based on a certain set of professional norms. This would also then influence the effect that frame will have on their level of change resistance. As such, a third and final hypothesis is:

Hypothesis 3: Higher levels of occupational professionalism will strengthen the relationship between change communication framing and change resistance.

2.7 *THEORETICAL MODEL AND SUMMARY OF HYPOTHESES*

The above review of the literature has lead to the development of the following theoretical model for explaining the relationship between framed change communication messages, employee change resistance and professionalism.
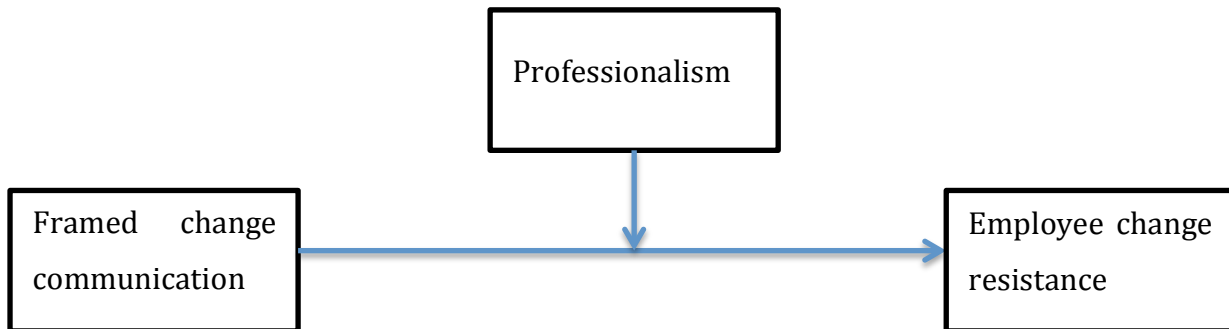
Diagram 1: Theoretical model of the proposed relationship between framed change communication messages, employee change resistance and professionalism

As detailed throughout the literature review, a series of hypotheses have been developed and are summarised below:

Hypothesis 1: Employees exposed to change communication messages that are framed with their professional norms will exhibit lower levels of change resistance.

Hypothesis 2: Employees exposed to change communication messages that are framed with professional norms counter to their own professional norms will exhibit higher levels of change resistance.

Hypothesis 3: Higher levels of occupational professionalism will strengthen the relationship between change communication framing and change resistance.

CHAPTER 3:
RESEARCH DESIGN

3.1 CASE SELECTION

The population for this study was drawn from frontline biosecurity staff from the Australian federal government Department of Agriculture and Water Resources. The survey was distributed to teams within the Victorian region with a population 213. Although this was a sample of convenience, the population is unique in the functions undertaken and the range of occupations that work together (biosecurity officers, administrative staff, management and scientific staff). Due to this, it was expected that diversity would exist within the levels of professionalism between the different occupation types with some respondents from occupations that are expected to be more highly professionalised (i.e. veterinarians) and others from less professionalised occupations (i.e. administration officers).

3.2 RESEARCH & DATA COLLECTION METHOD

An experimental survey research design was chosen as it allows for the formation of causal arguments, which is not possible with other research methods (Toshkov, 2016). Also as was noted in the review by Oreg et al. (2011), the sheer number of antecedents to employee change reactions that have been identified through previous research would make it difficult to measure and control for these potential confounding antecedents. The experimental design naturally controls for these other potential confounding factors (Toshkov, 2016) and thus, there is no requirement to measure and then control for these statistically. An experimental method has also been used extensively with the concept of framing and within the study of opinion formation including recently within in a similar study in the field public administration (S. C. Andersen & Jakobsen, 2016).

This study was conducted via an online survey delivered through Qualtrics. Each respondent was randomly distributed electronically via the system to either one of the treatment groups or the control group. This electronic randomisation

therefore removed any issue with selection bias (Toshkov, 2016). The survey consisted of three parts. The first part included exposure to a vignette of information relating to a realistic yet hypothetical organisational change for the selected employees. In addition to the basic vignette, the two treatment groups were also exposed to additional information relating to the purpose of the organisational change. For experimental group 1, this information was framed by relevant occupational professional norms, and for experimental group 2, this information was framed by competing professional norms that were aligned to organisational professional norms. Respondents were then asked to provide responses to a series of statements relating to employee change resistance. The second part of the survey related to professionalism and included a series of statements to measure levels of occupational professionalism. The final part of the survey included a series of questions relating to relevant demographics (classification, role type, level of education, length of service). A total of 64 responses were received which gives a overall response rate of 30%.

3.3 OPERATIONALISATION OF KEY VARIABLES

The measurement of each of the study variables in this research was undertaken using established measures and where relevant, responses were recorded using a seven-point Likert scale (ranging from 1 equalling 'strongly disagree' to 7 equalling 'strongly agree').

Employee change resistance

The dependant variable, employee change resistance, was measured using an established employee change resistance scale developed by (Oreg, 2003) which is based on a three factor structure including affective, behavioural and cognitive subscales. This original scale was first developed and trialled as a pilot study with a comparative fit index [CFI] =.92 and then reconfirmed via a main study with a CFI = .93 (Oreg, 2006). The original scale also showed good reliability scores of .78, .77 and .86 respectively for the three subscales. The scale has also been used in a range of other studies including within an Australian context (Georgalis, Samaratunge, Nell, & Lu, 2015; Heuvel, Schalk, & van Assen, 2015; van Dam, Oreg, & Schyns, 2008). All fifteen items from this scale were included

within this study and the only adjustment made was to change the retrospective nature of the original items to be in present tense. Four of the fifteen items were reverse coded and all the items can be found in Appendix 1.

Change communication content

The measurement of the independent variable, the content of change communication messages, was undertaken through the development of two vignettes of information that were related to different professional norms. For experiment group 1, this information was framed by occupational professional norms and included such phrases as 'based on the latest scientific knowledge', 'improve quality' and 'improve targeting of biosecurity risks'. The relevancy of these statements for the audience was developed from the researchers own knowledge as an employee as the case organisation and also through testing with another past employee. For experiment group 2, this information was framed with competing norms that could be argued to be more aligned to organisational professional norms due to the rational managerial focus (Evetts, 2009). This information included phrases such as 'improve the efficiency', 'shorten the length of time taken' and 'considerable savings for the department'. The full text of the vignettes can be found in Appendix 1.

Professionalism

No previous research could be found that studied professionalism within the target audience and as such to operationalise the concept of professionalism, items from two different scales were included. The first were items from an older scale developed by Hall (1968), modified by Snizek (1972) and since used extensively to study a range of occupations. This scale has been shown to be effective in measuring levels of professionalism in police officers (Carlan & Lewis, 2009; J. Miller & Fry, 1976) and due to their similar role in the regulation and enforcement of legislation, it is felt that the scale should also provide an effective measure of professionalism within the unique population of this study. As one of the issues with the original scale noted by Snizek (1972) was the potentially ambiguous wording of some of the items, the items within this study have been adapted to make them more relevant for the target audience. Also, due

to the number of items within this scale, it was impractical to include them all and as such a selection of items were chosen for inclusion (refer to appendix 1 for statements). These were chosen based on their level of fit both within the adjusted model from Snizek (1972) and a subsequent study that used the model in a population of police which found similar fit indices to Snizek (J. Miller & Fry, 1976; Snizek, 1972). Of the items chosen, 2 were reverse coded.

The second set of items were from a more recent study that aimed to develop a new measure for professionalism based on items relating to professional capacity (van Loon et al., 2015). This scale has a greater behavioural focus and as such, it was expected that it may show a higher moderation effect with change resistance responses. A total of six items were chosen based on those with the highest fit indices from this original research and those that more closely related to potential change attitudes and behaviours.

CHAPTER 4:
RESEARCH RESULTS

4.1 *ANALYTICAL STRATEGY*

In order to conduct the analysis of the proposed relationships within this study, firstly the descriptive statistics were analysed and a linear regression method was used. This method was chosen because it allows for a simpler display and analysis of the data when analysing the effects of change communication framing and potential interaction effects. As a number of the variables measured in this study were categorical in nature, a series of dummy variables were created in order to undertake the analysis.

In addition, two variables within the study, change resistance and professionalism were measured via responses to a series of statements. For change resistance, a single averaged score was calculated for each respondent for both the whole scale and the three subscales (affective, cognitive and behavioural components). The internal consistency of this measure was tested using Cronbach's Alpha and found to be acceptable for both the whole scale (15 items, $\alpha = .913$) and each of the subscales (Affective component, 5 items, $\alpha = .836$; Cognitive component, 5 items, $\alpha = .769$; Behavioural component, 5 items, $\alpha = .774$).

A similar process was also undertaken for the measure of professionalism, which was measured using a series of statements from two scales presented previously in the literature (the Hall (1968)/Snizek (1972) scale and the van Loon et al. (2015) scale). The internal consistency of the full scale was measured using Cronbach's Alpha and found to be low (11 items, $\alpha = .632$). As such, the internal consistency of the statements from the two scales was measured. For the Hall (1968)/Snizek (1972) scale this was also found to be low (5 items, $\alpha = .340$) however for the van Loon et al. (2015) scale it was found to be acceptable (6 items, $\alpha = .756$). As a result, it was decided to use only responses to the van Loon et al. (2015) scale as the measure for professionalism in the following analyses.

In addition, initial analysis of the results between the groups highlighted a difference in the change resistance scores between respondents who identified as being managers and those who identified in other work roles. As the main aim of this study was to analyse the effect of change communication on professional employees, the decision was made to exclude the respondents who had identified in the management group. It was also decided to exclude those who identified as a manager, a subjective measure, rather then using the more objective measure of their classification (employment level). Although the Executive Level (EL) classifications are generally identifiable as the upper level of middle management within the case study organisation, there are also some highly specialist roles with no management functions that are classified at this level and are more likely to identify as 'scientific analysis' or 'biosecurity' rather then 'management' functions. Due to the specialisation of these roles it is also likely that those employees could be highly professionalised which, as a key focus of the study, did not want to remove from the analysis. Although removing this group did further reduce the sample size, it was felt that this would give a more representative sample of employees who identified with the occupational professional norms and therefore the results would more accurately reflect these employees in the analysis.

4.2 RESULTS

In total 64 responses were collected as part of this study, which resulted in 22 participants in the control group and 21 in Experiment Group 1, and Experiment Group 2. The descriptive statistics for the whole study sample and each of these groups is shown in Table 1. Overall this indicates a predominately low level of change resistance although differences can be seen both between groups and between the different change resistance subscales. In terms of professionalism, it shows a predominately high level of professionalism although a difference of almost a full-scale point is shown between the two professionalism scales used. In addition to the dependant and moderator variables, data was also collected for a series of potential control variables that are also shown in Table 1.

Table 1 — continuous measures

	All Mean	All SD	All N	Control Group Mean	Control Group SD	Control Group N	Experiment Group 1 Mean	Experiment Group 1 SD	Experiment Group 1 N	Experiment Group 2 Mean	Experiment Group 2 SD	Experiment Group 2 N	Sig.
Change Resistance	2.55	.88	64	2.63	.82	22	2.29	.79	21	2.72	.99	21	.051
Affective component	2.50	1.03	64	2.51	.95	22	2.23	1.00	21	2.74	1.11	21	.084
Cognitive component	2.78	.87	64	3.01	.87	22	2.57	.76	21	2.75	.96	21	.177
Behavioural component	2.38	.99	64	2.36	.99	22	2.08	.82	21	2.69	1.10	21	.018
Professionalism	5.17	.61	64	5.13	.72	22	5.11	.62	20	5.25	.47	21	.883
Hall/Snizek Scale	4.63	.82	64	4.45	.98	22	4.72	.76	21	4.73	.71	21	.614
van Loon et al. Scale	5.61	.70	63	5.70	.85	22	5.46	.64	20	5.67	.57	21	.795

Table 1 — categorical measures

	All %	All N	Control Group %	Control Group N	Experiment Group 1 %	Experiment Group 1 N	Experiment Group 2 %	Experiment Group 2 N	Sig.
Classification^									.117
APS 3-4	29.2	14	12.5	6	8.3	4	8.4	4	
APS 5-6	45.8	22	14.6	7	14.6	7	16.7	8	
EL 1-2	23	11	4.2	2	14.6	7	4.2	2	
Role function^^									.071
Biosecurity	60.4	29	10.4	5	25.0	12	25.0	12	
Scientific Analysis	14.6	7	10.4	5	2.1	1	2.1	1	
Administration	22.9	11	10.4	5	10.4	5	2.1	1	
Education^^^									.099
Low	29.2	14	4.2	2	20.8	10	2.1	1	
Med	48	23	18.8	9	10.5	5	18.8	7	
High	20.9	10	8.4	4	6.3	3	8.4	4	
Length of Service									.516
Less than 5 years	22.9	11	10.5	5	4.2	2	8.4	4	
5 – 15 years	52.1	25	12.5	6	22.9	11	16.7	8	
More than 15 years	22.9	11	8.4	4	10.5	5	4.2	2	

Table 1: Descriptive statistics and significance results of one-way analysis of variance (ANOVA) between the three experimental groups

An initial analysis of variance (ANOVA) between the three groups was conducted to determine if any significant variance existed between the groups. The results of this analysis are also shown in Table 1. Overall, the results of this analysis were as expected although it is likely that they were affected by the small sample size. Significant variance was achieved between the independent variable (exposure to the change communication framing) and the dependant variable (change resistance) for the behavioural component of this scale and was very close to significance for the measure of the whole change resistance scale. It is likely that the levels of significance achieved in this relationship were affected by the small sample size and a larger sample may have resulted in greater levels of significance. In addition, no significant variance (at the .05 level) was shown between the groups for the moderator and control variables. This indicates that the random group assignment of respondents to the different experimental groups occurred as expected. Overall this is a positive result as it indicates that the experimental design operated as designed. It is therefore suggestive that the differences seen in the dependant variable are due to the exposure to the different change communication frames rather then other potential confounding factors.

Linear regression analyses were conducted to test the three hypotheses. These included three models to test a direct relationship between the change resistance and communication framing and individual models for the interaction between professionalism and each of the experimental treatments. The results of the analysis with the full change resistance scale are shown in Table 2.

	Model 1	Model 2	Model 3
Intercept	2.734(.117)***	2.733(.119)***	2.732(.1118)***
Group (ref: Control)			
Experimental group 1	-.268(.131)*	-.271(.135)+	-.270(.133)*
Experimental group 2	.119(.140)	.119(.141)	.123(.141)
Professionalism	-.033(.112)	-.034(.114)	-.009(.121)
Professionalism x Experimental group 1		-.013(.117)	
Professionalism x Experimental group 2			.076(.139)
Observations	47	47	47
R^2	.174	.174	.180

Note: Reported values are unstandardized coefficients with standard errors between parentheses
***$p>.001$; **$p>.01$; *$p>.05$; +$p>0.1$
Table 2: Linear regression analyses for Total Change Resistance Scale

This analysis provided support for Hypothesis 1 as the results for the first experimental treatment are significant and in the correct direction. This therefore supports that change communication messages framed by the professional norms of employees will reduce the level of change resistance shown by those employees. Although the results for the second experimental treatment cannot confirm Hypothesis 2 as they are not significant, they are in the predicted direction that change communication messages framed by competing professional norms will increase change resistance. Likewise, although not significant, the results for Hypothesis 3 are also in the predicted direction that higher levels of professionalism will strengthen the relationship between change communication framing and change resistance. It is likely that the small sample size may have been a contributing factor to the non-significance of these results and further research with a larger sample may also yield significant results for these hypotheses.

As the analysis of the total change resistance scale did not provide significant results for Hypothesis 2 or 3, it was decided to conduct further analyses using the three change resistance sub-scales. The results of these analyses are shown in Table 3 (affective sub-scale), Table 4 (cognitive sub-scale) and Table 5 (behavioural sub-scale).

	Model 1	Model 2	Model 3
Intercept	2.663(.143)***	2.662(.145)***	2.662(.144)***
Group (ref: Control)			
Experimental group 1	-.258(.160)	-.259(.164)	-.259(.162)
Experimental group 2	.198(.170)	.198(.172)	.200(.172)
Professionalism	-.173(.136)	-.173(.138)	-.157(.148)
Professionalism x Experimental group 1		-.004(.143)	
Professionalism x Experimental group 2			.050(.170)
Observations	47	47	47
R^2	.174	.174	.175

Note: Reported values are unstandardized coefficients with standard errors between parentheses
***p>.001; **p>.01; *p>.05; +p>0.1
Table 3: Linear regression analyses for Affective Change Resistance sub-scale

	Model 1	Model 2	Model 3
Intercept	2.916(.118)***	2.918(.120)***	2.915(.119)***
Group (ref: Control)			
Experimental group 1	-.303(.132)*	-.300(.136)*	-.305(.134)*
Experimental group 2	-.089(.141)	-.088(.142)	-.086(.142)
Professionalism	.010(.113)	.012(.114)	.031(.122)
Professionalism x Experimental group 1		.018(.118)	
Professionalism x Experimental group 2			.065(.141)
Observations	47	47	47
R^2	.117	.118	.124

Note: Reported values are unstandardized coefficients with standard errors between parentheses

***p>.001; **p>.01; *p>.05; +p>0.1

Table 4: Linear regression analyses for Cognitive Change Resistance sub-scale

	Model 1	Model 2	Model 3
Intercept	2.623(.137)***	2.618(.139)***	2.620(.138)***
Group (ref: Control)			
Experimental group 1	-.244(.154)	-.254(.158)	-.247(.155)
Experimental group 2	.249(.163)	.248(.165)	.254(.164)
Professionalism	.064(.131)	.061(.133)	.100(.141)
Professionalism x Experimental group 1		-.051(.137)	
Professionalism x Experimental group 2			.114(.163)
Observations	47	47	47
R^2	.196	.198	.205

Note: Reported values are unstandardized coefficients with standard errors between parentheses

***p>.001; **p>.01; *p>.05; +p>0.1

Table 5: Linear regression analyses for Behavioural Change Resistance sub-scale

These analyses provided further interesting findings. Although both the affective and behavioural sub-scale analyses did not produce significant results, they are both similar to the results of the whole scale and in the directions predicted in the hypotheses. The results for the cognitive sub-scale were different to the other analyses conducted. This analysis resulted in significant results at the 0.05 level for Hypothesis 1, which was similar to the total change resistance scale. What is different however is that the direction for the second experimental treatment is opposite for this sub-scale then the other analyses. Although this result was not significant, it is still interesting as it suggests that cognitively, knowing more information, regardless of the type of information, will reduce change resistance in employees. This indicates that the relationship between the change communication framing and change resistance is potentially more complex then originally proposed and it provides an interesting avenue for future research.

In addition, these analyses also highlighted some differences in the role that professionalism may play with the relationship between change communication framing and the different components of change resistance. The effect difference for professionalism observed for the affective component was the largest of the three components and also resulted in a reduction in change resistance. This was in comparison to the positive effect observed in the cognitive and behavioural components although the size of the effect for the second experimental treatment for the behavioural component was also larger than that observed in the first experimental treatment. This indicates that the level of professionalism in employees potentially has a greater impact on how employees feel about an organisational change rather than what they think about the change. The effect difference in the levels of professionalism between the two experimental treatments can also be observed in the results for the interaction variables. Across all the change resistance components, but particularly the behavioural component, the effect size for the interaction between professionalism and the experimental treatments is largest for the second experimental treatment. This effect size can be observed in Figure 1 where the high level of professionalism results in a higher level of change resistance when respondents were exposed to the second experimental treatment.
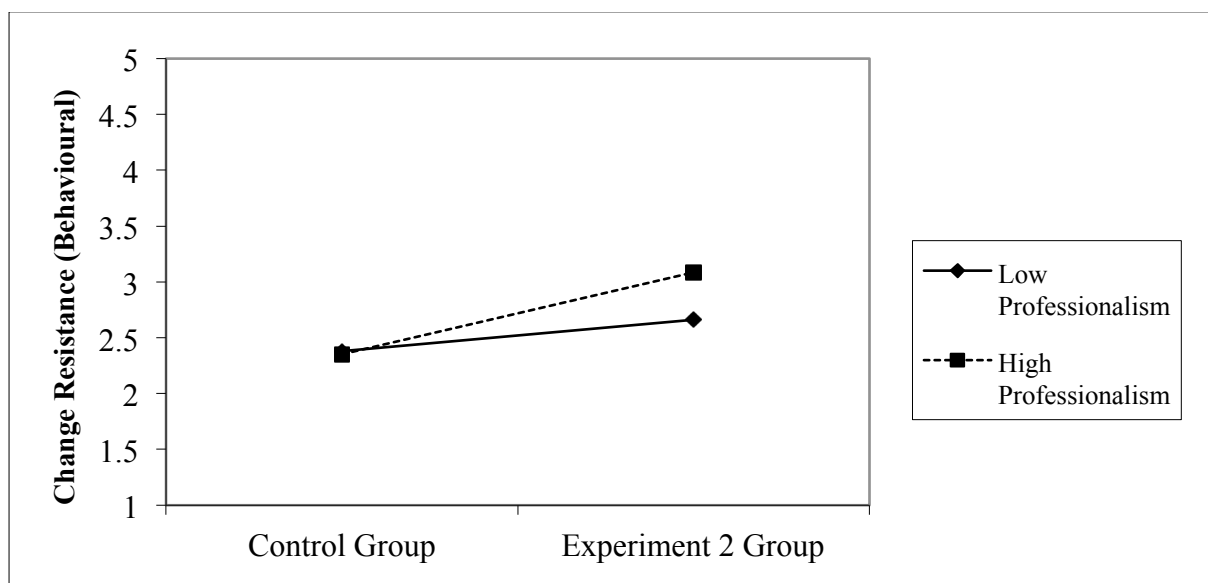

Figure 1: Interaction effect between professionalism and experimental treatment 2 for the behavioural change resistance sub-scale

Although these effects were not statistically significant, it does suggest the possibility that employees with higher levels of professionalism are likely to react more strongly to change communication messages that are framed with competing professional norms than those employees with lower levels of professionalism. This size of this interaction effect was also only observed in this study with the second experimental treatment rather then the first experimental treatment which suggests that the level of professionalism in employees is not as influential when communication aligns to an employees professionalism norms.

CHAPTER 5:

DISCUSSION AND SUMMARY

5.1 DISCUSSION

This study intended to make a contribution to the field of public administration research through examining the effect of change communication messages on change resistance within a professional public setting. The aim of the study was to answer the question, *How does the framing of change communication messages affect the level of change resistance in public employees in occupations with varying degrees of professionalism?* Although the study was impacted by the size of the study sample, it is still felt that this goal was achieved as further evidence has been provided regarding the effect of change communication framing on employee change resistance.

Of the three hypotheses proposed in this study, statistical significance was achieved for the first hypothesis. This provides support that change communication messages that are aligned to the professional norms of employees can result in lower levels of change resistance exhibited by those employees. This is in line with previous suggestions in the literature (Oreg et al., 2011) that it is not only the presence or absence of change communication that is important in managing organisational change also the content and framing of the messages being provided to employees. It has also confirmed with a different population the previous findings of L. B. Andersen et al. (2016) that the framing of communication messages for public employees can influence what they think about the subject of those messages.

Although statistical significance was not achieved for the second hypothesis of this study, the results were still encouraging as they were in the direction predicted. It is likely that the small sample contributed to the non-significance of this result and further research with a bigger sample would be beneficial. In line with the findings of L. B. Andersen et al. (2016), the results suggest that framing change communication messages for employees with frames that are counter to their professional norms may increase their levels of change resistance. In

addition, the difference in change resistance levels observed between respondents exposed to the counter professional norm framing and those in the control group also suggests the possibility of a boomerang effect (L. B. Andersen et al., 2016). This suggests that framing with counter professional norms may actual cause a greater backlash and resistance to an organisational change then no framing at all.

The third and final hypothesis of the study was to examine if higher levels of professionalism in individuals strengthened the relationship between change resistance and change communication framing. Again statistical significance was not achieved for this hypothesis however the direction of the interaction results did indicate that such a strengthening effect may occur. In addition, the results of this study indicate this effect may be greater when highly professionalised employees were exposed to change communication that did not align with their professional norms rather than change communication framed that aligned with their professional norms. This is an interesting outcome as it suggests that the use of counter communication frames may cause a greater negative reaction to an organisational change with highly professionalised employees and that the boomerang effect discussed above may be more relevant for these highly professionalised employees.

In making the above inferences about the casual relationship between change communication framing and change resistance, it is also important to examine the internal validity of the experimental design used within this study. There were two threats identified within the design of this study that had the potential to impact the internal validity. The first risk, the small sample size, may have affected the internal validity through influencing the natural process of randomisation inherent in experimental designs through not having an adequate number of respondents. This was shown however through the ANOVA analyses to not be the case for the control variables that had been collected. As such it is assumed that the randomisation process also worked for other variation that exists within the population. The second threat to the internal validity was the risk of respondent bias through participants interacting whilst responding to the

survey. This threat occurred due to the fact that the survey was distributed via email and respondents were not supervised during the response period. This is a risk that many researchers face when conducting survey experiments from outside the case-study organisation. All practical attempts to mitigate this risk were undertaken such as asking participants to complete the survey individually and including only basic information on the purpose of the survey so that participants were unaware that the information provided could be different to another respondent. Although there is still some chance that respondents may have interacted whilst completing the survey, it is felt that this risk is small and as such it should not have affected the internal validity of the design.

5.2 ACADEMIC IMPLICATIONS

From an academic perspective, there are a number of outcomes from this study of interest both theoretically and methodologically.

Theoretically, the results of this study have provided further support to the argument (Oreg et al., 2011) that it is not only the absence or presence of communication during an organisational change but also the framing and content of those messages that is important. In addition, the experimental design of this study provides evidence for a claim of causality within this relationship. From the results of this study, it can be argued that the framing of change communication messages does cause differences in the levels of change resistance that is seen in professional employees. This also means that future studies into organisational change within public settings should ensure they account for the framing and content of change communication rather then only the presence or absence of change communication.

Although the results for Hypothesis 2 were not significant, there is still an indication of a boomerang effect occurring which repeats what was found by L. B. Andersen et al. (2016). This can be seen in the results of respondents that were exposed to the second experimental treatment having higher change resistance levels (for the total scale and the affective and behavioural sub-scales) then the control group. What is interesting when comparing the two studies is

the different direction of the effect in the cognitive sub-scale within this study. The response statements used in the study by L. B. Andersen et al. (2016) did not differentiate between the different components and were more general in nature. It could however be argued that some were more cognitive in nature as they use phrases such as 'All in all, I think…' (L. B. Andersen et al., 2016, p. 23). The results of this research indicate that such boomerang effects are potentially connected more to how an employee feels and how they towards an organisational change rather then what they logically think about the change. It is important for further researchers to be aware of the complexity behind such a boomerang effect. It also highlights a need for further research to understand the role that boomerang effects may play when communicating organisational change efforts to employees.

The outcomes of this study also have some relevance for the change readiness framework developed by Armenakis and Harris (2002). As mentioned in the literature review, this framework contains five components that can influence the change readiness of employees. The results of this research suggest that when a frame is aligned to the professional norms of an employee that this can influence their perception and subsequent response to an organisational change. Of the five components identified by Armenakis and Harris (2002) it is likely that change communication framing is influencing an employee's view on the *appropriateness* of the change for the organisation. Depending on the communication framing that is undertaken, it is possible that it could also influence an employee's view of the *personal valence* of the organisational change if the framed communication conveys a position that is likely to impact them directly.

In terms of methodological implications, the first finding is the use of the change resistance scale in this survey experiment has highlighted the value of using a multi-faceted scale when measuring a complex variable such as change resistance. This study has provided a greater understanding of how these types of measures can work within an experimental survey design. Previous similar experimental designs that have been used within public administration (L. B.

Andersen et al., 2016; S. C. Andersen & Jakobsen, 2016) have used more general statements to measure employee reactions however this study has shown that more complex reactions can also be measured in experimental designs.

Although this study has shown that Oreg's (2006) change resistance scale can work within an experimental setting, it should also be noted that the change scenario is hypothetical. As such, it is possible that the responses of employees may be different then in a real organisational change. This may also be a contributing factor for why the cognitive sub-scale result was significant and the affective and behavioural sub-scales results were not, as respondents are more likely to be thinking about the change rather then necessarily having an emotional connection to it. This is an important factor for future public administration researchers to consider when designing survey experiments and operationalising variables, as measures that work in an experimental setting may result in different responses in a real world setting and vice versa.

Another methodological implication for public administration researchers is the difference between the two professionalism measures that was an unexpected outcome from this research. Although the van Loon et al. (2015) measure functioned as expected, the issue with internal consistency in the Hall (1968)/Snizek (1972) measure was surprising. On further reflection however there could have been a number of reasons for this. Only one item was chosen for inclusion from each of the 5 sub-categories developed by Hall (1968) which originally consisted of ten items in each sub-category. This may have negatively influenced the internal consistency of the 5 statements chosen because they were not adequately close enough in context without further items from their respective sub-category. This is an important point for future researchers to be aware of when selecting items from a larger scale for inclusion in a survey design. In addition, as the van Loon et al. (2015) measure was developed for use within a public setting (school teachers) it is possible that this measure was more suited for use within a public setting especially with occupations that are not traditionally professionalised.

5.3 PRACTICAL IMPLICATIONS

The results of this study do show that change communication framing can have an effect on the levels of change resistance that occur in professional employees and as such, there could be practical implications for the public sector. As such, it would be wise for managers and practitioners within public organisations to take this into consideration when planning their change communication strategy. Managers should pay attention to the professional norms of their employees and where possible frame messages about organisational changes in line with those professional norms in order to reduce potential resistance to such changes. A concept that has been raised in popular change management press books (Lewis, 2006a) is that the more communication the better to get employees on board during the implementation of an organisational change. The results of this study however indicate that this may not be the case as communication framed by competing professional norms may actually increase employee change resistance. This is also potentially more relevant for managers of highly professionalised employees as the results indicated that these employees may react more strongly to messages that do not align with their professional norms. As such, it is recommended that public sector managers develop an awareness of how they are framing change communication they are providing to their employees and limit messages that are not aligned to the professional norms of their employees.

For the organisation that was studied as part of this research the impact of such change communication framing is important. Like many public organisations across the world, the Department of Agriculture and Water Resources has seen an increased focus on economic and efficiency considerations due to the implementation of New Public Management reforms and the federal government imposition of an annual efficiency dividend (Horne, 2012). With this increased focus on efficiency and rising levels of managerialism, it is also likely that this could be influencing how managers communicate to their employees about organisational change. The results of this study indicate that for the specific type of professionals that exist within this organisation, this may be increasing the levels of change resistance that are exhibited by employees during

organisational change events especially those with high levels of professionalism. As such, it is recommended that managers within the department think through their strategy for communicating organisational changes and where possible frame that communication with relevant occupational professional norms. This can not only be undertaken at the organisational level when change communication strategies are being developed but can also be used by individual team managers as they cascade organisational change messages to their teams. Through targeting and framing their communication in such a way, it may then reduce the levels of change resistance from their employees toward organisational changes.

5.4 STUDY LIMITATIONS

Although this study has made some promising progress in the relationship between change communication framing and employee change resistance, it should be noted that there were some limitations in the design of the study. The first of these is the size of the study sample. The small sample size has reduced the ability of this study to confirm all of the hypotheses proposed however the direction of the effects that were found does indicate that the original theoretical reasoning is sound and a larger sample size may have achieved statistical significance for these effects.

It can also be reasoned that the design of the research as a survey experiment does not necessary measure real reactions, as the organisational change described is only hypothetical. Although this can be a valid criticism of survey experiment designs, the main benefit of this design is in being able to establish causality in theoretical relationships. As a relationship between change communication and change resistance was already fairly well established in previous literature (Oreg et al., 2011), the research design of this study has allowed for further understanding of the direction and complexity of this relationship.

There was a final limitation to this study that involved the method of distribution of the online survey to the respondents. Due to restrictions within the organisation used within this study, the release of bulk email address lists was not possible. As such, the distribution of the survey was undertaken through managers to their teams. Although it was known which teams within the organisation the survey was distributed to, it did result in one manager deciding to remove their involvement in the study after viewing the online survey which impacted the overall study population. In addition, although reminder emails were sent to managers to remind their employees to complete the survey, it is difficult to know if this actually occurred which may have impacted the overall response rate.

5.5 FUTURE RESEARCH DIRECTIONS

On the basis of this study there are a few areas of future research that can be recommended. To increase the external validity of this research, it is recommended that similar studies be repeated in other public organisations and with larger sample sizes. It would be beneficial to conduct this research with a range of occupations and in a range of organisations across different cultures and countries. In particular, it would be especially useful to repeat this research in environments that have a high population of more traditional occupational professionals (i.e. doctors or lawyers) to see if these results could be replicated in those populations. This would provide further validity for the key theoretical relationships including the potential interaction with individual levels of professionalism. If possible, further validation could also be achieved through using the theoretical relationships hypothesised in this study in a field experiment setting. For example, this could be achieved through partnering with a public organisation about to undergo an organisational change and developing two change communication strategies, one that is aligned to the professional norms of the employees within the organisation and one that is aligned with a competing set of professional norms. Different managers could then be randomly allocated one of these communication strategies to communicate the organisational change with their team and a similar survey to the one used in this study could be distributed to the employees to measure levels of change

resistance and professionalism. Replicating the research in this way would provide further evidence of the theoretical relationships in a more realistic setting. This would increase the generalisability of the research and provide greater understanding of how employees would react when faced with an actual organisational change rather then a hypothetical change as described in this study. This would increase the understanding of actual change resistance effect sizes when influenced by different communication frames and also show if the boomerang effect from a competing professional norm frame could be repeated in a more realistic setting.

The results of the analyses between Oreg's (2006) change resistance components also provides an interesting avenue for further research. Although both the full scale and affective and behavioural sub-scales were aligned to the hypothesised relationships between change communication framing and change resistance, the cognitive sub-scale gave a different result. The analysis of the results for the cognitive sub-scale indicated that more information, no matter the type of information, was beneficial in reducing change resistance. This could have interesting ramifications on both future and past research as it highlights a potential issue in the types of questions used to measure change resistance in public administration research. Further research to understand the differences in these sub-scales would be beneficial to provide further understanding of how communication frames may influence change resistance. An example for further research could be to conduct a similar experimental survey design using a hypothetical organisational change with the addition of a third experimental treatment that combined aspects of both the professional norm and counter professional norm communication frames. This would provide further insight into the influence of more information on the cognitive component of change resistance and also the overall impact of the different communication frames (i.e. if the effect of the professional norm frame was able to counteract the effect of the non-professional norm frame). Based on the results of this study, it is hypothesised that the addition of more information would cause a further lowering of the cognitive component of change resistance due to the lowering of change resistance seen in both the two framed experimental treatments

compared to the control group. The overall effect of a combination of the two frames is more difficult to predict due to the fairly similar effect size, albeit in opposite directions, observed in this study for the two experimental groups compared to the control group. This could mean that the effect of each group of professional norms in a combined frame could equal each other out which results in a similar level of change resistance to that observed in a control group. What would also be interesting to take into account for this third experimental treatment is an individual's level of professionalism as this could also influence the relationship between change resistance and a combined communication frame. As shown in the results of this study, it is possible that individual professionalism levels have a greater role in the relationship with change communication framed around counter professional norms and as such this could mean this aspect of a combined frame would have a stronger influence in highly professionalised employees. This could mean that a higher level of change resistance may be observed in highly professionalised employees verses employees with low levels of professionalism when exposed to a combined communication frame. Results of such a study could further the theoretical relationship between change resistance and communication framing and the influence of professionalism in this relationship. It could also provide further insight into the question of 'is more better?' when it comes to communication during an organisational change.

Further comparative use of the two professionalism measures should also be pursued. This would provide evidence as to the suitability of these different measures within public settings as this study did indicate some potential differences in their use with this population. It would be useful to conduct this using the whole scale to see if the differences between the measures experienced in this study are replicated when the full scales are used. This would allow for greater understanding as to the suitability of the different measures with different populations within the public sector.

REFERENCES

Adams, T. L. (2014). Sociology of professions: international divergences and research directions. *Work, Employment and Society*, *29*(1), 154–165.

Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Prediciting Social Behaviour*. Upper Saddle River, NJ: Prentice Hall.

Allen, J., Jimmieson, N. L., Bordia, P., & Irmer, B. E. (2007). Uncertainty during Organizational Change: Managing Perceptions through Communication. *Journal of Change Management*, *7*(2), 187–210.

Andersen, L. B. (2005). Offentligt ansattes strategier (Public employees' strategies). Århus: Politica. In: Andersen, L. B. (2009). What determines the behaviour and performance of health professionals? Public service motivation, professional norms and/or economic incentives. International Review of Administrative Sciences, 75(1), 79–97.

Andersen, L. B., Andersen, S. C., Jacobsen, C. B., & Jakobsen, M. (2016). Leadership Communication, Professional Norms, and Boomerang Effects. In *2016 PMRA conference* (pp. 1–27). Aarhus, Denmark.

Andersen, L. B., & Pedersen, L. H. (2012). Public Service Motivation and Professionalism. *International Journal of Public Administration*, *35*, 46–57.

Andersen, S. C., & Jakobsen, M. (2016). Policy Positions of Bureaucrats at the Front Lines: Are They Susceptible to Strategic Communication? *Public Administration Review*, *xx*, 1–10 (early access).

Armenakis, A. a., & Harris, S. G. (2002). Crafting a change message to create transformational readiness. *Journal of Organizational Change Management*, *15*(2), 169–183.

Blackburn, G. (2014). Elements of Successful Change: The Service Tasmania Experience to Public Sector Reform. *Australian Journal of Public Administration*, *73*(1), 103–114.

By, R. T. (2007). Ready or Not... *Journal of Change Management*, *7*(1), 3–11.

Cao, Y., Bunger, A. C., Hoffman, J., & Robertson, H. A. (2016). Change Communication Strategies in Public Child Welfare Organizations: Engaging the Front Line. *Human Service Organizations: Management, Leadership & Governance*, *40*(1), 37–50.

Carlan, P. E., & Lewis, J. A. (2009). Dissecting Police Professionalism: A Comparison of Predictors Within Five Professionalism Subsets. *Police Quarterly*, *12*(4), 370–387.

Chong, D., & Druckman, J. N. (2007). Framing Theory. *Annual Review of Political Science*, *10*(1), 103–126.

Dent, E. B., & Goldberg, S. G. (1999). Challenging "Resistance to Change." *The Journal of Applied Behavioral Science*, *35*(1), 25–45.

Elving, W. J. L. (2015). The role of communication in organisational change. *Corporate Communications: An International Journal*, *10*(2), 129–138.

Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, *43*, 51–58.

Evetts, J. (2009). New Professionalism and New Public Management: Changes, Continuities and Consequences. *Comparative Sociology*, *8*, 247–266.

Evetts, J. (2011). A new professionalism? Challenges and opportunities. *Current Sociology*, *59*(4), 406–422.

Fernandez, S., & Pitts, D. W. (2007). Under what conditions do public managers favor and pursue organizational change? *The American Review of Public Administration*, *37*(3), 324–341.

Fernandez, S., & Rainey, H. G. (2006). Managing successful organizational change in the public sector. *Public Administration Review*, *66*(April), 168–176.

Freidson, E. (1984). The Changing Nature of Professional Control. *Annual Review of Sociology*, *10*, 1–20.

Georgalis, J., Samaratunge, R., Nell, K., & Lu, Y. (2015). Change process characteristics and resistance to organisational change: The role of employee perceptions of justice. *Australian Journal of Management*, *40*(1), 89–113.

Goodman, J., & Truss, C. (2004). The Medium and the Message: Communicating Effectively During a Major Change Initiative. *Journal of Change Management*, *4*(3), 217–228.

Hall, R. H. (1968). Professionalization and Bureaucratization. *American Sociological Review*, *33*(1), 92–104.

Heuvel, S. Van Den, Schalk, R., & van Assen, M. A. L. M. (2015). Does a Well-Informed Employee Have a More Positive Attitude Toward Change? The

Mediating Role of Psychological Contract Fulfillment, Trust, and Perceived Need for Change. *The Journal of Applied Behavioral Science*, *51*(3), 401–422.

Horne, N. (2012). The Commonwealth efficiency dividend: an overview. Retrieved December 12, 2016, from http://parlinfo.aph.gov.au/parlInfo/download/library/prspub/2105255/upload_binary/2105255.pdf;fileType=application%2Fpdf

Jaccard, J. (1981). Toward theories of persuasion and belief change. *Journal of Personality and Social Psychology*, *40*(2), 260–269.

Kiefer, T. (2005). Feeling bad: Antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior*, *26*(8), 875–897.

Kiefer, T., Hartley, J., Conway, N., & Briner, R. B. (2015). Feeling the Squeeze: Public Employees' Experiences of Cutback-and Innovation-Related Organizational Changes Following a National Announcement of Budget Reductions. *Journal of Public Administration Research and Theory*, *25*(4), 1279–1305.

Kuipers, B., Higgs, M., Kickert, W., Tummers, L., Grandia, J., & Van der Voet, J. (2014). The management of change in public organisations: A literature review. *Public Administration*, *92*(1), 1–20.

Lewin, K. (1947). Frontiers in Group Dynamics: Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, *1*(1), 5–41.

Lewis, L. K. (1999). Disseminating information and soliciting input during planned organisational change: Implementers' targets, sources, and channels for communicating. *Management Communication Quarterly*, *13*(1), 43–75.

Lewis, L. K. (2006a). Advice on Communicating During Organizational Change: The Content of Popular Press Books. *Journal of Business Communication*, *43*(2), 113–137.

Lewis, L. K. (2006b). Employee Perspectives on Implementation Communication as Predictors of Perceptions of Success and Resistance. *Western Journal of Communication*, *70*(1), 23–46.

Miller, J., & Fry, L. (1976). Measuring Professionalism in Law Enforcement.

Criminology, *14*(3), 401–412.

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

Naff, K. C., & Crum, J. (1999). Working for America: Does Public Service Motivation Make a Difference? *Review of Public Personnel Administration*, *19*(4), 5–16.

Nelson, T. E., Oxley, Z. M., & Clawson, R. A. (1997). Toward a Psychology of Framing Effects. *Political Behavior*, *19*(3), 221–246.

Noordegraaf, M. (2016). Reconfiguring Professional Work: Changing Forms of Professionalism in Public Services. *Administration & Society*, *48*(7), 783–810.

Oreg, S. (2003). Resistance to Change: Developing an Individual Differences Measure. *Journal of Applied Psychology*, *88*(4), 680–693.

Oreg, S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, *15*(January), 73–101.

Oreg, S., Bayazit, M., Vakola, M., Arciniega, L., Armenakis, A., Barkauskiene, R., ... van Dam, K. (2008). Dispositional resistance to change: Measurement equivalence and the link to personal values across 17 nations. *Journal of Applied Psychology*, *93*(4), 935–944.

Oreg, S., Vakola, M., & Armenakis, A. (2011). Change Recipients' Reactions to Organizational Change: A 60-Year Review of Quantitative Studies. *The Journal of Applied Behavioral Science*, *47*(4), 461–524.

Piderit, S. K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review*, *25*(4), 783–794.

Rainey, H. G. (2009). *Understanding and Managing Public Organizations* (4th editio). San Francisco, CA: Jossey-Bass.

Roberts, J., & Dietrich, M. (1999). Conceptualizing Professionalism: Why Economics Needs Sociology. *American Journal of Economics and Sociology*, *58*(4), 977–998.

Russ, T. L. (2008). Communicating Change: A Review and Critical Analysis of Programmatic and Participatory Implementation Approaches. *Journal of*

Change Management, *8*(3–4), 199–211.

Schott, C., van Kleef, D. D., & Steen, T. P. S. (2016). The combined impact of professional role identity and public service motivation on decision-making in dilemma situations. *International Review of Administrative Sciences*, *0*(0), 1–21.

Sniderman, P. M., & Theriault, S. M. (2004). The Structure of Polical Argument and the Logic of Issue Framing. In *Studies in Public Opinion: Attitudes, Nonattitudes, Measurement Error, and Change* (Vol. 3, pp. 133–65).

Snizek, W. E. (1972). Hall's Professionalism Scale: An Empirical Reassessment. *American Sociological Review*, *37*(1), 109–114.

Straatmann, T., Kohnke, O., Hattrup, K., & Mueller, K. (2016). Assessing Employees ' Reactions to Organizational Change : An Integrative Framework of Change-Specific and Psychological Factors. *The Journal of Applied Behavioral Science*, *52*(3), 265–295.

Toshkov, D. (2016). *Research Design in Political Science*. Palgrave Macmillan.

van Dam, K., Oreg, S., & Schyns, B. (2008). Daily Work Contexts and Resistance to Organisational Change: The Role of Leader – Member Exchange, Development Climate, and Change Process Characteristics. *Applied Psychology: An International Review*, *57*(2), 313–334.

van der Voet, J., Kuipers, B., & Groeneveld, S. (2016). Implementing change in public organizations: the relationship between leadership and affective commitment to change in a public sector context. *Public Managment Review*, *18*(6), 842–865.

van Loon, N., Heerema, M., Weggemans, M., & Noordegraaf, M. (2015). Conceptualizing and measuring professional capability in a public context. In *IRSPM conference* (pp. 1–30).

Vann, J. L. (2004). Resistance to Change and the Language of Public Organizations: A Look at Clashing Grammars in Large-Scale Information Technology Projects. *Public Organization Review*, *4*, 47–73.

Wanberg, C. R., & Banas, J. T. (2000). Predictors and Outcomes of Openness to Changes in a Reorganizing Workplace. *Journal of Applied Psychology*, *85*(1), 132–142.

Watson, G. (1971). Resistance to change. *The American Behavioral Scientist*,

14(5), 745–767.

Wright, B. E., & Christensen, R. K. (2013). Motivated to Adapt? The Role of Public Service Motivation as Employees Face Organizational Change. *Public Administration Review*, *73*(5), 738–747.

APPENDIX 1:

SURVEY DESIGN AND QUESTIONS

Below is a scenario relating to a hypothetical change within the department. Please read through the scenario description carefully and provide answers to the statements below.

Note: Each respondent was randomly assigned one of the three hypothetical change vignettes below.

Control group text

Imagine that the department is about to make changes to how biosecurity inspections are conducted. Officers will be trained to use new inspection equipment and record keeping techniques. The changes will occur progressively over the coming months and all staff involved in biosecurity operations will be affected.

Experimental group 1

Imagine that the department is about to make changes to how biosecurity inspections are conducted. Officers will be trained to use new inspection equipment and record keeping techniques. The changes will occur progressively over the coming months and all staff involved in biosecurity operations will be affected. These changes are based on the latest scientific knowledge and will improve the quality of biosecurity inspections. This will reduce the threat of biosecurity risks and inspectors will have more freedom to make their own decisions. The new information collected will help officers to make further improvements in targeting biosecurity risks.

Experimental group 2

Imagine that the department is about to make changes to how biosecurity inspections are conducted. Officers will be trained to use new inspection equipment and record keeping techniques. The changes will occur progressively over the coming months and all staff involved in biosecurity operations will be

affected. These changes are based on the latest economic modelling and will improve the efficiency of biosecurity inspections. This will shorten the length of time taken to conduct an inspection, which will make considerable savings for the department. The new information generated will help the department to continue to achieve efficiency in our inspections.

Change Resistance Questions Coding		Fully disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree or disagree (4)	Somewhat agree (5)	Agree (6)	Fully agree (7)
Affective	I am afraid of this change							
Cognitive	I believe that this change will harm the way things are done in the department							
Affective(R)	I am quite excited by this change							
Cognitive(R)	I believe that this change will benefit the department							
Behavioural	I will look for ways to prevent this change from taking place							
Affective	I have a bad feeling about this change							
Cognitive	I believe that this change will make my job harder							
Cognitive	I think that it's a negative thing that we are going through this change							
Behavioural(R)	I will encourage others to support this change							
Behaviour	I will complain about this change to my colleagues							
Affective	This change makes me upset							
Behavioural	I will protest against this change							
Affective	I am stressed by this change							
Behavioural	I will present my objections regarding this change to management							
Cognitive(R)	I believe that I will personally benefit from this change							

The below statements relate to how you experience your work. Please rate each of the statements:

Professionalism Questions Coding		Fully disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree or disagree (4)	Somewhat agree (5)	Agree (6)	Fully agree (7)
Hall/Snizek	I regularly read professional journals relevant to my job							
Hall/Snizek	The dedication of people in my occupation is most gratifying							
Hall/Snizek	I make my own decisions regarding what is to be done in my work							
Hall/Snizek(R)	Other occupations are more vital to society than mine							
Hall/Snizek(R)	It is hard to judge the competence of others within my occupation							
van Loon et al.	I speak up when I consider accountability systems (such as administration systems) useless							
van Loon et al.	I take an active role in discussions about my profession							
van Loon et al.	I speak up within the department if there are problems that form an obstacle for providing good service							
van Loon et al.	I search courses or training programs for the development of my skills that may be beneficial in the future							
van Loon et al.	I encourage colleagues to speak up within the department when they encounter problems that make it difficult to achieve results							
van Loon et al.	I regularly adjust how I do my work in response to new insights							

What is your current classification?

O APS 3

O APS 4

O APS 5

O APS 6

O EL 1

O EL 2

O SES

What do you see as the primary function of your role?

O Biosecurity

O Scientific Analysis

O Administration

O Management

O Other (   )

What is your highest level of education achieved?

O Less then Year 12 or equivalent

O Year 12 or equivalent

O Vocational qualification

O Undergraduate/Associate diploma

O Bachelor degree (including honours)

O Post graduate diploma (including graduate certificate)

O Masters degree

O Doctorate

How long have you worked for the department?

○ Less than 12 months

○ 12 months to 2 years

○ 2 years to 5 years

○ 5 years to 10 years

○ 10 years to 15 years

○ 15 years to 20 years

○ More than 20 years