

**CHALLENGES TO INTERPROFESSIONAL
COLLABORATION BETWEEN PROJECT AND
CHANGE MANAGERS**

Exploratory Study Using a Paradox Lens

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Abstract

This thesis sets out to explore the challenges in interprofessional collaboration between project and change managers taking a paradox lens. Literature evidences the need for integration between the two professions yet has not been able to identify the challenges faced by project and change managers during the project lifecycle and the root causes of the challenges. One of the issues identified in literature is rivalry between the two professions. This study explores this further by first understanding the challenges to interprofessional collaboration and second, analyzing the tensions that arise between project and change managers during 2nd order change projects.

The study presents the reader with an understanding of some key constructs that provide insight into the characteristics of interprofessional collaboration and the respective challenges. The three constructs of professionalism, collaboration and collegiality are studied and analyzed through which six key themes are extracted. The six themes are identified as enablers of interprofessional collaboration. The six key enablers are used to explore tensions through a paradox lens. Four paradoxes are used for the analysis of practitioner case studies and the books of knowledge published by two bodies of knowledge, namely, Project Management Institute and Change Management Institute. Case studies and the books of knowledge, Project Management Book of Knowledge and Change Management Book of Knowledge, are analyzed using the paradox framework, which includes the paradox of learning, paradox of belonging, paradox of organizing and paradox of performing.

The analysis shows that paradoxes play a role in creating barriers to interprofessional collaboration. Where paradoxes are not clearly identified, it was evidenced that the books of knowledge through their teachings, can create tensions between the two professions. The six key enablers are required in order to reduce tensions and mitigate paradoxes. Moreover, as long as paradoxes are recognized and accepted, with the minimum availability of the six key enablers, there is possibility for project and change managers to work through the paradoxes and overcome interprofessional collaboration.

This secondary research and analysis contribute to academic and practitioner research on interprofessional collaboration between project and change managers. It contributes further to allow for further study of the six enablers to identify approaches and behaviors to the integration of project and change management.

Declaration

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1. Introduction

The practical problem

New global conditions, frequency and magnitude of change are greater now than before and are placing a premium on how fast organizations can respond to the changes (Worley and Mohrman 2014; Greiner and Cummings 2004). As a result projects are being used as a way to institutionalize change in organizations (Crawford and Nahmias 2010). The success rate of projects is directly proportional to the effectiveness of change management techniques and, project management integration is the 6th contributing factor to the success of change initiatives (Prosci, 2018). PMI's *Pulse of the Profession* (Project Management Institute, 2017), shows that organizations are wasting approx. \$97 million for every \$1 billion they invest. This is due to poor project performance. Moreover, lack of change management is among the top 10 causes of project failures.

Change is an inevitable consequence of project implementations (Hornstein 2015a). Hence 'change' elements must be considered a component of project management, as such, change initiatives are initiatives such as, installing new technology, downsizing, restructuring, mergers and acquisitions, business model changes, business process reengineering, total quality management, corporate culture change; behavioral and organizational culture (Nohria and Beer 2000; Burnes 2004; Parker et al. 2013; Partington 1996; Hornstein 2008a; Boddy and MacBeth 2000), all of which are considered projects or programs. Changes affect how people work together and who they work with, bringing into play the power and political dynamics of the organization, making it difficult to apply the same success factors across all change projects (Boddy and MacBeth 2000).

With the introduction of complexity and volatility in the business environment, organizations are recognizing the need for organizational and behavioral changes to realize benefits from change initiatives (Crawford 2011; Kuzmanova and Economy 2012; Parker et al. 2013). It is evidenced through literature that the way change is managed impacts the degree of project success, and that, both project management and change management have a role to play in the management and delivery of change initiatives. The integration of the two is required to achieve better project results (Kuzmanova and Alexandrova 2017; Hornstein 2015b; Pádár et al. 2017).

Several well-known organizations and bodies of knowledge, that conduct research and provide certifications have been established over the past several decades that focus on change management. Examples being, the Change Management Institute (CMI), established in 2005,

Prosci established in 1994, the Association of Change Management Professionals (ACMP) established in 2011, thus emphasizing the need for change management and change managers in transformation projects.

The practitioner community (both project and change managers) suggest the use of project and programs for managing change within organizations, thus utilizing methods from the Project Management Institute (PMI), Office of Government Commerce (OGC), Australian Institute of Project Management (AIPM), Japanese Project Management (JPM) among others. Over the years, several change management models have been developed and are being utilized by the practitioner community. These include ADKAR¹ by Prosci, Heitger & Doujak, McKinsey 7S Model, Kotters 8 stages, Lewins CM model, Bridges' transition model, Kübler-Ross five stage model and change management frameworks by consulting firms such as KPMG, Deloitte etc. However, there is little spoken about change management and related models in literature (Gareis and Huemann 2008) possibly due to the little interaction between the two professions.

Crawford (2005) found little research evidence to show that subject matter expertise or exclusive competency gained from the bodies of knowledge, such as PMI and APM and the certifications they provide lead to improved project performance. Instead, more than expert knowledge is required to improve project performance taking into consideration the need for the two disciplines to work collaboratively to achieve a common objective.

It is important to consider the integration of project and change management from various aspects. Some being, their activities, roles and responsibilities, approach utilized, governance and the relationship between the two professions. Understanding how these two professions can work together is the main premise for this study. Considering such limited collaboration and rivalry between project managers (PM) and change managers (CM), this thesis aims at understanding collaboration between project and change managers through a paradoxical lens.

The existing practitioner literature recognises the need for the two professional groups to work collaboratively. 2nd order transformational projects require both project and change managers to share common objectives and values, inadvertently suggesting that their work is complementary, and that they should develop collegial relations and work in a collaborative manner. One explanation for limited collaboration comes from broader literatures from the

¹ ADKAR: Awareness, Desire, Knowledge, Ability, Reinforcement

Sociology of Professions, which leads us to expect professional rivalry and jurisdictional disputes as a consequence of, project and change management being distinct professional groups. This study uses paradox theory to explore how these differences may be impacting interprofessional collaboration between project and change managers.

The next section presents an understanding of the discussion in literature regarding the need for integration of project and change management and change initiatives.

It sets the foundation for the research motivation to explore the challenges in interprofessional collaboration between project and change managers.

[Integration of Project and Change Management](#)

The evidence in literature suggests that there is need for the integration of project and change management. Paradoxically there is also evidence of the limitations of integration as both have different objectives and approaches, both are considered separate professions, organized and led by different bodies of knowledge. The literature provides insight into the barriers to integration and identifies some key elements used in practice by project and change managers to collaborate and make projects successful. This section presents an understanding of the need for integration in literature, however, it does not provide sufficient information on how such integration can take place and moreover, how to make this collaboration a success.

It is important to understand that different types of changes require different change management approaches. This is based on the demand for the change, the organizations readiness to change, the magnitude of change, the pace of change and the impact of the change on the organization (Gareis 2010; Kuzmanova and Economy 2012). This is also evidenced by Crawford (2011) whose research suggests that higher the degree of change, greater the involvement of change management roles in projects. Hence it is important to define change as either minor improvements or adjustments that do not change the organizations core, also known as 1st order changes, or multi-dimensional, radical change that affects the organization at multiple levels and results in a new future state, also known as 2nd order changes (Levy and Merry, 1989).

For the purpose of this study and as recognized in literature, we refer to 2nd order changes when exploring project management and change management. The common domain of project and change management are those of 2nd order changes that are also projects. Evidenced through extensive literature review (Pádár et al. 2017), 2nd order changes demand high levels of interpersonal skills, a human centric approach and hence a different set of skills

that project managers do not currently possess (Gareis 2010; Partington et al. 2005; Padar et al. 2011), but change managers do.

Study conducted by Levasseur (2010) showed that people skills were essential for project success, which are achieved through the application of change management principles such as two way communication, collaboration and collective efforts. Such skills and methods are available to change management professionals. 2nd order changes influence shared practice, affect the entire organization, and a variety of people horizontally and vertically, and require multiple approaches to change (Kezar 2013). All of these are taught in the change management books of knowledge as evidenced in chapter 5.

Matthews et al. (2018) has evidenced that integrating change and project management practices is gaining importance, however both practices are seen as separate professions within an organization as they have some effective differences which often becomes the reason for hindrance in integration. A study conducted by Shakirov *et al.* (2019) showed there is significant evidence that suggests successful integration of project and change management, but the scope of integration is still limited as the required practices are seen as separate by both, project and change managers. Moreover, change management theories and literature have presented effective frameworks² for managing change however, there is little emphasis on explicitly defining the roles of change managers in implementing change initiatives.

Change management practices focus on change dynamics as they are developed within the context of creating change within an organization. They place emphasis on change ownership, strategic management, communication, and engaging leadership in the change initiatives, however, project management emphasizes methods and techniques (Pollack and Algeo 2014a; Pollack 2016a). To perform these two distinctive management practices, both project and change managers have taken different approaches. There is lack of clarity on what the areas of interdependence are. The difference in the frameworks, the approach taken, the practices, focus, outcomes, professional memberships, and bodies of knowledge play a major role in the lack of or limited convergence between the two professions. Literature has evidenced that there is rivalry between the two professions (Belias et al. 2019; Gareis and Huemann 2008; Crawford and Nahmias 2010; Algeo and Pollack 2014). Hence, for the study, we will distinguish between project and change management as different professions and assume the

² Models by: John Kotter, Elisabeth Kubler-Ross, Lewin, Prosci ADKAR, McKinsey 7S

possibility of limited scope of integration due to challenges in collaboration. This is covered under chapter 3 in further detail.

It is evidenced through literature that the intellectual convergence of the two professions and their need to complete projects successfully and meet the required outcomes and benefits are reasons for collaboration. At the same time, the differences in models and approaches utilized, priorities and areas of focus during the change initiative create boundaries between the two professions (Rosenbaum et al. 2018). Other factors that make the integration of the two professions difficult are focus on different outcomes (Al-Ali et al. 2017), different approaches, poor support from project managers as change management tasks are viewed as less important by project managers (Crawford and Nahmias 2010; Piroozfar et al. 2019) and lack of leadership support to change management due to limited knowledge of change management (Kuzmanova and Alexandrova 2017).

Whilst literature has evidenced the need for collaboration between the professions of project and change management, it has also evidenced the lack of collaboration between the two professions and provided some conditions and characteristics required to make such collaborations successful. The area of interest for this study is the cause of the rivalry between the two professions taking a softer approach looking at various nontechnical aspects that are required to make collaboration work between the two professions. The next section shows the motivation behind the research and the focus of the study.

Research Motivation

Literature has identified the need for integration of project and change management and at the same time has stated that there are challenges and identified them. The key reasons are around people and social issues (Greiner and Cummings 2004; Hornstein 2001; Levasseur 2010). Moreover, there is no one approach that addresses both the project aspect and the social, human and people aspect (Hornstein 2015c; Hornstein 2008a; Griffith-Cooper and King 2007; Levasseur 2010). Question that arises is what behaviors are necessary to make collaboration between the two professions work?

Moreover, literature has demonstrated that there are areas of convergence between the two professions (Padar et al. 2011; Lehmann 2010; Pollack and Algeo 2014a), and, the need for exchange of knowledge and subject familiarity (Hornstein 2015a), yet it has been evidenced that there is rivalry between project and change managers with regards to the management and ownership of the change (Crawford and Nahmias 2010; Pollack and Algeo 2014b). Additionally, research has evidenced that practitioners of these two professions,

project and change management, have considerable different views on the distribution of authority during the change initiative (Pollack and Algeo 2013). There is also evidence that change managers are viewed more senior compared to project managers, where change managers are seen as senior management who focus on “strategy and vision” whereas project managers are seen alongside middle management who focus on “operational performance” (Pollack and Algeo 2014a; Gareis 2010).

As stated earlier, it is evidenced in literature that there is a need for integration of the two professions (Hornstein 2015a) and that there is a need for them to work together (Alsène E. 1998); however, 1) there are differences in the authority the professions hold during change initiatives and 2) practitioners of change and project management profession have different perspectives of how the two professions should collaborate (Pollack and Algeo 2013) and 3) there are differences in roles and responsibilities of the two professions during transformation projects (Pollack and Algeo 2014a).

Some challenges have been mentioned, but research has not been conducted to identify the underlying people issues behind these challenges. It continues to remain unclear why there is limited interaction and rivalry between project and change managers and what may be the cause for this between the two professions. This thesis attempts to explore this issue using paradox theory. It begins with an understanding of professionalism, collaboration and collegial behaviors through literature review and applying them to practical cases to explore the tensions between the two professions.

Research conducted by Algeo and Pollack (2014) concluded that in work environments where conflicts have been evidenced between project and change managers or in situations where conflict was anticipated between the two professions, discussions should be held between the two disciplines with regards to how they will collaborate on a particular project; possibly through negotiating clear roles and responsibilities and ownership of activities within the project. This would ensure clear distinction between what one profession does compared to the other. The research also indicated that the conflict could be resolved at an individual interpersonal level. This shows that clarity in roles and responsibilities and tasks assigned is a key element to effective collaboration between the two professions.

Further research conducted by Pollack (2016) showed that together, project and change managers hold a significantly greater chance of alignment, resulting in the effective and efficient delivery of projects, and for that they must compromise to reach agreement. However, further attempts are required to be made to establish the factors for how project and change managers should work together.

The above evidence gaps in literature and as a result knowledge in terms of interprofessional collaboration between project and change managers. This leads me to investigate the social and human aspects involved in the interaction of the two professions, namely, change and project managers, using the constructs of professionalism, collaboration, and collegiality. Building on the understanding from the three constructs, this study explores the application of paradox theory to interprofessional collaboration. As stated by Tapper and Palfreyman (2002) collegiality is a quality where colleagues work together united in a common purpose with mutual respect for one another's abilities and Denis et al. (2019) conceptualize collegiality as understanding how individuals and groups govern work.

The presence of paradoxes has been identified by several studies as a barrier to collaboration specifically between two separate disciplines. The study explores the application of this, specifically to collaboration between project and change managers.

This thesis draws on McGuire's (2016) argument that collaborations are "inherently paradoxical in nature", which is a useful starting point from which to provide a richer view of the limited collegiality and collaboration between project and change managers. A paradox lens recognises that collegiality and collaboration require simultaneous protection and integration that pull against each other. Using a paradox lens is based on work by Lewis and colleagues, who in a series of papers indicate how the masking of paradoxes and conflicting truths can lead to "paralyzing defences" and negative outcomes (Lewis, 2000). They also argue for the exploration of tensions, rather than suppression, such that management can tap the "positive potential of paradox". By drawing on McGuire's application of this lens to the study of project and change management, this thesis attempts to answer the following questions:

- Can paradoxes be detected in collaborative contexts in which project and change managers work?
- Can paradoxes be detected in the project and change management professional books of knowledge?
- What paradoxes can be detected in case studies of project and change management?

The study contributes to knowledge in several ways, most of which have not been explored yet and cannot be found in literature. One is the exploration of collaboration between project and change managers using a paradox framework and second is the exploration of paradoxes created by the books of knowledge published by the change and project management bodies of knowledge, neither have been explored in academia. Thirdly, theoretical contribution that identifies the paradoxes that challenge the collaboration between project and change

managers, giving academics a starting point to further investigate whether these paradoxes exist in practice and how, if at all, are such paradoxes managed by the two professions in practice. In terms of practical contribution, project and change managers can utilize this to understand the existence of such tensions, be conscious of them and agree to identify and manage them through collaborative efforts. The detection of key elements of interprofessional collaboration provides project and change managers as well as organizations, with an opportunity to implement them and evidence the increase in interprofessional collaboration.

Study Overview

Researchers have recognized the need for integration of project and change management and have shown through case studies that such integration positively affects project outcomes, however, there are significant differences in various aspects as the two professions respond to different factors of delivering a successful project. Moreover, these are based primarily on practitioner focused literature that have provided insight into the integration by exploring the roles and responsibilities, process, approach, and methods utilized, project governance and structure among others.

One of the key aspects that has been identified through literature is the difference in the role of the two professions. Some are, project managers play an operational role, whilst change managers play a strategic role; project managers prefer change managers to report to them whilst change managers prefer to take a collaborative approach (Pollack and Algeo 2013; Pollack 2017; Pádár et al. 2017). The writers have evidenced that such differences in views are brought about by lack of formal guidance on the roles and responsibilities of the professions when managing transformation projects. Practitioner literature analysis shows that the literature does not focus on the reason for the rivalry between the two professions, human behaviors, and motivations behind the rivalry. Literature has shown the difference in views of the two professions, with little theoretical context to enable deeper insight into the integration of the two professions and the underlying issues that limit such integration.

Further study needs to be conducted that can address the reasons for the rivalry between the two professions, the role of the two professions within 2nd order transformation projects and how the two professions can collaborate to address the same project objectives and outcomes whilst maintaining professionalism.

The study begins with a methodology that explains the approach taken towards the exploration of paradoxes in interprofessional collaboration. Chapter 3 provides the context by introducing and explaining the following:

- Paradox theory and the framework used for the study
- Evolution of project and change management professions
- Characteristics and values of professions and professionalism
- Interprofessional collaboration
- Characteristics of interprofessional collaboration and associated collegial models
- Challenges to interprofessional collaboration

Once an understanding is gained from literature review, the literature is analyzed with a paradox lens using paradox theory and the developed framework, namely, paradox of learning, paradox of organizing, paradox of belonging and paradox of performing.

Chapter 4 utilizes practitioner case studies to investigate the possibility of paradox detection in practice between project and change managers.

Chapter 5 utilizes project management and change management books to knowledge respectively to explore the role of paradoxes in interprofessional collaboration between project and change managers.

Chapter 6 concludes through discussion bringing together all aspects of this study.

Chapter 7 finalizes the thesis, encouraging further, in depth research through primary research.

This study is an exploratory study that utilizes secondary data to conduct qualitative analysis. This is further explained in the next chapter that details the methodology used to conduct the analysis. This study analyzes literature review, practitioner-based case studies and the books of knowledge published by the project management and change management bodies of knowledge to explore the challenges in interprofessional collaboration through a paradox lens. This is a one-of-a-kind study that does not have previous similar research available to build upon and attempts to establish a basis for further research. The reader will find that the research is vast, and the analysis is at a holistic level. This allows the reader to gain an understanding of the various constructs, their association and the impact of paradoxes on creating challenges to interprofessional collaboration.

The next chapter details the research methodology, data collection and research gaps.

2. Methodology

2.1. Introduction

This chapter is divided into several sections intended to explain the research design and methodology utilized to underpin the research. The researcher's philosophical or theoretical perspective is how he/she sees the world and makes sense of it (Crotty 2020). Secondary research has been utilized for this study, which includes the analysis of cases from academic articles and analysis of the practices taught and promoted by well-known bodies of knowledge namely, the Project Management Institute (PMI) and the Change Management Institute (CMI). Research ethics was not required for this work, as it did not involve the collection of primary data.

Covid 19 Impact Statement has been included in this thesis to consider the disruption caused by Covid-19 since 2020. This thesis has considered data from secondary sources for several reasons. One being the impact of Covid over the past few years which has encouraged more work from home and made it difficult to approach organizations directly. This is a Covid Impact Statement to indicate how these studies have been disrupted by Covid-19 since 2020. This thesis was originally going to consider the research question from primary data sources. However, a key impact of Covid over the duration of this study is that it was not possible to approach organizations for direct access during the height of the pandemic. Subsequently, many organizations prioritized adjusting to a new business context and supported mass working from home, making it equally challenging to gain access to primary data in the time available. This research context required a new way of looking at the issues. The chosen alternative strategy was to look at these questions in a unique and different way, in particular, looking at the research questions in a more exploratory approach using a range of secondary data sources that already exist. It was intended that this secondary data analysis will form the basis for more focused, concrete research using primary data.

First, time was spent exploring the research questions in a broader set of literatures than previously used to explore project and change management. This thesis therefore engages with paradox theory and within that framework brings together several concepts that draw on professionalism, collaboration, collegiality, project management, change management, interprofessional collaboration and integration.

Secondly, case studies of project and change management in existing literature were analyzed using the framework. Thirdly, this framework was used to analyze the Books of Knowledge used in project and change management. Both actions enabled the exploration of

the existence of paradoxes in interprofessional collaboration between project managers and change managers.

The purpose of the research is to conduct exploratory research using a paradox lens to help obtain a richer view of the limited collegiality and collaboration between project and change managers leading to answering the research questions mentioned in chapter 1. Moreover, to identify whether paradoxes can be detected in the context of collaboration and understand whether paradoxes can be detected in the bodies of knowledge and in the practices they teach and promote through their books of knowledge, namely, PMBoK³ and CMBoK⁴.

2.2. Research Design

Few researchers have investigated the potentially paradoxical nature of the relationship between project and change managers. This study embarks on an exploratory study where the research goal of the current analysis is to create an understanding of the topic and generate a pathway for future studies. Exploratory research in this case has been an effective method for gathering knowledge. This concept is flexible and does not use require confirmed hypothesis for instance. This exploratory research utilizes a qualitative research method because qualitative exploratory research has the possibility to add quality and insightful information to a study (Stebbins 2001).

Qualitative research is an approach rather than technique, and its appropriateness derives from the nature of the social phenomena being explored (Morgan and Smircich 1980). All approaches to social science are based on interrelated sets of assumptions regarding ontology, human nature, and epistemology (Burrell and Morgan 1979). The increasing trend in management research is to add multi-dimensional insights into management research problems and include the researcher's intuition and reflections that are considered subjective in nature. If the aim is to gain a better knowledge of the world, then one must recognize the complexities and ambiguities that exist in every organization (Mangan et al. 2004).

Qualitative research is extensively utilized and acknowledged in management studies, which frequently rely on case studies of organizations as their primary source of information (Patton 2005).

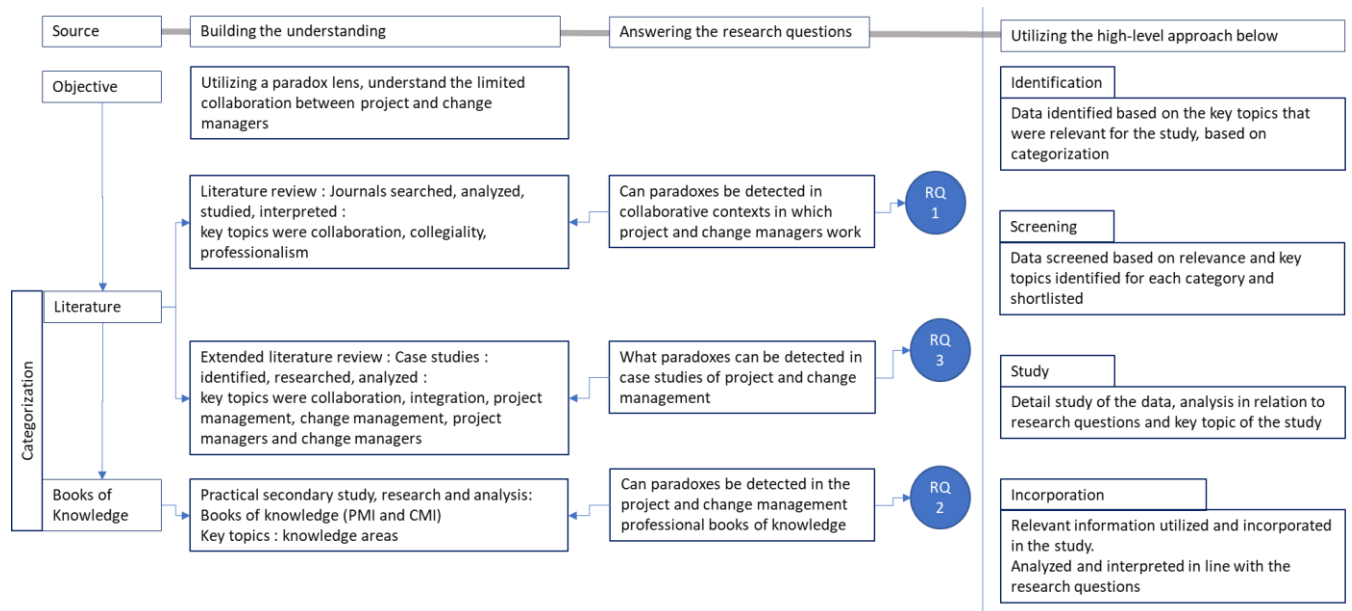
Qualitative exploratory research is a method of inquiry that encompasses the theoretical assumptions that underpin the investigation, the study design, and the collection of data (Abell

³ Project Management Book Of Knowledge

⁴ Change Management Book of Knowledge

et al. 2008). In other words, the selection of research method has an impact on the way data is gathered and analyzed during the study process.

Figure 1: High level approach utilized to conduct the research



*Data : data mentioned in the figure above refers to literature, case studies and knowledge areas studied in the books of knowledge

Reason for using Qualitative Research

This study utilizes qualitative research as it attempts to understand relationships and behaviors between two distinct disciplines and to explore the types of paradoxes that exist within such relationships and interprofessional collaborations. The study attempts to understand the intricate nature of interprofessional relationships within organizations. It must be considered that there is no single answer to a socially constructed world or environment and that it cannot be viewed as black and white.

Qualitative measures provide the researcher with flexibility for interpretation of allow for interpretation of individual motivations, perspectives and behaviors leading itself best to a qualitative method of data analysis as it is not hard coded, is multi dimensional in its nature and allows a degree of ambiguity and uncertainty. It is acknowledged that any study, whether qualitative or quantitative, is influenced by researcher assumption or world views, or the researcher may ignore or oversee something whilst including others leading to an incomplete picture or only one point of view. Neither qualitative nor quantitative measurements are perfect, and it is important to recognize that in every social system it is possible to identify characteristics that are multi-dimensional in nature, in which case the researcher creates constructs that they believe are related with features that the researcher is trying to observe.

Such difficulties may introduce a grey area, a ‘softness’ in the analysis (Luna-Reyes and Andersen 2003).

There are several reasons for using qualitative research in this study. One is the nature of the research, where the research questions attempt to investigate the relationship between two professions whereby exploring the role of paradoxes in people related roles, contributions, and behaviors towards working together. The study attempts to understand the intricate nature of the relationship between the two professions in a project-based environment and in a wider context, within an organization. Furthermore, qualitative analysis is used because it is multi dimensional in its nature and allows a degree of ambiguity and uncertainty which is experienced in this secondary research (Strauss and Corbin 1998).

Second, is the vague relationship between the two disciplines of project and change management. The use of qualitative research allows exploration of the differences and provides enhanced conceptual understanding of the disciplines in terms of how they relate to each other and to an organizational change project (Strauss and Corbin 1998).

2.3. Data Interpretation technique

An interpretivist perspective has been used to interpret the data and categorize them into four key themes, namely, paradox of learning, paradox of belonging, paradox of organizing and paradox of performing (Lewis 2000). Each chapter following this chapter, utilizes different sources of data for analysis. Chapter 3 utilizes literature to conduct literature analysis. Thematic analysis is utilized to analyze the literature and identify patterns or themes from literature. It is a qualitative analysis approach that offers a method, a tool and technique for identifying patterns, analyzing them, and developing relevant themes within qualitative data (Clarke and Braun 2017). The analysis method utilized for chapter three was specifically used to analyze interprofessional collaboration and the three constructs of professionalism, collaboration, and collegiality. Common data was identified across the constructs and six key themes were identified. Details of this are available in chapter 3.

The technique was modified for chapters 4 and 5, where analysis of case studies and the books of knowledge were based on interpretive analysis. The data was reviewed and analyzed considering four paradoxes: paradoxes of learning, belonging, organizing, and performing. Whilst reviewing the data, actions or patterns were identified that 1) created tensions and where paradoxes clearly surfaced and 2) where tensions could be created and as a result paradoxes would surface. This required detail analysis, linkage with paradox theory and the framework introduced in chapter 3, and interpretation of the data to identify tensions

and related paradoxes. Interpretation was required as tensions and paradoxes were not apparent in case studies and books of knowledge.

The analysis endeavored to uncover tensions by focusing on the situation and/or thoughts and behaviors of participants and finally the interpretation of the researcher themselves. Qualitative study through secondary research does not allow the researcher to discuss individual's experience and obtain clarifications and obtaining the individuals interpretation in their own words. However, as this is an exploratory study on a topic that has not been studied before, secondary data was sufficient to conduct context dependent analysis and answer the research questions, results of which can be further verified through primary research. The study has attempted to develop an understanding of the respondents' perspectives of the contribution that project and change managers make to specific project activities, however it is acknowledged that alternate interpretations are also possible.

The analysis relies on the interpreting the data and developing views and opinions based on the paradox theory. Moreover, the goal of data interpretation is to ensure practicality in its application for managers. The interpretation is a researcher's struggle to identify information and findings in the most objective way possible, focus on key and relevant elements of the information and categorize them appropriately (Strauss and Corbin 1998).

2.4. Data Collection

The data is collected in three different ways, using secondary research. The study is broken down into three separate chapters, following this chapter. Chapter 3 focuses on exploring paradoxes in literature by studying professions, professionalism, collegiality and inter-professional collaboration. Chapter 4 explores the possible creation of paradoxes in the practice through analyzing case studies from published research. Chapter 5 explores the possibility of the existence of paradoxes through the practices taught by the bodies of knowledge, namely, PMBoK and CMBok.

Data gathered has been reviewed, analyzed, interpreted, and categorized under four paradoxes explained in the previous chapter, which are the key themes of this study. This same method is used to analyze both the cases as well as the books of knowledge. The case studies utilized are limited, to reduce the width of the study and time spent to collect data, categorize them, analyze them and classify them into the four themes, and to better focus on the depth of analysis. In case the bodies of knowledge, the focus in on the high-level practices taught by the bodies of knowledge instead of delving deep into the detail approaches and methodologies utilized by each profession, for the same reasons highlighted in the previous statement.

Moreover, the exploratory nature of the study is to gain insight for future research opportunities.

Chapter 3: Analyzing literature to understand paradoxes in inter-professional collaboration

Chapter 3 explores whether paradox theory can be applied to literature on professionalism, collegiality and collaboration and help understand how paradoxes play a role in inhibiting inter-professional collaboration. It aims to answer research questions one: Can paradoxes be detected in collaborative contexts in which project and change managers work?

The approach utilized in this chapter is twofold. One is the literature review, and the other is the analysis of the literature. Literature view involves review of wide range of literature focused on professionalism, collegiality, and collaboration. The literature was studied to understand the definitions of the terms, the characteristics of professions, professionalism and collaboration and components that either facilitate or hinder collaboration and the associated reasons. The analysis involves utilizing qualitative thematic analysis by studying literature of professionalism, literature of collaboration and literature on collegiality. These three constructs have been used as they are interrelated, which will be further shown in chapter 3. In addition, literature on paradox theory was studied and utilized as an underlying source of information to answer the three research questions.

Through the review of literature, key elements that promote collaboration and key challenges to interprofessional collaboration are identified. Further analysis of the literature led to the detection of six key themes. The six key themes are then used to explore tensions through a paradox lens. The analysis explores whether the lack of these key themes is a reason for the emergence of paradoxes, which can be applied to the challenges faced in collaboration by project and change managers. Where there were areas of ambiguity, and paradoxes could not be determined easily, examples from paradox related literature were used. Such as examples from the case studies were utilized to identify a relationship or a situation similar to the data being reviewed. That led to the identification of paradoxes and where paradoxes could not be identified due to the ambiguity, the data was not utilized.

Chapter 3 forms of the basis of this study. Wide variety of literature was required for this chapter. Key topics utilized to identify the literature were collaboration, collegiality, integration, professionalism, professions across various industries. The academic papers were screened, relevant topics related to the key words mentioned in the previous sentence were captured and relevant literature were shortlisted. They were then further studied in depth,

categories of similar themes were captured that led to the identification of six key themes. This formed the basis of further analysis leading to chapter 4 being an extension of chapter 3.

Chapter 4: Analyzing Case Studies

Chapter 4 aims to answer research question 3: What paradoxes can be detected in case studies of project and change management? The data utilized for this were practical case studies.

Following Romano (1989); considering there are no precise guidelines to the number of cases required for qualitative study, and that similar research has not been conducted in the past, there was no basis to be utilized and the decision was made to utilize 22 case studies. This facilitated practical research and an understanding of the challenges faced by project and change managers in practice. This can be considered an extended literature review, as it links the theoretical aspects of the study with the practical aspects. The articles utilized for the study are listed in Appendix I.

Since 2008, several articles written by Henry Hornstein focused on the integration of project and change management. Several other articles have since been written on the requirement of integration between project and change management, and research conducted on what is hindering such integration. The articles identified explore such reasons. Similarly, the analysis of the methods and approaches taught by the bodies of knowledge provide insight into the paradoxes created that cause barriers in inter-professional collaboration between project and change managers.

Table 1: The case studies selected are based on the following criteria

Criteria	Explanation
Practitioner based	Considering secondary research is being conducted, exploratory qualitative research to obtain practical examples was required to obtain data that assimilates primary research data
Focus on projects that required collaboration	Most of the articles focus on the integration of project and change management, they are viewed as complementary and advocate the need for the two professions to work together. Other articles selected focused on interprofessional collaboration on mega change initiatives but not necessarily

	<p>studied the collaboration of project and change managers in specific.</p> <p>Common themes and focus of the articles allow for a controlled analysis and ability to draw conclusions from the comparisons</p>
2 nd order change initiatives	The articles focus on 2 nd order change initiatives
Different sectors	The articles focus on various sectors considering this is exploratory research, with limited research on the integration of project and change management aspects, a wide range of change initiatives provides for a holistic view of interprofessional collaboration and allows for a degree of generalizability and ensures that the exploratory study is not biased to one sector.

The case studies selected followed the approach shown in Figure 1. Several practitioner-based literatures were identified. They were screened to ensure they met the criteria identified in the table above. These were then studied in detail to ensure they contained key components of collaboration and integration between project and change managers and/or project and change management methods. This study reduced the number of articles to 22, selected mainly from journals related to project management and organizational change management, as they were practical and relevant to the study and the research question.

The analysis of case studies attempts to explore whether paradox theory can be applied to the case studies being analyzed thus facilitating the understanding of inter-professional collaboration between project and change managers.

Chapter 5: Analyzing the practices stated in the Books of Knowledge

Chapter 5 explores whether the practices taught in the books of knowledge published by the bodies of knowledge, namely PMI and CMI, play a role in creating paradoxes in inter-professional collaboration. It aims at answering research question 2: Can paradoxes be detected in the project and change management professional books of knowledge? The study involves the analysis of the knowledge areas from Project Management Book of Knowledge 6th edition and the knowledge areas from the Change Management Book of Knowledge 1st edition. Based on the findings of chapters 3 and 4, by which time, deep insight was obtained in terms of theory and practice, it justified the need to explore how the main books of knowledge were impacting

the approach and mindset of project and change managers as they heavily rely on these to conduct their operations within their profession. Accordingly, the areas of knowledge were studied keeping the research question in mind and exploring paradoxes that may arise as a result of the teachings. The approach identified in figure 1 was followed, where data here would be defined as the knowledge areas in the PMBoK and the CMBoK.

The PMBoK has 10 knowledge areas that are inter-related and may or may not all be used in a project, based on the type of project. As described by the PMBoK “A Knowledge Area is an identified area of project management defined by its knowledge requirements and described in terms of its component processes, practices, inputs, outputs, tools, and techniques” (PMI 2017). The project life cycle is defined in terms of 5 process groups, namely, Initiating, Planning, Executing, Monitoring and Controlling, and Closing. The knowledge areas are mapped against the process groups, which identifies what process needs to be followed under each process group and applicable knowledge area.

The CMBoK has 13 knowledge areas that are required by change managers to practice change management effectively (Change Management Institute 2013). The knowledge areas focus on the competencies required by change managers to manage change rather than technical approaches that define how and when, what should be done. There is no specific approach or change life cycle provided by the CMBoK. Change managers are free to select an approach from a variety of change management models, as long as, they have the required competencies to do so.

Based on the findings of chapters 3 and 4, by which time, deep insight was obtained in terms of theory and practice, it justified the need to explore how the main books of knowledge were impacting the approach and mindset of project and change managers as they heavily rely on these to conduct their operations within their profession. Accordingly, the areas of knowledge were studied keeping the research question in mind and exploring paradoxes that may arise as a result of the teachings. The approach identified in figure 1 was followed, where data here would be defined as the knowledge areas in the PMBoK and the CMBoK

2.5. Research Gap

This exploratory study has been conducted through secondary research, reasons provided in the previous sections. To re-iterate the point, literature shows that there is little academic research on inter-professional collaboration in the context of change and project management. Research has shown that there is a need for them to collaborate on 2nd order

change initiatives, however, in depth research has not been conducted to identify the reasons they are unable to collaborate.

Reiterating from chapter 1, literature has evidenced that there is rivalry between the two professions (Belias et al. 2019; Gareis and Huemann 2008; Crawford and Nahmias 2010; Algeo and Pollack 2014). But none have identified the exact issues behind the rivalry nor provided required evidence. This study builds on this finding from literature and attempts to explore the role of paradoxes in inter-professional collaboration between project and change managers. It must be noted that this study is a new study that is not built on other similar studies or attempting to close a narrow knowledge gap identified previously.

Since such a study has not been conducted in the past, a wider perspective has been taken and the exploration has been conducted across various scenarios, 1) exploring paradoxes in literature on professionalism and inter-professional collaboration, 2) exploring paradoxes in practitioner case studies that discuss integration of project and change management and, collaboration and 3) exploring paradoxes in the practices taught by the professional bodies of knowledge by comparing the practices taught in the books of knowledge; the 13 knowledge areas of the change management book of knowledge and the 10 knowledge areas of the project management book of knowledge. This will provide a more holistic view of the possibility of the existence of tensions and whether paradoxes can be detected such that they challenge interprofessional collaboration between the two professions. The aim is to build a foundation for the understanding of the challenges, the role tensions and paradoxes can play in challenging interprofessional collaboration and guides future thought and studies into each of the areas using primary research.

The subsequent chapters each identify the related research gap and opportunities for further research. Considering that there is limited research on interprofessional collaboration between project and change managers, this exploratory study identifies several aspects of interprofessional collaboration, that can be utilized as a foundation for further research. It must be noted that this document does not intend to provide in depth analysis of the topics covered, instead is exploratory in nature providing a foundation for further research and prompting thought in utilizing the paradox lens as a factor in the limited collaboration between project and change managers. In order to provide the foundation, this document looks at various aspects of collaboration, a high level comparison of the books of knowledge and case studies focusing on project and change management bringing them together to show that a deeper study of paradoxes could provide insight into the lack of collaboration between project and change managers.

The next chapter presents various concepts from literature that are used as a foundation for the study of paradoxes in interprofessional collaboration between project and change managers. It introduces the reader to paradox theory, the guiding framework for this study, followed by the evolution of project and change management, which provides insight into the two different professions. It then elaborates on three key constructs of professionalism, collaboration and collegiality, which form the basis of the study of interprofessional collaboration. The literature is then tied together through literature analysis and discussion around it. Chapters 4 and 5 are different studies and attempt to tie the findings from chapter 3.

3. Literature Review and Analysis

This chapter aims to explore paradox theory in context of inter-professional collaboration. It aims to study papers, articles and other resources that define interprofessional collaboration and characteristics that facilitate and hinder inter-professional collaboration and those of professions and professionalism that help lead to inter-professional collaboration. This is then linked to interprofessional collaboration between project and change managers.

The literature review has been conducted using a paradox lens to understand 1) the various factors that are barriers to inter-professional collaboration and 2) whether paradoxes facilitate or hinder inter-professional collaboration. For this, it is required to understand paradox theory, professions and how professions have evolved, collaboration and interprofessional collaboration. As shown in the previous chapter, little is available that focuses on project management and change management as professions, and discusses the collaboration between the two professions, but the wide study of profession and professionalism allows for exploration and analysis of the literature to categorize the two professions, their characteristics and to identify the tensions between the two professions and possible causes of these tension.

Section 3.1: This chapter begins with understanding paradox theory used as a basis for this study, then moves on to define professions and the nuances in what divides, brings together, and/or guides professions, important in understanding the tensions between two distinct professions: project managers and change managers.

Section 3.2 : explains the evolution of project and change management, as this sets the basis for understanding the backgrounds that differentiate the two professions and to give context to why they are considered two separate professions.

Section 3.3: This section explores the characteristics of professions and professionalism, key topic of study that sets the base for a deeper understanding of why project and change management can be categorized as two separate professions and the expectations in terms of professionalism from various professions.

Section 3.4: This section explores another key topic of collaboration providing the reader with an understanding of collaboration and its emphasis in literature on achieving results. Collaboration is further explored in terms of interprofessional collaboration, and the positive impact of collaboration between professions.

Section 3.5: This section explores the characteristics of interprofessional collaboration, bringing together the three key constructs, namely, profession, professionalism, collaboration, that set the basis for the research.

Section 3.6: This section provides the reader with an understanding of collegiality as a term and collegial models that integrate and facilitate interprofessional collaboration. Collegial models require the same characteristics as professionalism and collaboration. The three key constructs are inter-related and hence an understanding of all of them is required.

Section 3.7: As much as interprofessional collaboration is a must, it comes with its challenges. A literature review is not complete without listing the challenges. These provide insight into the challenges that project and change managers face when having to work together on change projects.

Section 3.8: This section focuses on literature analysis. After the review of the literature on the various topics listed in sections 3.1 to 3.7, the data was analyzed considering the three research questions. As a result, key themes were identified. These are then used to analyze interprofessional collaboration between project and change managers and explore the role of paradox theory in such collaborations.

The need for professional collaboration and interactions is evidenced, however, there are challenges which have been described. Methods to facilitate collaboration are also discussed, yet they do not always work in practice. What causes these challenges to inter-professional collaboration? Might it be the paradoxical tensions between two professions? This chapter provides the background and context through literature review for the subsequent chapters and research.

Section 3.9: The chapter ends with a discussion that addresses the question above. It shows the linkage of the three constructs and the six key enablers that are in common. Some practical examples are used to link the enablers with successful interprofessional collaboration.

3.1. Understanding Paradoxes through Literature

Four key articles have been used to understand paradoxes and devise a theoretical framework used for this study. The framework is then used to study collaboration between project and change managers through a paradoxical lens. Paradoxes indicate contradictory yet interrelated elements, that when viewed in isolation seem logical and the very opposite when appearing simultaneously (Lewis 2000). As Lewis (2000) explains, paradoxes are defined differently in organizational studies, such as contradictions embedded within a statement,

human emotions and also in organizational practices; some described paradoxes are observations that contradict common beliefs or have unintended consequences.

A paradox is a coherently inconsistent assertion or an explanation that negates one's expectation. It is an explanation that, notwithstanding clearly legitimate thinking from genuine premises, prompts an apparently self-problematic or a consistently unsatisfactory conclusion. Research conducted by Sabini and Alderman (2021), has shown that the introduction of sustainability concepts in project management has overwhelmingly changed the overall approach to the management of projects where contradictions arise as the professionals get pushed in different directions, intensifying existing paradoxes or creating new contradictions. They noted that project management literature evidences the trade-off decisions that project managers face when attempting to reconcile sustainability related objectives with the conventional triple constraint criteria of cost, quality, and time. It has been suggested that understanding the behavior of project managers can aid in providing reasoning behind the paradoxes and how they can be resolved (Silviu and Schipper 2020).

A paradox as a rule includes incongruous yet-interrelated components that exist all the while and endure over time. They allude to a couple of attributes that give off an impression of being different to such an extent that they truly couldn't exist together. They bring about "industrious inconsistency between associated components" prompting an enduring "solidarity of opposites" (Sabini and Alderman 2021). In rationale, numerous oddities exist that are known to be invalid contentions yet are by and by important in advancing basic thinking; however, different paradoxes have uncovered mistakes in definitions that were thought to be thorough, such as Russel's Paradox and Conservation Conundrum to name one. Paradox theory, at its core, presumes that tensions are integral to complex systems, and that they need to be recognized as contradictory yet intertwined and should be dealt with accordingly (Smith and Lewis 2011).

This thesis utilizes the framework developed by Lewis (2000) as a basis for exploring paradoxes that hinder the collaboration between two professions, change managers and project managers. The table below explain the four paradoxes.

Table 2: Paradoxes (Lewis 2000)

Paradox	Description
Paradox of Learning	<p>Learning requires the usage of, critiquing of, and often destruction of past understandings and practices to develop new and more complicated knowledge of reference.</p> <p>Learning paradoxes involve processes of transforming old knowledge, which may cause tensions between old and new knowledge. Individuals find it difficult to take action despite of knowing that there is inconsistency between their current understanding and the changing global environment.</p>
Paradox of Organizing	<p>Organizing represents an ongoing process of equilibrating opposing forces that lead to commitment, and trust, whilst continuing to maintain the efficiency or order. Paradox of organizing lead to tensions and conflict, and demand for control and flexibility simultaneously. Organizations want to empower employees to obtain better efficiency and results, however, at the same time need to control through governance and processes. Additionally, the way the organization is structured, causes tensions, due to contradictions between different parts or functions of the organization.</p>
Paradox of Belonging	<p>Groups become cohesive, influential, and distinctive by valuing the diversity of their members and their interconnections with other groups.</p> <p>Paradoxes of belonging signify complex relationships between oneself and others, thus making individuality, teamwork a problem. Individuals strive for both individuality as well as affiliation to a group or team or professional body, which causes paradoxes to arise.</p>

Paradox	Description
Paradox of Performing	Performing paradoxes stem from the plurality of stakeholders and result in competing strategies and goals. Organizing paradoxes can spill over into role contradiction, which is performing paradox because of the tensions that arise in performing contradictory roles. Additionally, paradoxes of belonging can spill over into tensions in activities and roles, thus creating paradoxes of performing.

Paradoxical tensions coexist and coevolve; as shown through a restructuring case study of a Telco conducted by Jarzabkowski et al. (2013). They showed how the paradox of organizing, which are the structural changes in the organization, led to employee's experiencing paradox of belonging and performing. A new division was created, with a separate office building, processes, governance, and related systems. It was required that commercial information not be shared between corporate and the new division. However, the two needed to work together to ensure transfer for related information and systems. Moreover, regulations stated that the two divisions would work together to develop and deliver new products. This contradiction created tensions in belonging and performing.

Paradoxes are complex and interwoven. The study above showed the iterative relationships between paradoxes, which operate at different levels within an organization. The paradox of performing lies at the microlevel of the organization, where employees focus on their individual performance through roles and responsibilities, whilst the paradox of belonging lies at the meso-level of the organization (in the middle) where employees focus on identifying themselves with a group or a department/function and lastly, the paradox of organizing lies at the macro / organization level where employees focus on following organizational processes. Paradoxes occur simultaneously at various levels within the organization.

Paradoxes may serve as the starting point for disciplined speculation, which compels people, organizations, and society to question the status quo and establish mental frameworks to move forward. Organizations may be thought of as complex social systems, the paradox arises when the organizational framework is challenged with increasing complexity in its surroundings. When it comes to organizational studies, paradox is becoming increasingly prevalent, since there is a rising realization that management and organization theory must

address the phenomena that is integral to human individuals and social systems (Cameron and Quinn 2011). Organizational theories try to describe a very complex world with a limited number of logically coherent claims, but they end up being unfinished and unsatisfactory (Poole and Van de Ven 1989). Literature suggests that exploring paradoxes, which include dynamic tension and balances, may help us go beyond simple and polarized conceptions and inspire the creation of more comprehensive theories; which would take into account the complexities of organizational life and the difficulties an organization faces in its ecosystem (Cameron and Quinn 2011; Braathen 2016).

The Figure below shows the categorization of organizational tensions, which are used as a reference in this study (Smith and Lewis 2011). The study considers that tensions operate within each paradox as well as between paradoxes. Conflicting yet inter-related elements exist at various levels within an organization, including projects (Van Marrewijk et al. 2008).

Figure 2: Organizational tensions, showing paradoxes coexist (Smith and Lewis 2011)

<p style="text-align: center;">Learning : Belonging</p> <p>Conflicts between the need for adaptation and change and the desire to retain an ordered sense of self and purpose</p>	<p style="text-align: center;">Learning</p> <p>Efforts to adjust, renew, change and innovate; foster tensions between building upon and destroying the past to create the future</p>	<p style="text-align: center;">Learning : Organizing</p> <p>Organizational routines and capabilities seek stability, clarity, focus and efficiency while also enabling dynamic, flexible and agile outcomes</p>
<p style="text-align: center;">Belonging</p> <p>Identity fosters tensions between the individual and the collective and between competing values, roles and memberships</p>	<p style="text-align: center;">Belonging : Organizing</p> <p>Tensions between the individual and the aggregate, individuality vs collective action</p> <p style="text-align: center;">Learning : Performing</p> <p>Building capabilities for the future while ensuring success in the present</p>	<p style="text-align: center;">Organizing</p> <p>Structuring and leading, fostering collaborations and competition, empowerment and direction, and control and flexibility</p>
<p style="text-align: center;">Performing : Belonging</p> <p>Clash between identification and goals as actors negotiate individual identifies with social and occupational demands</p>	<p style="text-align: center;">Performing</p> <p>Plurality fosters multiple and competing goals as stakeholders seek divergent organizational success</p>	<p style="text-align: center;">Performing : Organizing</p> <p>Interplay between means and ends, employee vs. customer demands, high commitment vs high performance</p>

This sets the base and provides the theoretical framework for the study. The next section explores the evolution of two professions, project and change management through a theoretical lens. The evolution of project and change management not only provides a comprehensive view of their emergence but also provides the foundation of considering them as two professions leading to the next section that delves into professions, professionalism, and collaboration, which sets the basis for exploring paradoxes between the two professions.

3.2. Evolution of project and change management

Organizational changes are now being recognized as distinct projects and majority of transformation projects require some degree of organizational and behavioral change. The practice of project and change management have evolved over the decades through development of frameworks, introduction of new tools and techniques and establishment of bodies of knowledge that aid project and change managers to fulfil their roles and achieve project success. By understanding the brief history and evolution of the two professions and their respective approaches and practices, we can obtain insight into how the two professions developed, facilitates the understanding of the improvements made in the two disciplines, helps understand the need for integration of project and change management and explore the reasons that encourage and discourage interprofessional collaboration.

Evolution of Project Management:

The Project Management Institute defines a project as “A project is a temporary endeavor undertaken to create a unique product, service, or result.” and project management as the “Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.”(PMI 2017).

Given the definition of project management, we could state that humans have started working on projects since ancient history and that project management began with the making of Noah’s Ark. However, the practice of project management was officially recognized since the Egyptian era (Kwak 2005). Over half a century ago organizations started applying systematic project management tools and techniques to complex projects. It was then when project management was formalized. Project management focus has moved from quality, globalization to now speed, where due to technology, organizations need to stay ahead of their competitors. This involves the development of complex products and services utilizing complex processes and interprofessional expertise. This has had an impact on project management as its current practices gradual grow and emerge for better project management.

As explained by Kwak (2005) the roots of formal project management date back to the early 1900s. During this time, advancement in technology impacted shorter project schedules, automobiles allowed resource allocation and mobility and the speed of communication was enhanced due to telecommunication systems. In 1920, Henry Gantt invented the Gantt chart which became the basis of developing work breakdown structures. The Gantt chart was later interfaced into current project management software’s one of them being Microsoft project.

The Hoover dam is a perfect example from the early 1900s that shows that project management cannot be conducted in silo and requires collaboration of several parties with various competencies. For the project to be successful it was critical develop detail project planning, controlling, and coordinating plan because it involved six independent companies working together to make the project successful. The project was successfully completed under budget and ahead of schedule (Worren et al. 1999).

The second era of the project management between 1958 and 1979, marks significant technology advancement which includes the introduction of the first automatic plain-paper copier by Xerox in 1959 and the development of silicon chips and transition from mainframe to minicomputers. With the development of programming language UNIX in 1969 by Bell Laboratories, the computer industry began to develop at a rapid pace.

Microcomputers allowed for midsize organizations to adopt project management practices. Emails were introduced in 1972 and Microsoft was founded in 1975. During this time several software companies were established.

Along with rise in technology, project management tools were introduced, such as CPM/PERT and Material requirement planning. Large computer systems were utilized to calculate CPM/PERT and skilled programmers were required to operate them, creating a new competency and expertise. It was the Polaris project that refined the project management concepts; the navy established a new unit called Special Project Office (SPO) also known today as Program/Project Management Office (PMO) that have evolved into other concepts such as Vision Realization Office or Strategy Realization Office (VROs and SROs).

The internet project that was initially funded by the US Department of Defense was initiated in 1962 and managed by the Advanced Research Projects Agency (ARPA) who conducted the required coordination among several set of contractors. This project was different from a single organization driven project and was driven by number of researchers and organizations. This concept remains the same till date where large second order transformation projects require several professions to work together to make the project successful. It has evolved into incorporating change management principles to ensure the change is adopted.

With the introduction of technology and project management tools came the introduction of specialized association and body of knowledge for project management. In 1965 the International project management Association was founded followed by the Project Management Institute (PMI) in 1969. The PMI was initially founded as a non-project

organization dedicated to the profession of project management offering certifications, guidance and knowledge to the profession of project management.

The 1980s and early 1990s mark the third era of project management; the revolution of IT/IS sector shifted people to multitasking personal computer that had high efficiency in managing and controlling complex projects. Several well known projects were initiated during this era, some being; The English-France Channel project (1989- 1991), Space Shuttle Challenger project (1983-1986), and The XV Calgary Olympic Winter Games (1988). These projects successfully utilized and applied technology and advanced project management tools and practices. These projects illustrated the diverse use of project management practices, where the Calgary Olympic winter games utilized project management techniques and practices to event management. The English Channel project successfully brought together several professions and organizations across two countries. This required skill, technology and advance project management techniques such as project goal, cost, schedule and performance measurement techniques. It put emphasis on communication and stakeholder management.

PMI published its first PMBoK (Project management book of knowledge) in 1987. It set the basis and standards of project management practices where processes used to manage the nine project management knowledge areas as described along with other information dealing with project management knowledge, skills, and attitudes (Kloppenborg and Opfer 2002). The project management frameworks present knowledge areas, processes or competences that are important in project management practice. Research has shown that some knowledge areas, processes and competencies are less researched by academia; some mentioned are Programme management Leadership, teamwork, team performance (Wawak and Woźniak 2020)

The current era (1995 – present) is the fourth era which is revolutionary considering the fast pace of change. Professor Peter Morris, in 1994, introduced the Management of Projects (MoP) perspective where greater emphasis is placed on the project definition phase. This is the phase which considers strategic alignment, technology management, budget formation, and most importantly, key organizational elements such as stakeholders, people and overall organization structure and the project team structure. (Pinto and Winch 2016). As a result, this shifts the role of the project manager and the team from taking directives from management to being proactive and interacting with the larger business within which the project is to be undertaken. It also requires that the organizational culture be recognized to make the project successful, as it may span across cities, states or countries. With the automation of various tasks, introduction of AI for data analytics and scenario and risk-based

analysis, project managers need to move from a highly skills focus to more of a new age business focus. This requires emphasis on achieving organizational strategic initiatives, realizing business benefit, utilization of latest, evolving technologies and most importantly, agility, leadership and communication skills (Bourne 2010). Art Petty describes the role of a project manager as being the epicenter of an organization's strategy execution; where strategy is executed in projects, and an organization's project management skills play a significant role in success or failure in the marketplace (Petty 2009).

Complexity in projects has increased over time and this requires projects to be managed from a technical perspective and also from a more strategic, people orientation perspective as projects now cover larger scale, affect how the organizations operate and in turn affecting large number of people who work within the organization, and possibly across various geographies.

To summarize this section, project management has evolved over several decades, is a well-established profession backed by professional bodies of knowledge providing certifications and knowledge to the profession. Project management has well defined practices and is technical in nature given its origin. Project management recently recognizes the need for change management but does not define the role of a change manager (a separate profession) and does not provide clarity in the distinct roles, responsibilities and activities of project managers and change managers or define points of integration between the two professions.

Evolution of Change Management:

Until the 1970s there was no change management; no structured practices and methodologies that could be leveraged by organizations and there was no profession called change management (LaMarsh 2015). The Change Management Body of Knowledge (CMBok) states that change management is a combination of understanding organizational change, organization development, organization behaviour, human resources, psychology of people, strategic thinking, project management, communication and the list goes on.

The concept of change has evolved over the years, from a deep psychological, personality perspective, where change was not formally be defined or introduced, to change being viewed in a more humanistic approach and since the past 40 years, change has evolved into two aspects – the humanistic as well as the organization management. It has been stated that the greatest weakness of change management is that change is a universal term, but it is yet an undefined construct (Pettigrew et al. 2001; Suddaby and Foster 2016).

Change management is a younger field compared to project management, that draws its content and context from organization development, strategy and human relations (Pollack and Algeo 2014b; Crawford and Nahmias 2010; Greiner and Cummings 2004).

Change as a concept has been around since 500BC. Prior to the 1940s, change was a psychological phenomenon. Taking the work of the likes of Aristotle, Sigmund Freud and Carl Jung, change was viewed from a psychological perspective (Leonard et al. 2013). In 1948, Lester Coch and John French Jr. in their study of Harwood Manufacturing Corporation (Coch and John R. P. French n.d.), identified that motivation was a cause that made people push back on change. Their work introduced “resistance to change” as a critical element to be considered in change management. The Harwood studies marked a significant break as research was moved from group behavior study in the laboratory to study in the real world and changing the focus of research from ‘understanding’ group behavior to ‘understanding and changing’ group behavior, using participative management (Burnes 2007).

In the 1950s, the work of Kurt Lewin & Edgar Schein, introduced the 3 Stage Model, that formally described how change could be managed in organizations. It is a very high-level approach to managing organizational change, but this formed the basis of many change management approaches going forward. The implication of this model is that incremental change with careful attention to the system factors resisting change is a more effective approach than trying to drive change by pressuring or threatening system stakeholders.

Lewin’s approach was contemporary and forward looking that was based upon action and was practical and universal, that has been adopted by or has influenced several change strategies such as OD (Cummings and Worley 2008), change management (Kotter 1996) and action learning (Marquardt et al. 2009). Lewin’s model influenced psychological change and being practical, was utilized for enacting organizational change.

In the 1960s, Everett Rogers, introduced Rogers Five Factors, in his first edition book named Diffusion of Innovations. Here he takes the humanistic approach, where he states that the diffusion or the spread of new products and ideas is best managed by focusing on the people difference. The five categories of adopters, according to Rogers are Innovators, Early adopters, Early Majority, Late Majority and Laggards. These terms are well understood and utilized to date by large associations such as the Project Management Institute (PMI)⁵. It shows that early adopters influence the innovation acceptance of late adopters. This is based on the benefits

⁵ Pulse of the Profession (2019) ‘In depth report, Next Practices, Maximizing the benefits of technology on projects’, Project Management Institute.

realization by which the question “what’s in it for me?” is answered positively. It influences the decision making of people influenced by the innovation or the change the innovation brings. Upon implementation by the innovators and positive confirmation provided of the innovation, the early adopters use the data to make their own adoption decisions based on the benefits realization. Diffusion of change happens through the communication networks, which is a network of people. Through technology advancements, our communication networks can become denser, thus increasing the rate of diffusion. Making initiatives successful is linked to people, thus how change initiatives affect people is critical in making initiatives successful.

Around the same time in 1969, the 5 Stage Model was introduced by psychiatrist Elisabeth Kubler Ross, who suggests that humans through five distinct stages of grief after the loss of a loved one: Denial, Anger, Bargaining, Depression, and then Acceptance. This is included as a change theory, because it looks at the psychological / humanistic approach as to how humans manage personal change. Her work has been used as a method of helping people understand their reactions to significant change or upheaval. The “Change Curve” as it is known, has also been applied to large organizational change management projects to manage the people side of change by understanding individual’s reactions to such large changes.

In 1967, Rensis Likert incorporated one key, strongly held principle of OD and change management method, into his model, System 4. The strongly held principle was that “participation in planning and decision-making generates more engagement and ownership in the change process and, consequently, less resistance and more support for the change plan that is ultimately developed” (Leonard et al. 2013).

In 1986, Fred Davis and Richard Bagozzi, developed the Technology Acceptance Model (TAM), which has now evolved into TAM 2 and TAM 3. This model focuses on the acceptance of technology and proposes that two factors must be considered because they determine the acceptability of an information system: 1) perceived usefulness and 2) perceived ease of use. In 1992, Warner Burke and George Litwin, two organizational change consultants developed the Burke-Litwin change model, a tool that takes into consideration every component of an organization and how they relate to each other in times of change. The model is advanced as it factors in open systems theory that suggests that change comes from external influences as well as internal influences. It’s a mechanism that takes into consideration variables that need to be considered to explain 1) the total behavior output of an organization, 2) interactions between these variables, and 3) how they affect change.

In 1996, John Kotter, published a book called *Leading Change*, where he outlines a practical 8-step process for change management. This 8 steps process was further enhanced in

his book called *Accelerate*, published in 2014, where the 8 steps are now called the 8 accelerators. The original sequential process has been enhanced to adopt the agile method, where various steps can be run concurrently and continuously.

Change is constant and so is the evolution and enhancement in change models. Several change models are being developed by practitioners and consultants, none are unique, but mainly based on older models or an enhancement of models from the past. The concept of change has not evolved as such. It is being utilized in various ways to meet various purposes.

Study conducted by Magsaysay and Hechanova (2017) resulted in key themes of well managed change initiatives: clear goals were established, it was well planned, change was communicated clearly and employees were prepared for the change and knew how they would be affected by the change, roles and responsibilities were clearly defined during the change project, sufficient training was provided, organization was able to sustain the best aspects of its culture and there was visible and tangible management support for the change. Such changes demand high levels of interpersonal skills, a human centric approach and hence a different set of skills that project managers do not currently possess (Gareis 2010; Partington et al. 2005; Padar et al. 2011) but change managers do.

The above evolution of change management shows that change management has a theoretical, human focus whilst project management has a practical, linear focus. Along with the evolution of change management theories and models, PROSCI, the global leader in change management was established in 1994. It focuses on providing knowledge, tools and research to manage organizational change initiatives. PROSCI introduced the ADKAR model (Galli 2018) that focuses on people change adaptation, as opposed to the change itself. The ADKAR model is sequenced by how an individual experiences the change. This model also aims to address a research finding published in 2020 that shows that change management is a success enabler and organizations are 6 times more likely to meet transformation project objectives as well as recognizing and providing solutions to the integration with project management practices as one of the top 10 contributors of project success (Prosci 2020).

This current era has and continues to formalize change management as a profession by providing change management tools and practices, encouraging the identification of change management as a knowledge area to be considered by universities and other education providers, providing clarity towards the roles and responsibilities of various positions within change management and establishing associations and bodies of knowledge to provide the profession with codes of ethics, professionalism and a sense of belonging.

Other than PROSCI, in 2005, the Change Management Institute (CMI) was established in Australia. It is now recognized as a global organization and the main body of knowledge through its publication of the Change Management Book of Knowledge (CMBok). Both PROSCI and CMI provide certifications and memberships to change management professionals.

In summary, change management is a distinct profession, fairly new and has evolved from organization development, which is more people and behavior focused. The profession is backed by bodies of knowledge, books and certifications; however, little has been provided in terms of detail methodologies and points of integration with project management practices.

Project and Change Management as professions

Both project and change management have evolved over the years in different ways however, their journey has led them to become interdependent. PROSCI⁶ and PMI⁷ research have identified the integration of project and change management as a necessary to see transformation projects to a successful close. Moreover, The PMI published a book on Managing Change in Organizations in 2013. Studies conducted are detailed in the book that show that organizations achieve higher success rates when they use standardized project management techniques in association with rigorous change management approaches.⁸ However, it shows that only 20% of organizations utilize any type of change management model or approach, reasons for which are recently under study by academics.

Both project and change management are provided structure and controlled through bodies of knowledge and code of ethics, through the Project Management Institute (PMI) or the Change Management Institute (CMI) for instance however, only project management has become a well established standard within organizations (Muzio et al. 2013). Project management is a 'semi-profession' or 'commercialized profession' and to help formalize it, the academic research community must provide systematic input (Morris et al. 2006) as the topic of profession and professionalism has neglected to pay appropriate attention to project management (Konstantinou 2015). the SOC 2020⁹ volume 1, classifies project manager as a

⁶ Prosci (2018) 'Best Practices in Change Management study'. 10th Ed. USA.

⁷ Pulse of the profession (2012) 'Driving success in challenging times', published by the PMI.

⁸ PMI (2013), Managing change in organizations, a practical guide, Project Management Institute.

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<https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2020/soc2020volume1structureanddescriptionsofunitgroups>

professional area of IT, Engineering and Business. The concept of ‘corporate professionalism’ is being developed; which characterizes ‘new professional projects’, such as management consultancy and project management (Hodgson et al. 2015).

Project management institute (PMI) or the Association of Project Managers (APM) are organized bodies of knowledge providing extensive training, methods, guidance, and certification in general project management as well as specialization in various areas of project management such as risk, stakeholder management, resource management. Universities are now offering degrees and specializations in project management.

Change management is an emergence from Organization Development (OD), which has been and still is a practice within the HR profession (Parker et al. 2013; Hornstein 2015b; Hornstein 2008b). In 1993, Robert Quinn, the Margaret Elliot Tracy Professor Emeritus at the University of Michigan, stated that OD has become irrelevant as there are better ways of managing change, rather than the tradition ones used by OD practitioners. Hence the need for a new profession that is focused on leading and managing change; a change agent (Quinn 1996).

Change management is a new discipline and is not listed as an official occupation within the SOC 2020. Professions that may not be defined by academia yet, such as managers, consultants and engineers are found operating within large, complex organizations (Muzio et al. 2013) where their roles are defined by the organizations that employ them or their clients, and are not just based on the academic knowledge or expertise they have gained (Hodgson and Muzio 2011). For these professions to work together they need to focus on characteristics of professionalism and collegial behaviors explained in subsequent sections and identify methods through experience and practice that encourage interprofessional collaboration.

Project management and change management are two separate professions, and thus based on the literature cited in the previous pages, they have different values, knowledge base, ethical bearings and most importantly different bodies of knowledge that provide training and knowledge focusing on the core needs of the profession. This brings challenges in collaboration between project and change manager mainly due to rivalry between them (Crawford and Nahmias 2010; Pollack and Algeo 2014b).

The evolution of the two professions shows their distinct nature, different areas of focus and practices, which creates division and possibly the reason for rivalry between the two professions. The other reason could be functional overlaps and interdependencies that have not been well defined, may be causing ambiguity in work practices and expectations thus creating rivalry between them. It must be noted that literature have also shown areas of convergence

between the two professions (Padar et al. 2011; Lehmann 2010; Pollack and Algeo 2014a) and the need for exchange of knowledge and subject familiarity (Hornstein 2015a).

The interprofessional collaboration between project and change managers has been a topic of interest which is being undertaken by academics as a topic of research. This is due to the fact that the practitioner community has recognized the need for collaboration and moreover integration, and are finding ways to make this work with little input from academic research, which would provide a solid foundation for methods of integration (Gareis and Huemann 2008). The study of change practice should emphasize on understanding what practitioners do and identify practitioners' theories as they become manifest in workplace practices (McGrath et al. 2019).

Some practitioner research shows that change managers initiate change management approaches focusing on culture shift, communication, stakeholder management, knowledge management and adoption post project completion. The practitioner community (both project and change managers) suggest the use of project management for managing change within organizations utilizing methods from Project Management Institute (PMI), Office of Government Commerce (OGC), Australian Institute of Project Management (AIPM), Japanese Project Management (JPM) among others, and several change management models have been developed, proposed and are being utilized by the practitioner community. Some are ADKAR¹⁰ by Prosci, Heitger & Doujak, McKinsey 7S Model, Kotters 8 stages, Lewins CM model, Bridges' transition model, Kübler-Ross five stage model and change management frameworks by consulting firms such as KPMG, Deloitte etc. However, such success cases have yet to be witnessed in literature.

Interprofessional practice has been conceptualized as creating high-performing teams that communicate and collaborate efficiently and effectively yet optimizing interprofessional collaboration through team work is challenging (Dow et al. 2017). Could paradoxes be playing a role in making interprofessional collaboration challenging? An example below provides insight into this.

A success story is evidenced by Konstantinou (2015) where modern project management practitioners, in order to produce successful work for the organization, collaborated with colleagues and experts from other professions keeping the client needs in mind and attempted to seek further knowledge, outside of their expertise from various sources.

¹⁰ ADKAR: Awareness, Desire, Knowledge, Ability, Reinforcement

They also found ways of working with other professionals to make their projects successful. The analysis identified that the project practitioners utilized practical knowledge, not necessarily from academia or from professional bodies of knowledge. This case does not explicitly apply to interprofessional collaboration between project and change managers, however, it shows that in practice, when the characteristics of professionalism and interprofessional collaboration are applied, it does work, and that it is not necessary to follow the knowledge from academia or from professional bodies of knowledge to obtain success. It has been shown in the previous chapters that 2nd order change initiatives required project and change managers to work together collaboratively and demand high levels of interpersonal skills (Pádár et al. 2017).

Should a similar attitude from the case be applied by project and change managers in a 2nd order change initiative environment, perhaps, tensions would ease and interprofessional collaboration would be a success. And perhaps academics should conduct further research exploring interprofessional collaboration between project and change managers and provide a theoretical foundation for practitioners, instead of them having to rely on experience and practice because what has worked for one project may not necessarily work for another.

In the next section the characteristics of professions and professionalism are provided through a review of literature. This understanding is required to explore what makes interprofessional collaboration work and what does not. Until integrated practices and approaches are not developed, and roles and responsibilities of both professions are not defined, it is up to the individuals themselves to find ways to work together. This comes through positive collegial behaviors as shown in the subsequent sections.

3.3. Characteristics and core values of professions and professionalism

Modern professions are becoming highly complex and over the years, many approaches have been used in defining professions and professionalism without reaching an agreement (Roth 1974; Barber 1963; Saks 2012). The word professionalism is rarely defined and is assumed that it is understood (Cruess et al. 1997), and is much disputed (Evetts 2014). Professions are often referred to as self-selected, self-disciplined group of individuals who maintain ethical standards, present themselves and are accepted by the public as individuals who possess specialized knowledge and skills based on acquired experience (Abadi et al. 2020).

Essential and common attributes that characterize a profession were summarized by Abadi et al. (2020) :

- A specialised, knowledge-based occupation with a profession-specific body of knowledge regulated training and credentialing.
- Legally established professional authority enabling autonomy self-regulation and governance.
- Stands in a complex, transactional and reciprocal relationship with the public and society-at-large, characterised by professional competence, public recognition, and trust; strong service orientation; Public interest is paramount but also susceptible to contextual influence.
- Regulative codes of ethical and professional conduct, with membership conditional on acceptance and adherence to these codes.
- Professional culture and identity with common values, norms and attitudes.
- A degree of formal organization (at least one professional organization or association) with functional structure, infrastructure, policy framework, systems, regulatory processes, defined areas of practice and professional standards, and regulatory policies that give effect to the functions of the organization (e.g. investigative and disciplinary functions).
- Summary: A specialised, knowledge-based, and legally self-regulating occupation that renders its services to the public and society through a complex, reciprocal relationship based on competence, recognition and trust, and characterised by several common attributes

Professions are bound to the concept of professionalism, as it addresses the self-regulation of the profession by setting standards. Literature evidences professions being controlled by a body of knowledge, code of ethics, defined services based on expert knowledge, and goes beyond just knowledge and expertise (Crues et al. 1997; Saks 2012; Thomas et al. 2014; Klegon 1978). With the increase of globalization there is need to recognize 1) the concept of professionalism (Evetts 2006) and 2) that interprofessional collaboration is on the rise creating permeable professional boundaries (Thomas et al. 2014). It is evident that profession and professionalism are linked where professionalism is the core values, ethics, and beliefs held by professionals that are part of a profession. The characteristics and values of these two concepts provide an understanding of key components of profession and professionalism.

Within the context of organization, professions and professionalism play a significant role. A profession is an occupation, based on the concept of contributing excellence in an area of knowledge, providing services to others for direct compensation, representing

empowerment (Rubens et al. 2018). For an individual to be successful in any profession, integrity, dedication, and responsibility which are elements of professionalism, need to be displayed and maintained. Within the professions, professionalism allows the professionals to take ownership of their roles and duties. Below are some fundamental characteristics of professionalism captured from Evetts (2014), which individuals must possess to belong to a profession. Professionalism significantly contributes to strengthening the morals, ethics and principles of professions, a quality that aids professionals in fulfilling their role (Cruess et al. 1997).

- Practitioners determine and control the governance of work; including systems, processes and procedures;
- Code of ethics, development of competencies, licenses to practice, discipline oversight, licensing and certifications are provided by professional associations that require memberships;
- Work is performed through collegial authority, mutual support and co-operation;
- Knowledge and subject matter expertise are obtained through shared education platforms that require extensive and expensive training;
- Practitioners develop professional identities, shared work culture, have a strong sense of purpose, significance and contribution to work, and common objectives;
- Practitioners utilize discretionary judgment and autonomy in decision-making, often in highly complex cases, and because of collective identity, provide confidential advice, resolution methods and way forward; and
- Relations between practitioners and clients / employer / fellow practitioners is based on trust and confidence.

Some strategies to professionalism have been summarized through review of literature.

I. Responsibility and Accountability

One of the key characteristics of a profession is that the individuals connected with the profession are held responsible and accountable for the services they provide to clients, as through this, is value delivered to clients (Evetts 2010; Skär and Söderberg 2018). Responsibility is important within a profession as its is considered a moral obligation to provide the right services, guidance, display commitment and earn trust.

II. Specialized Knowledge and Autonomy

Professionals are required to have a high degree of universal and systematic specialized knowledge (Barber 1963; Klegon 1978), and are considered experts in their profession. They are employed for their specialized skills and knowledge which cannot be obtained from those

who are not part of the profession. Professionals work within given autonomy to be able to exercise the required independent judgment required to best serve their clients, and the degree of autonomy varies across different societies (Crues et al. 1997).

III. Competency & Excellence

Excellence is made part of the core competency of the profession and its professional body of knowledge as they are required to meet customer expectation ensuring all services are customer centric (Fournier 1999; Faulconbridge and Muzio 2008). Additionally, for projects to be successful, it is required that appropriate roles be filled with the right profession and that those competencies be available that will ensure project success (Williams-Ghosh 2019).

IV. Integrity, Altruism and Ethics

Professionals are obligated to their clients and society, thus they must display integrity as a core value that is not compromised (Crues et al. 1997). Various professions come with various responsibilities hence the need for focus on achieving the outcome without getting emotionally involved with the client (Kerr et al. 1977).

V. Collegiality, Trust, Collaboration and Mutual Support

Professionalism requires professionals to work together through collegial means supporting one another to gain mutual benefit and achieve outcomes. They develop collective and professional identities, shared work culture, have a strong sense of purpose, significance and contribution to work, and common objectives (Evetts 2014).

The discussion above shows that professionalism aids professions to foster a culture of respect and collaboration, enabling them to manage conflicts, set boundaries of work and perform work with integrity, autonomy, and confidence. Professionalism depends on the knowledge, skills and competencies of the human resources, and the controls in the organizational system that influences human behavior (Mrope 2017).

Given the current focus of the thesis, the concept of professionalism plays an important role as it is considered an enabler for various professions to work together to achieve organizational success. Within an organizational context, this requires collaboration between various professions. This can be associated with the collaboration between two distinct professions of project and change management. Yet, as seen in the previous sections, there are challenges in interprofessional collaboration. Can paradoxes be one of the challenges and can the exploration of paradoxes help understand why interprofessional collaboration is difficult?

The next section provides an explanation of interprofessional collaboration, illustrating the linkage of characteristics of professionalism and collaboration. At a high level, it explores the importance and challenges of interprofessional collaboration, through review of literature.

This essential understanding will facilitate in exploring paradoxes in interprofessional collaboration and associating them specifically with collaboration activities between project and change management.

The key point of illustration is that professions are required to display professionalism, and other than expert knowledge, autonomy and other characteristics, professionalism requires individuals to display collegial behaviors to support one another to achieve a common objective, behaviors that are dependent on individuals and relationships.

3.4. Interprofessional Collaboration Summarized

Studies have concluded that organizations achieve strategic objectives better through collaboration than through competition (Todeva and Knoke 2005), one of the key values and characteristics of professionalism as shown in the previous section. Collaboration occurs when individuals with different practices, interests, and competencies engage within an organization; which is the act of working with one or several persons to produce an outcome (Levina and Vaast 2008). Within the organizational context, the term collaboration is defined by the practice of individuals working together to achieve a common objective or business benefits (Reeves et al. 2018).

Effective collaboration is a process that is facilitated by shared identity and practices (Hardy et al. 2005) and hindered by individual differences that impacts open and honest communication (Levina 2005). Hence, effective collaboration depends on the relationships amongst individuals, who are in a process of constant negotiation depending on the project they are working on. Within the context of organizational collaboration, knowledge sharing, shared accountability, interdependence between individuals, clarity of roles and goals, openness are some key enablers; and in order to maintain collaboration, relationships need to be maintained (Reeves et al. 2018; Bush 2003).

It is important to gain an understanding of collaboration to explore the tensions that may be facilitating the challenges in interprofessional collaboration.

This study adopts the definition of interprofessional collaboration as defined by the Canadian Interprofessional Health Collaborative (CIHC). It is a holistic definition that includes the healthcare ecosystem where practitioners are professionals such as doctors, nurses and other professionals contributing towards the ecosystem including learners, those in the education system working towards becoming practitioners, and can be applied to 2nd order change initiatives.

Interprofessional collaboration is the process of developing and maintaining effective interprofessional working relationships with learners, practitioners, clients, and communities to enable optimal outcomes.

Interprofessional collaboration has grown and gained momentum with academics (Reeves 2012); it presents various benefits to the organizations. But it is identified by studies that without a proper and systematic approach, the implementation of interprofessional collaboration comes with challenges (Todeva and Knoke 2005) moreover, it interprofessional collaboration provides an indication of the complex interplay between knowledge, skills and behaviors (Reeves et al. 2009).

Interprofessional collaboration increases the chances of achieving success: two different professions, bring diversity and through collaboration the different values, experiences, competencies, and skills of the professionals offer different perspectives about how to perform work. This whole process helps the work to be completed more effectively than as an individual project (Karam et al. 2018). Collaborative approaches reduce silos and, aid in completing a project in less time thus enhancing productivity and profit for the organization (Reeves et al. 2018). Collaboration between different professional groups drives innovations as different ideas from different points of view are utilized within collaborative approaches (Link et al. 1996).

Collaborating organizations experience increasing integration and have formalized governance of relationships (Todeva and Knoke 2005), facilitating collaborative approaches between various professional groups thus defining purpose and meaning for individuals within the organization, leading to better solutions and achieving strategic objectives. (Rice *et al.*, 2017). Many experts have stressed the need for interprofessional collaborations within organizations and identified the reasons behind the importance of such collaborations (Vangen 2017).

Despite the need for collaboration, some empirical studies suggest that most collaborations are short-lived failing to achieve the required objectives (Todeva and Knoke 2005). It has also been shown, that a strong sense of collaboration can be a challenge in terms of professional authority (Hargreaves 2001; Kelchtermans 2006); since collaboration is closely linked to the individual professionals' competence and their ability to make discretionary decisions as well as the ability of colleagues, or their organizations, to manage the professional work. It has been claimed that professionals monopolize knowledge and negatively utilize their expertise for purposes of power and control (Hall 2005).

Another issue with interprofessional collaboration could be lack of collegiality, an important component in successful collaborative professional work (Paoline 2003; Evetts 2010; Hargreaves 1994), where colleagues work together united in a common purpose, through mutual respect, loyalty, solidarity, expertise and collaborative forms of control and decision making (Tapper and Palfreyman 2002; Denis et al. 2019). Collegiality reinforces the sense of shared purpose in the collaborative approach through respect, sense of connection and commitment (Linthicum et al. 2021). It has been evidenced in various literature that inter-professional collaboration is a critical requisite for professionals to work well together (Rice et al. 2017) and that collaboration would not be effective should collegial relationships between professionals not exist considering collegial relations are a characteristic of professionalism (Evetts 2014) and serve to increase professionalism (Singh and Manser 2002).

Professions within organizations have to find solutions and develop arrangements in work processes to achieve business goals and realize benefits (Gaglio 2014). However, collegial relations don't come naturally are not an inherent characteristic of any profession, instead it's a want and a responsibility that will help achieve organizational objectives. Collaboration requires collegial behavior, which, identifies with collective identity (Lazega 2017), a group with common purpose and shared responsibilities. It implies a set of expectations with regards to the relationship between peers, horizontally and the hierarchy, vertically, within organizations. Innovation and knowledge transfer are better implemented through processes of continuous interaction, making collaboration a process that requires individuals to 'want' to work together to realize organizational objectives.

Professions are known to withhold information, bend the rules within the processes and not establish collegial relationships and ways of working (Corbin and Strauss 1993). Research has shown that collaboration has become the answer to making organizational change a success (Hargreaves 2019; Bryant 1993; Ambrose-Miller and Ashcroft 2016) and that organizations need to focus on developing a collegial culture that encourages individuals within the organization to practice collegiality and work collaboratively (Chang 2018). At the same time research has shown that collaboration is complex and difficult to achieve, within professions as well as across professions and that several elements mentioned in this chapter must be in place to achieve collaboration.

Professionalism is a topic that focuses on thought and behavior styles that are necessary to be adopted as results are best achieved when professionals take an active role in organizing working methods and identifying solutions (Noordegraaf 2015). It is important to recognize and define the constructs of interprofessional collaboration and collegiality to better explore

the paradoxes that challenge interprofessional collaboration. These constructs help better understand what makes collaboration work and what does not and explore the role of paradoxes in collaboration between professions. As a result, the next section focuses on the characteristics of interprofessional collaboration, and elements to have in place to make interprofessional collaboration successful.

A few collegial models are introduced to further evidence behaviors that make interprofessional collaboration successful. These are used to explore collaboration between project and change managers and provide insight into the existence of paradoxes in complex interprofessional relationships.

3.5. Characteristics of Interprofessional Collaboration

Some of the characteristics of professionalism simplified and summarized by (Evetts 2014) are 1) structural, which include governance, targets and performance indicators, 2) work standardization and relations, which are authority, power, status, competence and knowledge, 3) personal identity and work culture, trust and respect, collegial relationships and 4) processes and procedures agreed and adopted between specialist teams. These characteristics of professionalism are characteristics of collaboration and without maintaining professionalism, interprofessional collaboration can be challenging.

The CIHC identify the elements of collaboration to include respect, trust, shared decision making, and partnerships; all of which are characteristics of professionalism. As established by various professional organizations and bodies of knowledge; the code of ethics, competency frameworks, focus on excellence and autonomy amongst others, become the foundation of any collaboration. Without these basic professional attributes, collaboration cannot be implemented successfully leading to unproductive results for the organization.

I. Defining Goals, Roles, and Responsibilities

One of the first steps towards approaching collaboration of different professions is defining the common goals and objectives that the two professions aim to achieve. Together professional employees must identify the common purpose, the goals and outcomes which would provide clarity of roles and responsibilities and ability to identify the best approach to achieve the common objective (Bates and Morgan 2018). This is important as conflicts arise due to lack of clarity in objectives and roles and responsibilities (Wallace 1988).

II. Communicating Clearly, Openly, and Honestly

For interprofessional teams to work collaboratively, interprofessional communication is key for effective team functioning, collaborative leadership, and client focus to services

(Canadian Interprofessional Health Collaborative and CIHC 2010). Effective, open communications together with building respect-based relationships (attributes of professionalism and characteristics of collegiality) contribute towards organizational effectiveness and employee satisfaction (Karam et al. 2018; Williams-Ghosh 2019).

Professionals must be able to deal with conflicting viewpoints and reach reasonable solutions focusing on the common goal/objective.

III. Encouraging Collaborative Behaviors:

Professions within organizations have to find solutions and develop arrangements in work processes so they can meet the business objectives and realize the benefits (Gaglio 2014). Formalized joint working arrangements are vital in addressing interorganizational challenges (Vangen 2017) and as a result organizations must encourage upskilling through learning and development programs, teambuilding exercises to increase friendship, raise awareness of personal values, positive implications of diversity and the effect of assumptions about colleagues and increase trust, support and confidence (Wallace 1988), factors that contribute towards reducing or mitigating paradoxes (Lewis 2000).

IV. Establishing the Right Structure and Culture

Organizations must establish the right organization structure, project team structures, governance frameworks, tools and system that support a positive culture that encourages collaboration taking into consideration the complexity of the projects based on strategic objectives and market demands (Wallace 1988; Boddy and MacBeth 2000). They must be mindful that there is no 'one best way', as in, one structure that is effective in every environment. Hence, organizations have to adapt their structure to both, external and internal environments, in order to be efficient and enhance performance and competitiveness (Bees and Dee 2008). Competencies taught and encouraged by the various professional organizations, help provide consistent standards of professional and interprofessional practice, provide performance indicators for fair evaluations and can shed light on the complex interplay between skills and knowledge, and, behaviors (Reeves 2012).

Organizations must encourage a positive culture of collegiality where members operate from a position of mutual respect and trust and, to ensure continuity of knowledge and expansion of opportunities learned from the experience of one another (Pelaez et al. 2018). If an inherent characteristic of a profession is autonomy and individualism regarding work, collaboration and working in groups can pose a challenge (Siekkinen et al. 2020; Hargreaves 2019).

V. Effective Leadership

A key factor that contributes to successful interprofessional collaboration is effective leadership methods and support from leaders that allow individuals to feel secure in an interprofessional team setting and fosters a sense of community, identification of shared values, develop a sense of trust, new relationships and successful ways of working together to achieve common goals and objectives (Cameron et al. 2014; Harris et al. 2016).

Interprofessional collaboration characteristics have been used as inputs into collegial models. Some collegial models are explained in the next section.

3.6. Collegial models

In order to study interprofessional collaboration between project and change managers, it is important to understand key characteristics of collegial models. These are tried models that facilitate interprofessional collaboration. It is seen in this section that collegial models require the same characteristics as professionalism and collaboration. The three key constructs are inter-related and hence an understanding of them all is required.

Some key requirements are mentioned below.

Collegial models require professionals to participate in the decision-making process (Bush 2016); where collaborative decisions are made, taking input from various participants, ensuring accountability, a sense of ownership and thus enabling effective implementation of such decisions.

Collegial models assume a common set of values held by members of the organization that guide activities that lead to shared objectives, hence the importance of collective identity (a sense of belonging) in achieving collaboration (Hardy et al. 2005). However, it must be considered that relationships are complex and hence collective identity alone cannot guarantee collaboration.

With the right structure and culture that encourages collegial relations and sense of shared identity, individuals can address internal conflicts, take collective risks and secure support from the organizations (Singh and Manser 2002; Bush 2006).

Collegiality is often described as an important component in successful collaborative professional work (Paoline 2003; Evetts 2010; Hargreaves 1994). Collegial models summarize the characteristics required to have in place to make interprofessional collaboration work. Some elements can be facilitated by the organization such as structure, culture, decision making governance and clarity in roles and responsibilities. This would set the basis on how individuals within the organization need to conduct work and themselves within an organizational setting.

Collegial models have been identified as good practices, but they are not easy to implement (Wallace 1988), a research topic of growing interest.

Several factors mentioned below create tensions in relationships:

- Lack of consensus due to conflicting views
- Overlap in responsibilities or roles
- Lack of clarity in authority and decision making
- Lack of detail processes
- Conflict between expected hierarchy and official hierarchy implemented
- Expected individual autonomy as professionals is viewed to be diluted
- Deeply ingrained habits and beliefs conflicting with organizational culture

Better practices can be identified, but it does not guarantee success as not all practices can be implemented. As mentioned in the previous sections, collegial behaviors identify with collective identity (Lazega 2017), a group with common purpose and shared responsibilities. It implies a set of expectations with regards to the relationship between peers, horizontally and the hierarchy, vertically, within organizations. Collegiality is recognized as respectful relationships and appreciation for contributions made towards a common purpose, where collaboration is the key to achieving that purpose; thus taking into account both the relational and the professional aspects of the concept of collegiality (Alleman and Haviland 2017).

Interprofessional collaboration depends on individuals, their attitudes and behaviors, factors that are not technical in nature and cannot be defined nor monitored on a regular basis. Interprofessional collaboration is challenging as human behaviors are complicated and cannot be controlled. It requires a sense of shared purpose, respect, sense of connection and commitment (Linthicum et al. 2021).

However, challenges can be overcome as long as, the challenge is identified, recognized and solutions sought to overcome them. The next section describes from key challenges to interprofessional collaboration identified through literature review.

3.7. Challenges to Interprofessional Collaboration

Through literature review, some of the key challenges of interprofessional collaboration within organizations have been summarized below.

- Unfamiliarity of other professions' knowledge and skills, roles and responsibilities, and scope of work (Ohta et al. 2019; Hall 2005)
- Knowledge gap between professions due to different specializations leading to inability to understand one another (Ohta et al. 2019)

- Lack of formalized information sharing methods (Ohta et al. 2019) leading to holding back information
- Professional organizations that educate and certify professionals may not focus on teamwork and interprofessional collaboration, rather focus on providing the knowledge and competency required to conduct technical work (Hall 2005)
- Different value systems instilled by the professional organization or bodies of knowledge in the professionals (Hall 2005)
- Traditional professional cultures focused on power and influence which are barrier to interprofessional teamwork (Hall 2005; Hepp et al. 2015)
- Inability to recognize the challenges of group dynamics and identify the different professional cultures represented in the team (Hall 2005; Hepp et al. 2015)
- Lack of a suitable enabling organization structure including decision making governance (Bees and Dee 2008)

Effective collaboration is a process that 1) leverages the differences among individuals to produce innovative, synergistic solution 2) addresses divergent stakeholders' concerns, and 3) a process that is facilitated by shared identity and practices (Hardy et al. 2005) and hindered by individual differences that impacts open and honest communication (Levina 2005). Hence, effective collaboration depends on the relationships amongst individuals, who are in a process of constant negotiation depending on the project they are working on. Without these, tensions arise in interprofessional collaboration.

As an example, Parker and Cullen (2015) showed that the traditional project management approach is based on a predictable, fixed approach; however, most projects nowadays lack certainty, are complex and changing, thus requiring project managers to possess additional non technical skills and competencies to successfully manage such projects. The application of traditional project management is sometimes difficult, where it is viewed as a top-down management style of the organization, that focuses on the end product, the tangible physical deliverables; however, the complexity of the changes now require appropriate project structures that include the employment of change management (Gordon and Pollack 2018). Research over several decades has concluded that collaborations are complex and prone to failure. Literature has shown several examples where collaborative contexts are themselves paradoxical in nature; paradoxical nature arises due to uniqueness in resources, competencies, experiences and dynamic organizing contexts (Vangen 2017).

Lack of professionalism may lead to personal conflicts, internal competition, lack of communication, lack of a clear vision and objective leading to unsuccessful collaboration between different professions that do not yield productive results nor successful transformation project outcomes. They lead to tensions between professions where paradoxes of organizing, belonging, learning, and performing become apparent.

Expertise and specialization create a protected space in which collaboration can be developed and nurtured in day-to-day work (Denis et al. 2019), causing paradoxes of learning and belonging. As an example, project management method of change control and change leadership from change management are interdependent and mutually supporting and, both are needed to support project success (Griffith-Cooper and King 2007), evidencing the need for exchange of knowledge and expertise (Hornstein 2015a), thus the need for communication.

Interprofessional collaboration is complex, and requires collegial behaviors to overcome the challenges. The next section focuses on the analysis of the concepts and literature identified and studied in this chapter.

3.8. Literature Analysis

Based on the literature presented in the previous sections of this chapter, the three key constructs of professionalism, collaboration and collegiality were analyzed and six key enablers or characteristics common to the three constructs have been identified, showing that they are interdependent. Moreover, the six enablers or key characteristics set the base for analyzing interprofessional collaboration between project and change managers. The six enablers, all, or some, need to be in place, for interprofessional collaboration to be successful; one of the main reasons being paradoxes that surface because of the characteristics/enablers not being in place. Below is a brief explanation of how paradoxes can surface without the key enablers in place using a paradox lens.

Roles and Responsibilities

Based on the literature analyzed, it is evidenced that clarity of roles and responsibilities forms the basis of interprofessional collaboration. It is a key competency of professionalism where practitioners determine and control the governance of work; including systems, processes, and procedures and collaboration depends on the relationships amongst individuals, who are in a process of constant negotiation depending on the project they are working on. As identified by O'Donovan (2019), the project manager would typically win any discussion over the change manager, as project structures usually give more authority to the project manager.

If individuals are unable to maintain positive relationships, lack of roles and responsibilities can cause paradoxes to surface. Tensions are caused in terms of conducting the work. Paradoxes of belonging and organizing surface when there is overlap or ambiguity in who does what. Individuals hold on to their knowledge and sense of belonging to one team where they are required to step into conducting the role of another profession and at the same time there is a need for collaboration and competition as part of different teams. Project managers and change managers have ambiguity in practices and approaches to managing change initiatives (Pollack and Algeo 2014a; Crawford and Nahmias 2010). As identified through a study conducted by Pollack and Algeo (2014a) a specific difference was that both professions believed that they were more responsible than the other in the role of communication and feedback. Potentially, this can cause conflict especially given that the change management profession and bodies of knowledge stress on these areas within the practices they teach. The authors concluded that there is need for clear boundaries between the project and change managers.

Moreover, ambiguity in roles and responsibilities, raises questions on the details of who does what, which in some cases may require project manager to take on change managers responsibility or vice versa, thus requiring them to learn new practices. This can cause paradoxes of learning and performing to surface, as it may require a new way of doing something that they are unfamiliar with or not in line with practices taught by the bodies of knowledge.

Interprofessional collaboration requires strong positive relationships, which can be achieved through collegial behaviors, where individuals identify with collective identity (Lazega 2017), a group with common purpose and shared responsibilities. Considering project and change management are two separate professions and they are experts in their own fields, they have sense of identity, an individual identity, and a collective identity within their profession. Such situations can create tensions and using a paradox lens, can lead to the paradox of belonging.

Knowledge gap

Professionals are experts in their field. Interprofessional collaboration requires professionals to work together to achieve a common goal. Without the flow of information and knowledge between professions, a knowledge gap is created. This exacerbates the challenges in interprofessional collaboration because individuals are unable to relate or understand one another.

Formal and informal forms of communication, such as project status team meetings, problem solving meetings, networking events facilitate free flow of information. Additionally, it allows a professional environment for professionals to intermingle thus building loyalty and trust amongst the team members and respect-based relationships. Positive collegial behaviors are built, understanding at an individual and professional level is built, enabling interprofessional collaboration.

Without such open honest communication, there is possibility of the paradox of learning, paradox of organizing and paradox of performing to emerge. Tensions rise when collaboration is expected, yet there is no understanding of what the other does and how each is fulfilling their role as a project team member. There is disruption in the project team's performance due to lack of efficiency and stable processes aimed at a common objective of achieving project success.

Professionals must be able to deal with conflicting viewpoints and reach reasonable solutions focusing on the common goal/objective.

Points of integration through practices

This enabler is linked to knowledge gap. As experts in their fields, professionals must be able to work together to identify approaches that best represents each practice. Project and change managers, as experts in their professions, should work together to develop the best integrated approach that meets the needs of the project and assures project success. This would require professionals to display collegial behaviors, understand one another's practices and integrate them as required, whilst clarifying their roles at each phase of the project life cycle.

Professions within organizations have to find solutions and develop arrangements in work processes so they can meet the business objectives and realize the benefits (Gaglio 2014). Organizations must create the path for the professionals to collaborate and address organizational challenges and meet strategic objectives (Vangen 2017).

Lack of formalized integrated practices create ambiguity in ways of working and points of integration causing tensions to arise, such as the paradox of organizing, which affects individual and organizational performance.

Value systems instilled by bodies of knowledge

Bodies of knowledge such as the PMI and CMI, and various others, provide trainings and competency development through certifications and association with academia, they have their respective code of ethics and provide licenses to practice and encourage memberships in professional associations and chapters. This creates a sense of community and belonging to an

elite class of specialist. They instill a certain value system amongst their members. Bodies of knowledge may focus more on the technical aspects such as methodology, practices, managing project stakeholders and project teams, and little on team building, team management, resistance management and interprofessional collaboration.

These instilled values and belief system that a project manager or a change manager learns, can cause conflict when it comes to interprofessional collaboration. Without collegial behaviors and positive relationship building, individuals may find it difficult to work with other professionals. Paradoxes of belonging, organizing, and performing may all surface as a result of such tensions. This can be alleviated by the organization, by instilling a strong culture of collaboration and providing the right structure, and governance to enable interprofessional collaboration. It has been identified through literature analysis that project and change managers, to make projects successful, do not always follow the bodies of knowledge in practice (Crawford and Nahmias 2010).

An enabling organization structure

Structure as an enabler is key to interprofessional collaboration, one that is facilitated by the organization and leadership, which requires professional to work together, as long as the structure enforced is right.

As seen in the previous sections, with the right structure in place, organizations can facilitate collaboration. An enabling structure is one that supports efficiency in work processes, encourages collegial relations and sense of shared identity (Singh and Manser 2002; Bush 2006). Enabling structure are linked to the other enablers as structure involves project structures, organization structures and reporting lines, authorities, processes and procedures, amongst others.

One example is without structures, paradoxes of organizing surface due to ambiguity in goals and objectives, creating competition whilst requiring collaboration to achieve the goals.

Positive culture

Positive culture includes an organizational culture of trust, open communication, good governance, and leadership that supports, and sponsors change initiatives, amongst others. Successful collaborations in complex projects are related to project culture (Hastings 1995; Maya et al. 2005).

Culture is organization driven, hence they must encourage learning and development, team building, open communication, relationship building through events and networking

activities, install the values of the organization in process, raise awareness of personal values, positive behaviors and its linkage to achieving organizational objectives, increase diversity and inspire collegial behaviors (Wallace 1988). These are factors that contribute towards reducing or mitigating paradoxes (Lewis 2000).

Megaprojects are characterised by a culture that is ambiguous; without clear limits and responsibilities in decision making. For instance, involve multiple stakeholders / professionals and communication; professionals being different competencies, each has their own specific rationalities, backgrounds, teachings, beliefs, experiences, such that conversations, practices, how they conduct work, make decisions etc may be different and unrelated. In such cases, participants in mega projects tend to make claims about their knowledge and competencies they may not have, a form of exaggeration. For the organization this is a form of double standards, where experts are being hired to conduct the work, however, they may be not having the in depth experience, which will eventually show on the job (Van Marrewijk et al. 2008).

Gordon and Pollack (2018) concluded that participants combined change management and project management practices based on their experience, organizational culture and work environment and, the immediate need of their project in order to make the change initiative successful. There is evidence in literature that a supportive leadership, organization culture and work environment is an enabler to successful interprofessional collaborations (Crawford and Nahmias 2010).

3.9. Discussion: The paradoxical nature of professions

This section brings together all the sections mentioned in this chapter. This chapter provides an understanding of three key constructs, namely, professionalism, collaboration, and collegiality. It shows that they are interconnected and have six key enablers in common. The chapter introduces the reader to paradox theory and the paradox framework used in the study and subsequent chapters. It sets a base for the reader by briefly discussing the evolution of project and change management. The literature analysis section brings it together by exploring the paradoxes that may surface as a result of inadequacy or absence of the 6 key enablers.

2nd order change initiatives involve engaging with people and refining points of view on a continual basis as solutions are sought and agreed with multiple stakeholders (Crawford 2011). Different change initiatives require different project and change management competencies. Additionally, as seen in literature, such change initiatives require the collaboration of project and change managers, and the application of both project and change management practices.

It is important to acknowledge that project and change management are two separate professions and that project management practices place greater emphasis on method and technique, whilst change management focuses on the human aspects of change and the underlying dynamics of change (Lehmann 2010). The change management bodies of knowledge do not focus on methods, tools, and techniques, rather focus on competencies, creating ambiguity in the change model to be adopted.

Recent authors have identified a number of roles in project and change implementations that have no clear differentiation between the roles (Crawford and Nahmias 2010; Stummer and Zuchi 2010; Algeo and Pollack 2014; Partington 1996; Winch et al. 2012; Boddy and MacBeth 2000). In addition to roles, in literature, the expected competencies of project and change managers have similarities, but in practice there were differences in what they actually did (Crawford and Nahmias 2010; Gordon and Pollack 2018), hence the need for the two professions to rely on both bodies of knowledge (Padar et al. 2011; Pádár et al. 2016; Pádár et al. 2017; Change Management Institute 2017).

Analyzing and identifying where the two professions overlap is a challenge for organizations and 2nd order changes transform the organizations core hence requiring leadership to play a critical role (Padar et al. 2011). Studies have indicated that initiatives require structure and within the defined project lifecycle, change and project roles and responsibilities and the relationship between them need to be defined and agreed and, tasks assigned accordingly. Communication is key to ensure the process, roles, relationships and decision governance were informed and understood by all those involved in the change, in addition to ensuring that the change and its impact and consequences were communicated to those affected by the change (Appelbaum et al. 2012; Stummer and Zuchi 2010).

All of the above stated facts from literature illustrate importance of the six key enablers to interprofessional collaboration. There are ambiguities in various aspects of the two professions creating challenges in interprofessional collaboration. Research has shown that disruptions expose tensions within organizations and ambiguity fosters disruptive conflicts due to mis-interpretations (Lewis 2000). Interprofessional collaboration requires collegial behaviors, as organizations and project's function based on individual interplay. Organizations need to consider this interplay and provide the right environment for employees to manage tensions; or allow for project and change managers to manage tensions during a transformation project (Schneider et al. 2021).

To conclude this section, a study by Fryers et al. (2012) is used as a practical example of successful interprofessional collaboration in the healthcare sector. Although this is not

directly associated with project and change managers, it is a 2nd order change project impacting several stakeholders. It reinforces the key enablers that are required to make interprofessional collaboration work and could be applied to collaboration between project and change managers.

Case description:

The study was about the implementation of an organizational change project, where in 2008, Toronto East General Hospital (TEGH), a 515-bed acute care community teaching hospital undertook a redesign of “the model of care delivery” to address several challenges. Stakeholders worked collaboratively to design and implement the Coordinated Care Team Model (CCT model) of care with a common objective of increasing quality, safety and patient satisfaction. Key components of the model are quoted as: “(1) hourly patient care rounds by members of the core team on each patient, (2) daily inter-professional rounds to improve care coordination and team communications, (3) face-to-face inter-professional exchange between shifts, and (4) post-discharge telephone calls to patients within 48 hours of discharge”. The design, implementation, and maintenance of such a change was complex and required the input and commitment of all stakeholders but implementing success factors within the change initiative made it successful. The success factors were support from key stakeholders and leadership, ongoing communication, and guidance to those involved in terms of changes in resource and project management activities.

Findings

Most staff indicated that they were comfortable with the new model and new ways of working. This required the need to learn “new ways to work”. They also highlighted some challenges of working with peers who were reluctant to let go of the old ways of working and their past responsibilities.

The staff agreed that they recognize the need to work together and rely on one-another. They reflected the need for positive inter-personal relations, including respect, effective communication, recognizing each other’s strengths, supporting each other, explaining things, and celebrating contribute to optimal team functioning. They requested continuity in team membership and physicians or physician assistant participation in rounds, more relationship building and further development of communication skills.

The staff highlighted the value of a strong team leader who could rebalance work assignments, noting the difference this made to team effectiveness and staff satisfaction.

Conclusion

They concluded that the key success factor in the successful implementation of the model was consistent engagement from all levels of the organization, that involved ongoing communication and guiding teams throughout the change project. Adequate resources were provided for every stage of the project lifecycle, from design work, ongoing training to project evaluation and monitoring. Design principles utilized were service-oriented, where the needs of the patient were the center of focus. As noted by the researcher in the article, this resulted in *freedom from “intra and inter professional tensions” that emerge in provider centric conversations.*

They continue to utilize their change strategy, that focuses on continuous improvement through enhancing interprofessional collaboration, processes of adopting and implementing initiatives, and conducting daily interprofessional huddles to review key patient care metrics. Overall, the CCT model was designed to create the foundation for leveraging interprofessional teamwork and technology to enhance the patient experience.

Such successes focus on the interplay between knowledge, skills, behaviors and implementation of collaborative practices mainly role clarification, decision making and conflict resolution (Hepp et al. 2015). In this case, clarity of roles and responsibilities, clear communication, training and organization support, culture and structure, amongst other factors, facilitated positive interprofessional collaboration, thus managing the tensions that can be caused as a result. Due to collegial behaviors, paradoxes were recognized, but managed through positive behaviors and focus on one objective, enhancing patient care.

This chapter aimed to understand whether paradox theory and framework identified can aid in understanding the lack of collaboration between project and change managers. It brings together various studies on three key constructs identified as important for this study, analyzes them and identified six key enablers to interprofessional collaboration. This is a study that has not been done before. The six key enablers identified can be utilized as a base for further study in this area. The study answers the research questions by illustrating how the three constructs are interrelated and without collegial behaviors and the 6 key enablers, tensions can arise leading to paradoxes surfacing.

In summary, the relationship and interdependence of the three constructs of professionalism, collaboration and collegial behaviors has been elaborated upon in the literature analysis. This adds to knowledge considering the three constructs have not been studied together showing interdependence in the context of project and change management. Secondly, this study identifies six key enablers that are required to make interprofessional

collaboration between project and change managers work, a study that has not been conducted in academia. Moreover, this sets the foundation for further study of the relationship of the three constructs and the six key enablers in organizational settings using primary research. This can be further narrowed down, by conducting research on only certain types of industries or 2nd order change initiatives. This study sets the base for several ways of exploring and studying interprofessional collaboration between project and change managers.

Immediate questions arise as a result of the literature review and analysis produced in this chapter. These are further explored through analysis detailed in the subsequent chapters.

1. Can paradox theory and identified framework be applied to the cases from practitioner literature?
2. Do the practices within the books of knowledge produced by the PMI and CMI create tensions created between project and change managers?

The next chapter, chapter 4 aims to explore tensions between project and change managers through analysis of cases from practitioner articles, followed by chapter 5 that explores the differences and similarities in practices taught by the two main bodies of knowledge, the PMI and CMI.

4. Practitioner Exemplars: secondary data analysis using a paradox lens

4.1. Introduction

This chapter explores what insights can be gained from the application of paradox theory to the interprofessional collaboration between project and change managers discussed in the previous chapter, through the analysis of case studies. Four themes have been kept at the center of the analysis namely, paradox of learning, paradox of belonging, paradox of organizing and paradox of performing.

The 22 case studies utilized in this study are mostly practitioner-based cases where both project and change managers are players and/or both project and change management are used. The reason is to attempt to answer the questions of this study as broadly as possible. For instance, in the given case, were paradoxes experienced? if so, which ones? In addition, the study tries to explore whether the paradoxes were experienced by both professional groups or just one and whether paradoxes were overcome and if so, how. Considering, interprofessional collaboration requires interpersonal skills, relationships, building trust and communicating openly to find solutions, the key question the study aims to answer is whether paradox theory can be applied to the cases, and obtain insight into collaborative efforts between project and change managers in real practice.

This chapter aims to answer research question 3: What paradoxes can be detected in case studies of project and change management? This is done by studying the practitioner literature using a paradox lens and analyzing whether paradoxes affect interprofessional collaboration. This chapter is an extension of chapter 3, utilizing the findings and extending them to case studies.

Section 4.2: Data Analysis: The analysis focuses on four themes from the paradox theory. Paradox of learning, belonging, organizing and performing. Examples are taken from practitioner research, and analyzed to identify whether one or many paradoxes can be identified and its effect on interprofessional collaboration.

Section 4.3: Chapter ends with a discussion of the findings and presents possible reasons for the findings and the cause of the paradox identified. Again, this is linked to the six key enablers identified from the literature review in chapter 3.

4.2. Data Analysis

The data analysis was done based on the research question: what paradoxes can be detected in case studies of Project Management and Change Management? The findings from the case studies are analyzed under four themes listed below. Paradoxes are often difficult to

observe in isolation and usually contribute towards other paradoxes, hence it is stated that paradoxes must be studied in conjunction with other paradoxes (Jarzabkowski et al. 2013).

The study attempts to analyze the data under four themes shown below, however, one paradox may influence another and hence it is not necessary that findings listed under one paradox do not influence another. The list of cases studies is available in appendix 1.

Paradox of Learning

This section aims to explore the paradoxes of learning that are evidenced through analyzing case studies. Paradoxes are identified through the findings, and where appropriate, solutions have been provided.

From the various cases analyzed, it was demonstrated that paradoxes of learning surfaced due to unclear roles and responsibilities, learning new ways of doing work when practices changed, and when the participants were not involved in the change from the beginning. Such tensions can be overcome and managed by the participants themselves; there is no technical approach to it, because resolving such conflicts lies with the individuals themselves who are involved in the process.

Change in tasks, roles and responsibilities over a short period of time can cause tensions specifically when an individual needs to learn something new that may require building on what is learned or unlearning and learning something new. A similar situation is evidenced in case study#1 (Alsène E. 1998), where a factory needed to be transformed into a “focused factory”, a factory that focuses on a narrower product mix. This project was conducted in two stages beginning with a pilot phase. Initially, the responsibility of the pilot stage was given to the supervisor in the Manufacturing department. During the pilot stage, the responsibility was then shifted to another supervisor in the Manufacturing department. Four months later the management of the organization changed, where the pilot project manager in charge resigned and was not replaced. With the project not being managed efficiently, parts of the project were missed, and the responsible individuals were unable to work collaboratively and share equipment. Processes were changed affecting methods of working, causing conflicts and the managers were not competent to run focused factories. As a result, the new practices were slow to be implemented in the new focused factories. As described by the author themselves, “The workers found themselves even more confined than before to working on certain equipment”. This is an organization that aims to optimize the works processes and increase productivity without hiring the required staff. This can be interpreted as an example of learning-performing paradox.

This could be a case where the paradox of learning surfaced as practices changed, people were not trained on the new practices whilst expecting efficiency and productivity in conducting the new practices. Tensions were created as management required dynamic capabilities and quick transition into the new processes, whilst expecting stability in conducting the new processes. In the manufacturing environment, appropriate change management practices were not employed, specifically stakeholder management and ensuring people had the knowledge of the new practices and the ability to practice them. It is a case where performing paradox surfaced as workers did not buy into these paradoxical demands thus resisting the request. This case is also a reflection of paradoxes of organizing; where processes were changed requiring collaboration, yet the processes were not taught or made official. Organizing and learning tensions surface in organizational capabilities that seek focus and efficiency while also enabling change and agility (Smith and Lewis 2011).

Learning tensions arise when old processes are reviewed and changed or require engagement of new ideas on a continuous basis. Such paradoxes can be managed by the participants themselves. One of the case studies evidenced the use of integrated project and change management processes in healthcare integration projects. However, the attempt initially was to utilize change management and project management practices and models for integration, however, during the participants identified practical issues combining the approaches because they did not align. The solution they sought was to integrate approaches intuitively based on the situation, “given lack of support from the existing normative guides and existing organizational documentation”. This is reflected from case #15 (Gordon and Pollack 2018). In this case, paradoxes of learning were overcome by the participants themselves who engaged in positive collaboration in identifying solutions and right approaches.

Some of the case studies have evidenced the need for knowledge transfer between project and change managers, where project managers must be equipped with required change management knowledge and practices and vice versa to make projects successful (Pádár et al. 2017; Crawford and Nahmias 2010; Pollack and Algeo 2014a). An example being, Sponsors are roles found in both project and change management. “Sponsors, who lack the necessary change management skills, often get frustrated by the lack of progress because the project sponsor as a change sponsor must pay attention to providing the required level of commitment and support regarding the change project in order to deliver on the promise, which can be much more difficult than in the case of a project which is not a second-order change.”

Change projects are complex, have several and diverse stakeholders who may invoke varied goals and diverse demands. Such complexity can create tensions as achieving success depends on meeting the demands of the varied stakeholders. This can cause tensions associated with the paradoxes of learning and organizing due to conflict between business as usual today with the demands of tomorrow (Smith and Lewis 2011). Such a situation is evidenced in case study # 16 (Van Marrewijk et al. 2008), where partners did not have the required knowledge or competency to support the project requirements with the required competent, qualified manpower. This was a cause of conflict between meeting current requirements with the available manpower and meeting the demands of the project with knowledgeable, experienced manpower. Such conflicts cause tensions and may give rise to the paradoxes of learning and organizing.

Paradox of Belonging

Current, volatile, evolving market conditions require organizations to function at a global level and structurally become flatter, intensifying the paradoxical nature of social relationships. Research has evidenced that paradoxical tensions arise because individuals strive for both individuality and collective affiliation, seeking clarity in their roles (Lewis 2000). There is an overlap between project and change management approaches, and at the same time there is rivalry between the two when it comes to authority and ownership of change initiatives (Pollack and Algeo 2014a).

A common theme from the case studies indicates the lack of clarity in the roles of project and change managers, that each have different perspectives on who should do what. Moreover, there is lack of clarity in the distribution of authority between the two professions.

Project management is a well-developed profession, older than the change management profession and focuses on the technical aspect of change projects. A project team member may be willing to support the collaboration with change managers, however, would not want to disrupt the cohesiveness of the project team, group decision making and team performance. This would create feelings of inclusion and exclusion, causing tensions. The sense of belonging in a project team is stronger amongst project managers compared to change managers as project management is an older profession and the bodies of knowledge have been in existence much longer. Moreover, considering they are two separate professions there is lack of guidance and

clarity being provided by the professional bodies of knowledge in terms of inter professional collaboration.

Case study #10 (Pollack and Algeo 2014a), evidenced that project managers perceived their role more important in all project life cycle stages, whereas change managers perceived their role being more important at the beginning of the project and the towards the end of the project life cycle after closeout. The initial design stage is the area where there is most conflict and disagreement. Project managers have a sense of belonging to their profession and seek distinction. Paradox of belonging may surface in such a situation if the approaches, roles and authorities are not clear. The case study analysis found clear dispute around governance of the organisational change processes, some being Benefits Realisation, Business Case Development and Options Analysis, Human Resource Management, and Stakeholder Management where both professions believed they must lead these activities. However, the study showed that these were areas where both needed to work collaboratively to make the project successful. Moreover, it requires both professions to work collaboratively to resolve such issues through knowledge sharing, open communication and identifying the best way forward keeping project success in mind.

Departments within organizations have different values, identifies and beliefs. And when individuals from various departments interact, they find it difficult to reconcile the values and beliefs of their group with those of others or the wider organization itself. During transformation projects, where matrix structures were utilized, paradoxes of belonging were exacerbated when project and change teams had to work collaboratively to achieve project outcomes. Paradoxical tensions were experienced when project and change managers need to trust one another yet control their work during the change specifically when there are no defined roles, responsibilities, integrated approaches, structure or process to support trusting relationships (Jarzabkowski et al. 2013; Pollack and Algeo 2015).

Paradoxes of belonging coexist with other paradoxes, the main being paradox of performing. The study has identified the existence of the paradox of belonging, but also evidenced how paradox of belonging influences the paradox of performing. The two paradoxes are evidenced to emerge due to clashes between goals of project and change managers and their identities as a group and within their groups or teams, affecting project success. Case study #20 (Jarzabkowski et al. 2013) studies the case of a telecoms company undergoing restructuring as a result of a new governance regulation. It required the company to grant access to all players in the market access to its distribution infrastructure. Integrated division within one organization were restructured where the distribution division separated and had to develop

new working relationships with the rest of the divisions. This case is an excellent example of various paradoxes coexisting and surfacing as a result of one another.

Paradoxes of performing and belonging surfaced due to new procedures for the design process as it affected the roles and goals of the distribution and retail managers.

“Distribution has been created as a separate and standalone organization with its own goals and objectives. So you don’t have much pressure on Distribution to say ‘we need to deliver to the level that the Retail business needs’” (Telco manager, interview).

“If we can’t communicate to get our requirements across, how can you make sure you meet our needs?” (Retail manager, meeting)

New processes during restructuring highlighted paradox of performing for managers. Whilst interaction over product design surfaced the paradox of belonging as each division adhered to a different identify.

“Distribution does not want to create a branding and identity for Telco, they want to create a brand and identity for themselves and for industry. And those two are very different” (Telco manager, interview)

Case study #22 (Pádár et al. 2016), evidenced lack of information sharing between departments during a large change initiative. The sponsor of the TRM project was not being line manager, nor were they officially told what their role was and what the expectations were. The project sponsor, a middle manager with no formal project authority, was unable to obtain the necessary information from the marketing team to design a robust technology map. As evidenced by the authors during the study, “It also turned out that they never shared the longer versions with any other division nor with the central technology development department even though they worked on the same projects. They operated as an isolated island within the organization—not sharing their ideas and information with any of the other divisions and central departments.”

The paradox of belonging is apparent in this situation where the conflict between sense of belonging to the marketing function and the need to withhold information. The cause of this was lack of structure and authority provided to the project manager leading to a technology map that have several gaps and could not be implemented.

Paradox of Organizing

Organizations with unclear structures, roles and responsibilities, and practices create tensions in collaboration. On a regular basis, organizations are confronted with tensions of structuring and leading, fostering collaborations and competition, empowerment and direction,

and control and flexibility. Case study analysis confirms that the project and change management emphasize on different approaches to bring control. For instance, project management emphasizes on planning, reducing variations, managing schedules and cost, which is a micro-level control of the project. Whereas, change management emphasizes control at the macro-level. Moreover, change managers do not follow a linear approach and need to operate all various levels within the organization at the same time to be effective (Pollack 2016a). This causes tensions between project and change managers due to the lack of organization of the processes and tasks between the two professions. The author suggests that change management can be implemented within the various stages of the project lifecycle, where change managers are provided direction by senior management, develop, and communicate the vision of the project and bring stakeholders together to built momentum of the change. This is a proposition, which has not been tested, moreover, vague as it does not provide specific approach, clear roles and responsibilities within the project lifecycle and doesn't provide clarity in governance and project structure in terms of reporting and authority. However, the author confirms that there are tensions between the two professions as a result of appropriate project organization. Such tensions can initiate the surfacing of paradox of organizing which in turn surfaces the paradox of performing.

During the analysis of case #22 (Pádár et al. 2016), it was identified that during a second order technology road mapping (TRM) project, the project structure was designed such that the project sponsor was at a lower level within the organization and had to ensure the success of the project, but at the same time, did not have key project stakeholders and participants reporting to him, leading to relevant information required for the project not being shared.

“The ownership of TRM was on a lower level than it should have been as the technological department initiated the TRM project. Senior managers only ‘supported’ the TRM project without fully understanding its real nature, potential key role and significance in the strategic planning process of the company.” As stated in the case study, experts from other functions were not his subordinates, nor were they told to be a dedicated part of the project team, so they were asked only informally to take part in TRM sessions. Consequently, the final map contained one-sidedly much more technology- related information, leaving knowledge gaps in the market dimension.

The paradox of organizing caused the project to fail, where the organization expected the sponsor to lead a second order change project whilst at the same time not providing the right required project structure or authority within the organization to make the project a success. There were no formal change management built into the structure, change agents

formally assigned from the other departments and made part of the project team, leading to reluctance in information sharing, rise in rumors and non acceptance of the project.

Similarly in case #2 (Boddy and MacBeth 2000), where 100 companies who were implementing supply chain partnering were surveyed to study the success of their collaboration efforts and which project and change management practices were used. Out of 100 companies, only 46 succeeded. One of the four key practices was the right structure was created for managing the change. When asked the questions, “Management created a clear structure to manage the change” and “The joint senior team created specific lines of authority and responsibility”, only 46% of the surveys showed a positive response. The paradox of organizing may have caused 53 companies to fail in collaborative efforts. They were not provided with the appropriate structure with clear lines of authority in terms of reporting or decision making. As analyzed by the writers, “there are limitations to what people acting on their own to solve a problem or improve a process can achieve”. They are unable to direct a project due to lack of empowerment and authority and have no flexibility in their work as required, due to lack of control over the project or decisions regarding the project.

When there is lack of flow of information and knowledge between professional groups, paradoxes of organizing and performing may surface. In the case of #16 (Van Marrewijk et al. 2008), during a mega project, one partner felt the other critical partner did not have the required knowledge and as a result, one was given more control than the other. In this case both partners were strategic and important, and in order for the project to be successful, the need for collaboration was not an option. The situation improved when communication channels were established for exchange of knowledge, where partners exchanged information and knowledge giving one another an opportunity to understand what each one does. As a result, organisational relations were restored, and the collaboration increased. This is a situation where lack of knowledge of the other profession can create tensions leading to mistrust and a sense of superiority.

Conflicts arise depending on the interdependence of tasks of different collaborating teams and partners. More conflicts can be seen when there is lack of clarity in what the task is and the number of dependencies especially in a linear process where one cannot work on something until the other has completed their task. An example provided in case study #17 (Ruuska and Teigland 2009) where “the graphic design of the portal could not be determined without understanding the needs and internet behavior patterns of the portal’s users”. Moreover, each partner had a different practice, method of working and pace at which they worked due to their competencies, making collaboration more difficult. The researchers’

findings indicate that the greatest challenge to interprofessional collaboration in their study was at a strategic and operational level due to task interdependency, lack of defined roles and responsibilities and task timelines.

Project culture can cause tensions between teams if not organized well. In case #16 (Van Marrewijk et al. 2008), the project management team developed a project culture based upon internal values such as independence, innovativeness, entrepreneurship and strong goal orientations. They called it the “fighting spirit”. This is in the case of a mega project that ran over a 38 year period, planned in three phases, where phases 1 and 2 were led by Steer and the final phase (decision making) was led by Flow. Another partner in the project was Straight, a center of expertise for project management and infrastructure construction. Early in the project, Steer and Straight began to have conflict, due to the project culture of “fighting spirit”. As a result, employees from Flow joined the project and changed the project culture to more diplomatic and focusing on collegial behaviors. They introduced procedures, project controls and created a new process of information exchange. Slowly, the collaboration with Straight was established. In this case study, the project culture initially created tensions between two different companies and professionals with different competencies. When the processes were clarified, roles identified and sharing of information was encouraged, the tensions began to be eased and collaboration was restored.

Temporary matrix project structures can cause conflicts within the project team, if it is not structured and defined well. In case #1 (Alsène E. 1998) a new plant was being constructed beside an old one, and staff would be transferred to the new plant once completed. A temporary matrix structure was constructed where project team members were placed under the project manager. However, at the same time, the project team continued to report to their functional supervisors. This was a problem for the project manager, as the structure did not allow authority or control over the project team.

In this situation the structure not only influenced the paradox of organizing, but also initiated the surfacing of the paradox of belonging, as the Project Engineer, Automation and Electrical Engineering, preferred his sense of belonging, loyalty and relationship with his functional supervisors focusing on their interests which were narrow and not in the interest of the project, as a whole.

In summary, when it comes to managing transformation projects, the focus is on redesigning the organization, possibly strengthening, or introducing new competencies thus requiring the organization to encourage flexibility to allow the change to happen. This causes contradictions if the management is not aware of the tensions their actions may cause. The

challenges of such transformational change are in the management of contradictions where one has to deal with contradicting factors of high social complexity, the uniqueness of the situation, the time pressure whilst managing ongoing daily businesses without disruption (Heitger and Doujak 2008). This is a challenge that both project and change managers face during transformation projects, where the paradoxes of performing and organizing are seen to work together, where they must meet project objectives vs managing employee resistance and gaining commitment, where they need to stay committed to the project that requires high performance on their side, yet the organization, the processes, the structure do not facilitate such performance.

Paradoxes of organizing can surface when process are unclear and unorganized, and the right stakeholders are not included in the process such that two parties are doing what they individually meant to do but part of their work is contradicting when it come to collaboration. When embarking on an IT implementation project, it is important to follow a staged approach to ensure successful project completion and integrating change management processes along the way. For example, conducting an initial analysis including feasibility study and detail case study, designing the system taking into consideration business processes, implementing the system with acceptance and adoption at the center of the stage. When such processes are not followed, conflicts arise between completing the project in time against completing a project to ensure adoption, and between stakeholders requiring collaboration but creating competition at the same time. It is important to include key stakeholders and change management processes within these stages. Case #3 (Legris and Collette 2006) stresses on incorporating of change management practices to ensure the relevant stakeholders are included in IT implementation processes. In this case, the system development was done solely by IT, a risky attitude as the system design influences work practices and business workflows, which are not the responsibilities of IT. The real issue is acceptance of the system and the effective use of the system functions. As a result, the authors provide a model that integrates elements related to IT project management, technology acceptance, and change management. A similar positive case was seen when participants in a healthcare integration project worked together to identify where change management approaches should be integrated with project management approaches to ensure project success. They identified that change management provided more benefit when incorporated early on in the project life cycle (Gordon and Pollack 2018).

Paradox of organizing is evidenced in case # 20 (Jarzabkowski et al. 2013), where new processes were introduced as a result of the restructuring and, the role of retail decreased.

The new process is hard for Retail. They're used to getting what they want. And we are saying "whoa, hang on, we can no longer do this, this, and this." But actually we've got to make them feel that "you are our most important customer but we have to be fair." It's tricky. (Distribution manager, interview)

Paradox of Performing

Organizations that do not make the overall goals and objectives of the project clear, experience the paradox of performing. The paradox of performing are usually an outcome of the other paradoxes.

Communication is an aspect of project success, when incorporated with project and change management approaches alongside the involvement of the relevant stakeholders, leads to project success. Case studies have shown that project team meetings, progress meeting, awareness sessions and informal interactions increase team performance and productivity and increases project success. Case #13 (Kuzmanova and Alexandrova 2017) states " personal meetings of the management with the personnel, and work meetings of project team with the personnel are two key tools for achieving effective project communication." Moreover, top management commitment to implement the change initiative is key to project success. Without these, paradoxes of performing can surface, due to lack of goals, direction, authority, governance, and sponsorship. Communication allows stakeholders to communicate issues, share knowledge and identify solutions aimed at achieving the common objective.

Case #16 (Van Marrewijk et al. 2008), mentioned under paradox of organizing, faced tensions in performing. The project culture, "fighting spirit" worked well in the early phases of the project but proved detrimental to the project when it came to implementing because financial control became predominant with predicted cost overruns of Euro 800 million. This resulted in the project slowing down with little possibility of the project team "self-unlocking". The project was handed over to Flow; they introduced a new project manager who brought about a cultural change. The culture moved to a traditional, project management style with defined clear roles and responsibilities, governance with the establishment of a steering committee and related delegation of authorities. This organized the process, however, affected the cooperation because not all partners bought into the new organization structure of the project and associated expected behaviors. Key change management practice of stakeholder management was not incorporated and initial buy-in was not taken from the partner.

We have had sessions with the partners to discuss the cooperation model. But there wasn't a cooperative attitude. (Interview with manager of Ministry of Public Works)

The conflict caused here is of performing, where the partners are each considered experts in their fields with vast knowledge and experience, where they were initially expected to work autonomously and be responsible for certain parts of the project and now they were expected to provide the expertise, but without direct influence on decision-making or having control over activities. Such a situation gives rise to the paradox of performing.

Case study on partnerships, case study #17 (Ruuska and Teigland 2009), showed conflicting goals, demands and requirements of firms coming together to collaborate on a project, causing paradoxes of performing. The case involved to develop 16 organizations from three sectors, academia, government and industry, coming together to create an innovative internet portal for the private construction industry. One of the key challenges identified in the study conducted through semi structured interviews and thematic analysis, was different goals. The government organizations wanted to implement an internet portal to improve the process for building houses for citizens, the private technical consulting firm was wanted to develop its competence in technical solutions, and academia were interested in conducting research on the integration of technical solutions to publish findings which in turn would benefit their careers. Moreover the project schedules were not agreed and varied amongst the partners. “Academia working more on a long-term basis and business more on a short-term basis with government located somewhere in the middle with a medium-term focus”.

The lack of common goals and objectives create tensions where each focuses on a different goal still working on achieving the project result. This is a case of paradox of performance, where such tensions hinder the success of projects. Tensions arise when several stakeholders are involved in a project where each is focusing on different goals.

Case study #2 (Boddy and MacBeth 2000), showed 54 companies failed in implementing a collaboration project due to lack of agreed goals. When the survey question was asked, “The people affected by the change within my organisation agreed with the goals”, 54% showed a negative response. In this case, the project plan was not shared and the key change management practice of ensuring buy-in was not implemented leading to a failed project. Buy-in is often initiated as a change management practice during the project planning phase. As acknowledged by the author, the data collected implied that at the project planning stage, efforts should have been made to ensure all stakeholders understood and agreed to the overall objective and goals of the project (Boddy and MacBeth 2000).

Articles studied have evidence the lack of clarity in the roles of project and change managers in theory and in practice. In cases when the project team believes that change management is dependent on project management or should be assimilated into their approach,

project management methods and tools dominate with the incorporate of change management as and where seen required. In addition, when project teams believe that project and change management are independent, then opportunities for synergies are completely lost. This affects performance. And may result in conflict between what the project and change teams have been taught vs what they believe is the right approach to making the project successful. Success is witness where project and change managers have worked collaboratively to develop joint plans and utilized their strengths to manage stakeholders.

4.3. Discussion

The exploratory study of the cases evidenced the existence of one or more paradoxes in the same case. The cases showed the possibility of paradox of performing surfacing in all scenarios. Paradoxes coexisted and were inter-related. Paradoxes have three overarching characteristics. Paradox is something that has interwoven yet contradictory elements such as perspectives, feelings, interests, practices etc. Second, paradoxes are constructed by individuals as they try and make sense of a complex, ambiguous situation. And third, paradoxes become apparent through either self reflection or social interactions that reveal the existence of contradictions. These are taken from Lewis (2000) which is also used to obtain the paradox theory framework on which this study is based. When paradoxes are identified, individuals often have a paralyzing defensive reaction which may initially reduce the anxiety however, if not addressed, overtime may intensify the tensions. Management of such tensions is the exploration of the tensions, there enables individuals to turn paradoxes into potential positives. Such as accepting the paradoxes or confronting it. There are various methods of managing paradoxes that has been covered extensively in literature. This briefly introduces the reader to the fact that paradoxes can enablers as well as hindrance to interprofessional collaboration.

The analysis shows that tensions arose due to lack of defined roles and responsibilities, lack of an enabling structure to make the projects successful, lack of communication and knowledge sharing, lack of identification of where the practices can be integrated, and lack of a positive culture provided by the organization. The discussion emphasizes the need for the six key enablers to make interprofessional collaboration successful.

Through the analysis it is recognized that the lack of key enablers mentioned in chapter 3 are key causes of tensions between professions. The cases studies mentioned and discussed one of more of the key enablers. These were used to explore tensions caused as a result. Most case studies themselves noted the causes of tensions. Lack of the key enablers are the main causes of tensions, giving rise to paradoxes as seen in the data analysis section. Tensions are

caused in individuals and between individuals and can be caused by individuals, teams, or the organization itself. It is clear from the case studies that paradoxes coexist and one can instigate another (Jarzabkowski et al. 2013; Levasseur 2010).

As evidenced in case #22 (Pádár et al. 2016), the researcher, linking back to literature, concludes that the initiating sponsor should have been at a higher level within the organization and that appropriate authority and structure should have been provided for the project to be successful. A project and change structure should have been incorporated, and roles and responsibilities of the participating functions and experts should have been defined clearly for the 2nd order change project to be successful.

Defensive responses to paradoxes are often seen in organization. They provide short term respite as they may enable individuals to temporarily overcome such tensions, however, such responses do not allow for understanding the paradox, identification of a long-term solution and establishment of a new way to work within the paradoxes. Paradoxes can be managed, if organizations and individuals accept the existence of paradoxes, the request for competing demands and identify methods to manage paradoxes. One of the methods identified in literature is clarity in expectations, processes, roles, and responsibilities. This would enable the two professions to shift their focus on fruitful, proactive discussions by accepting the paradoxes, reducing defensiveness, and working collaboratively towards mitigating them (Lewis 2000). This study does not discuss the methods of overcoming or managing paradoxes as it is outside the scope of the study.

A way to overcome challenges in collaboration is to support actions with structures and mechanisms. Leadership needs to create new structures to support change initiatives, ensuring adequate resources are assigned and clarity in roles responsibilities, decision making governance and most importantly the information is communicated to the organization (Boddy and MacBeth 2000).

One of the researchers explained the power of collaboration very well; They assert that *collaboration is the fundamental principle that distinguishes effective change efforts from less effective ones*. To harness the power of groups, for collaboration to work, change management techniques must be implemented from day one; involve everyone from the beginning because people support what they have contributed towards, communication is an absolute requirement, manage stakeholders closely and ensure that responsibilities are clearly identified, and tasks are clearly allocated holding the team members accountable for the activities (Levasseur 2010). This supports the need for the key enablers to be implemented to reduce tensions and make interprofessional collaboration successful. The same can be applied to the case of

interprofessional collaboration between project and change managers. If the two professionals become cognisant of the tensions caused during collaboration, perhaps, they may better apply collegial behaviors to recognize the tension and work cohesively to manage the tensions, focusing on the common objective to make projects successful.

Knowledge of the individual participants in a project is key to making projects successful (Boddy and MacBeth 2000), however, as seen in the case study analysis, these must be supported by organizational mechanism such as a positive culture of sharing information, providing the right structure to enable free flow of information and empowerment to do so and implementing clarity in roles and responsibilities coupled with accountability. Case studies have shown that organizational learning should be embedded within the processes and be a continuous process. Such learning is not possible if the organization does not provide the right culture, structure, processes or defined roles and responsibilities for making this successful. Tensions are caused when organization expect innovation but promote silo behavior, or do not provide the required mechanisms for knowledge sharing. Case studies have suggested that organizations can develop processes that use a phased approach and apply; accordingly, identify the knowledge required, secure the expertise, provide the knowledge. For experts to collaboration, the unlearning mechanism must be incorporated within the process acquiring process (Gareis 2010). This case relates the importance of role definition through case study:

The benefits of increasing the complexity of the change organization by defining change roles in addition to the project and programme roles was not obvious from the beginning to all parties involved. Only when the demand for continuity and sustainability in the changes became visible, these additional roles were accepted.

Some key practical enablers identified in the case study analysis are (1) co-developing a clear project charter, (2) recruiting a project leader with strong knowledge and skills, (3) conducting joint problem-solving tasks, and (4) ensuring continuous open and balanced communication (Ruuska and Teigland 2009). These solutions are in line with the key enablers identified from the literature review, where clear roles and responsibilities, accountabilities, structure, and decision-making governance are documented, in a project charter. Open communications and team work to allow for joint problem solving ensuring the gap in knowledge is reduced through information sharing. A strong project leader would bring the project team together, manage stakeholders through the experts that make the project team and ensure that tasks are appropriately distributed and monitored to achieve project success.

Organizations need to ensure that an enabling project structure is defined, ensuring the teams are autonomous and have the right decision making authority to make the project

successful (Alsène E. 1998). In addition, organizations need to identify the right processes to ensure involving the right stakeholders with the relevant processes. An integrated model developed and successfully implemented on two projects shows that one of key success factors to IT system implementation is end user involvement from the early stages of the project (Legris and Colletette 2006).

As 2nd order change projects often bring about a significant change within an organization, case studies suggest that a structured method should be utilized, however, due to the complexity of 2nd order changes, efforts need to be focused on collaboration between project and change managers, where both work collective to co-define the goals, the solution and the plan (Lehmann 2010). Without the key enablers of integration through practices, defined roles, responsibilities, governance, authority, collegial behaviors, such collaboration may not be successful. Literature stresses on having the key enablers in place for interprofessional collaboration to succeed. Without these, tensions in relations arise amongst the professionals which can lead to the rise of paradoxes, which in themselves may be difficult to resolve leading to unsuccessful change initiatives.

Knowledge transfer between the two professions is a necessity and studying and applying change management concepts and tools is a necessity for project managers if they want to cope with problems effectively. Perhaps if the bodies of knowledge utilized literature to understand paradoxes, acknowledge the existence of paradoxes in various situations, and utilize the solutions provided by academia, even though theoretical, they may be able to provide clarity to their members on recognizing paradoxes and mitigating them in specific situations. In order to achieve project success, integration of project and change management practices throughout the project lifecycle is a must, along with developing a culture of partnership between the two professions that is entrenched in the processes of organizations (O'Donovan 2019). Some barriers to change management initiatives identified through the case studies are *lack of a clear change vision, lack of leadership skills, Poor Communication, Low Commitment of Stakeholders, and Lack of Monitoring System* and some of the enablers identified are *leadership and sponsorship, effective and constant communication, stakeholder engagement, activities for managing change, and motivation of employees*. (Errida and Lotfi 2021). Findings from the case study are linked to the key characteristics and enablers of interprofessional collaboration.

In summary, based on the analysis of cases, paradox theory can be applied to the cases. It gives us deeper insight into the challenges in interprofessional collaboration between project and change managers. This study shows that the key enablers; characteristics of

professionalism, collaboration and collegiality, are required to manage tensions and as a result paradox. As mentioned previously, interprofessional collaboration is complex and challenging and requires project and change managers to recognize the need for collaboration and the existence of paradoxes in order to manage and overcome them.

There is limited research evidencing the integration of project and change management by discussing roles and competencies, but none have explored the behavioral reasons behind the rivalry between the two professions. The analysis of cases tied together with the literature analysis from chapter 3, identifies the need for the six key enablers to make interprofessional collaboration successful. This study shows that tensions arise between project and change managers which cause paradoxes to arise, thus hindering the interprofessional collaboration between project and change managers. This fills a gap in knowledge, where such a study has not been conducted in the context of project and change management.

The case study analysis provides the foundation for further study, and exploration of the causes of tensions between project and change managers in an organizational setting through primary research. Further focused study can be conducted by considering a specific industry or specific 2nd order change projects. In summary, the literature analysis and the case study analysis provides the foundation for various research on the interprofessional collaboration between project and change managers.

The next chapter explores the possibility of paradoxes in the practices of project and change management taught by the bodies of knowledge. The similarities and differences in the practices, perhaps, the lack of areas of integration specified by the bodies of knowledge and / or perhaps ambiguity in tasks from the bodies of knowledge may be a cause of tensions between the two professions. This is explored in the next chapter.

5. Knowledge Area Comparison: Bodies of Knowledge

5.1. Introduction

This chapter studies the books of knowledge published by the Project Management Institute and the Change Management Institute and explores whether paradoxes can be detected within the practices. Could the differences or similarities or ambiguities within these practices cause tensions to arise between the two professions? During the analysis, we keep the six enablers identified in chapter 3 under consideration to understand if they can be applied to the practices. At the center of the study are the four paradoxes, namely, paradox of learning, paradox of belonging, paradox of organizing and paradox of performing, which form the basis of the study. This chapter aims to answer the research question, what paradoxes can be detected in the project and change management professional books of knowledge?

Details of the methodology and philosophy are explained in chapter 2. In summary, the following two books are utilized for the analysis of the knowledge areas mentioned in the books. The PMBoK¹¹ has 10 knowledge areas and the CMBBoK¹² has 13 knowledge areas.

1. A guide to the Project Management Body of Knowledge (PMBoK Guide), 6th edition, 2017
2. The effective change manager (CMBBoK), 1st edition, 2013

Considering that the PMBoK studied is at its 6th edition whilst the CMBBoK is at its 1st edition, it can be stated that the project management body of knowledge is better established and more mature than the change management body of knowledge. This is in congruence with the history and evolution of project and change management explained in chapter 3.

The PMBoK (PMI 2017) being utilized for the study was published recently in 2017 and is the 6th edition, showing that the project management profession is older and more established compared to the change management profession. The PMBoK defines 10 knowledge areas that will be utilized in the study. As stated in the PMBoK, page 1, it includes “proven traditional practices” that are currently applied across the project management profession as well as emerging “innovative practices” in the profession. The PMBoK asserts that it is a guide, a foundation that guides organizations in building their own “methodologies, policies, procedures, rules, tools and techniques, and life cycle phases needed to practice project management”. The PMBoK is based on the Standard for Project Management and

¹¹ Project Management Book of Knowledge

¹² Change Management Book of Knowledge

offers key concepts, emerging trends, considerations that project managers can customize and utilize to implement project management processes. The PMI publishes the code of ethics and professional conduct, which includes the values that the project management community defined as most important; namely, responsibility, respect, fairness, and honesty.

The CMBok(Change Management Institute 2013) being utilized for the study is the 1st edition published in 2013. The CMBok defines 13 knowledge areas the focus more on the role of the change manager in terms of knowledge / competency requirements. The CMBok relates back to the change manager competency model, which are “clusters of behaviors” that a given change role must possess. The change roles are foundation, specialist, and master. The CMI asserts that the CMBok and the competency requirements have been developed in consultation with practitioners and employers across the globe, hence this should provide a practical viewpoint for the study. The CMBok has been designed for several professionals such as academics, practitioners and employers and provides an outline of the knowledge a practitioner must have to conduct change management, depending on the role. It focuses more on knowledge and areas of expertise.

The above provides a background of the two books of knowledge that are compared in further detail in the next section. The next section aims to explore paradoxes within the knowledge areas taught by the project management book of knowledge and the change management book of knowledge. The analysis has been conducted on the 10 knowledge area chapters of the PMBoK and the 13 knowledge area chapters of the CMBok. It must be noted that a like for like comparison has not been conducted in terms of tools, templates, data analysis templates etc for each knowledge area, mainly due to the fact that the CMBok does not delve into this level of details, whilst the PMBoK does. This is an exploratory study, which cannot obtain references from previous literature, due to lack of them. By taking a broader perspective, this study allows the exploration of differences and similarities in practices at a higher level, and provides a basis for further detail research into key knowledge areas that may result in tensions giving rise of paradoxes between the two professions.

Section 5.2: This section is divided into sub-sections that guide the reader in understanding the various knowledge areas, the similarities and differences identified in these knowledge areas and the impact of these on the study.

Project Management Knowledge Areas Overview: The PMI PMBoK 6th edition has 10 knowledge areas of project management. These are explained in this sub-section.

Change Management Knowledge Areas Overview: The CMI CMBok, 1st edition has 13 knowledge areas of change management. These are explained in this sub-section.

Differences between PMBoK and CMBoK knowledge areas: The next section compares the two knowledge areas and describes the differences between the PM and CM knowledge areas.

Similarities between PMBoK and CMBoK: The last sub-section under section 5.2 compares the two knowledge areas and details the similar knowledge areas.

Section 5.3: The chapter ends with a discussion of the paradoxes detected within the teachings of the PMI and CMI through their books of knowledge.

5.2. Data Analysis

The knowledge areas of each book of knowledge were studied and compared. 10 knowledge areas of project management and 13 knowledge areas of change management. The change management knowledge areas had to be further studied as each is broken down into knowledge components. The knowledge areas are analyzed to identify the similarities and differences in the practices mentioned in the knowledge areas. The similarities are further analyzed to explore whether the similarities can be a cause of tensions between the two professions. Additionally, an attempt is made to link the tensions back to the six enablers identified in section 3.8.

The differences provide an understanding of what project managers are required to do and what change managers are required to do. A difference in practice means lines of demarcation are clear, where roles and responsibilities are clear and that there is no reason for dispute between the two professions. Moreover, this comparison provides clarity in terms of when to employ a project manager and when to employ a change manager during a 2nd order change project. Similarities in practice will help understand the areas of overlap that is causing ambiguity in the role of each profession, which as seen in section 3.8 is one of the key reasons for challenge in interprofessional collaboration. It also guides the reader into anticipating the tensions such similarities or overlaps can cause. Moreover, it sets the base for further research in practice to confirm the cause of tensions and rise of paradoxes and allows for implementing actions in practice where such ambiguity can be mitigated, and interprofessional collaboration promoted.

Project Management Knowledge Areas Overview

Project management is considered a profession and most professions have professional bodies that provide the knowledge and guidance for the profession to conduct their work as well as grow professionally within their domain. The PMI provides such knowledge and frames

of reference through their book of knowledge. This section provides an overview of the teachings which is important for this study, as they form the basis of how project managers work through the approach(es) they learn from their related professional organization. Such teachings may have influence on the mindset of the professional creating the possibility of paradoxes. Hence gaining an understanding of the knowledge areas is a starting point for further analysis.

10 knowledge areas of project management, extracted from the PMI PMBoK 6th edition are provided in the table below. PMI define knowledge areas as follows:

“An identified area of project management defined by its knowledge requirements and described in terms of its component processes, practices, inputs, outputs, tools, and techniques.”

Table 3: Project management knowledge areas and their description (PMI 2017)

PMBoK knowledge area	PMBoK Knowledge area description
Project Integration Management	Includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups
Project Scope Management	Includes the processes required to ensure the project includes all the work required, and only the work required, to complete the project successfully.
Project Schedule Management	Includes the processes required to manage the timely completion of the project
Project Cost Management	Includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget.
Project Quality Management	Includes the processes for incorporating the organization’s quality policy regarding planning, managing, and controlling project and product quality requirements, in order to meet stakeholders’ expectations.
Project Resource Management	Includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project.
Project Procurement Management	Includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team

PMBok knowledge area	PMBok Knowledge area description
Project Stakeholder Management	Includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution
Project Risk Management	Includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.
Project Communication Management	Includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information

The 10 knowledge areas are interrelated and defined further by process groups, which provide a series of activities along with inputs and outputs and what tools and techniques can be used to execute the activities. The PMI is considered to promote “attribute-based” standards (Bredillet et al. 2015), where the PMBoK focuses on the tasks and activities a project manager is expected to perform when managing a project. The PMBoK clarifies that it does not provide methodologies, instead it is to be used as a guide, a reference document that provides “good practice” and is to be tailored by the project manager as required. The detail methodology to be adopted by the project manager, must be decided by the project manager, the team or the organization itself (Section 1.2.5 TAILORING).

The relationship between the knowledge areas and the process groups can be better understood based on the figure below. There are 49 processes associated with the process groups. These processes provide some direction in terms of what should be done within the knowledge area and the project life cycle (5 process groups). They are the connectors between the process groups and the knowledge areas.

Figure 3: 10 knowledge areas mapped against the 5 process groups of a project life cycle (PMI 2017)

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Change Management Knowledge Areas Overview

Change management is considered a profession and most professions have professional bodies that provide the knowledge and guidance for the profession to conduct their work as well as grow professionally within their domain. The CMI provides such knowledge and frames of reference through their book of knowledge. This section provides an overview of the teachings which is important for this study, as they form the basis of how change managers work through the approach(es) they learn from their related professional organization. Such teachings may have influence on the mindset of the professional creating the possibility of paradoxes. Hence gaining an understanding of the knowledge areas is a starting point for analysis.

13 knowledge areas of change management, extracted from the CMI CMBOK 1st edition are provided in the table below. There is no specific definition of a knowledge area within the CMBOK, however it states:

“Knowledge Area describes a major aspect of the underpinning knowledge and practical experience expected of an effective Change Manager” and that the knowledge areas have three or more knowledge components, *“distinct but related subsets of the Knowledge Area under which they are described”*

Table 4: Change management knowledge areas and related knowledge components (Change Management Institute 2013)

SNo	CMBOK knowledge area	Project Capability	CMBOK Knowledge components
1	A Change Management Perspective – the overarching theories behind change	Concepts that are influential in introducing a change	1. Why change management matters
			2. Change and the individual
			3. Change and the organization
			4. Key roles in organizational change
			5. Organizational culture and change
			6. Emergent change
2			1. Aligning change with strategy
			2. Drivers of change

SNo	CMBOK knowledge area	Project Capability	CMBOK Knowledge components
	Defining Change – what is the change?	Defining the individual change the project is aiming to deliver	3. Change definition 4. Developing vision 5. Scenario design and testing
3	Managing Benefits – ensuring change delivers value	Understanding and working with the benefits of a specific change	1. Benefits management principles and processes 2. Benefits identification, mapping and analysis 3. Planning benefits realization 4. Supporting benefits realization
4	Stakeholder Strategy	Identifying and engaging stakeholders involved in or impacted by a specific change	1. Identifying and segmenting stakeholders 2. Stakeholder mapping and strategy 3. Managing relationships and mobilizing stakeholders
5	Communication and Engagement	Identifying and delivering the communication strategies, plans, activities, and measures relating to a specific change	1. Theory of effective communicating 2. Communicating change 3. Communication channels 4. Planning communications
6	Change Impact	Identifying the impact of a specific change on the environment into which it is being delivered	1. Assessing the impact of change 2. Assessing and managing the risks of change 3. Business continuity and contingency during change
7	Change Readiness,	Developing and executing strategies and	1. Building individual motivation to change

SNo	CMBOK knowledge area	Project Capability	CMBOK Knowledge components
	Planning and Measurement	plans to build readiness for a specific change	2. Building organizational readiness to change 3. Planning for resistance 4. Measuring change effectiveness
8	Project Management	Working as part of a project	1. Change within project governance structures 2. Establishing a project 3. Change planning and scheduling 4. Executing change within a project environment 5. Transitioning to the business
9	Education and Learning Support	Analyzing skills gaps and developing training and support strategies and plans to support a specific change	1. Learning theory and skills development 2. Identifying and meeting learning needs 3. Behavioural change and coaching
10	Facilitation	Facilitating a process or event in relation to a specific change	1. The role of the facilitator and the skills required 2. Preparing a group process 3. Facilitating a group process
11	Sustaining Systems	Ensuring all aspects of a specific change and the environment into which it is being implemented support the lasting effects required of that change	1. Organization development levers 2. Leadership levers 3. Reinforcement systems 4. Achieving critical mass 5. Embedding change
12			1. Leadership principles

SNo	CMBoK knowledge area	Project Capability	CMBoK Knowledge components
	Personal and Professional Management	Being a role model for people involved in or impacted by a specific change	2. Building team effectiveness
			3. Emotional intelligence
			4. Effective influence
			5. Negotiation
			6. Conflict management
13	Organizational Considerations	Avoiding or leveraging organizational elements in support of a specific change	1. The Change Manager and Human Resources
			2. Safety, health and environment issues in change
			3. Process optimization in organizations
			4. Financial management for Change Managers

The CMBoK 1st edition, which is used for the study focuses primarily on the ‘project’ level of the change management maturity model, although they claim that many of the concepts are relevant to all levels, namely, project change management, business change readiness and organizational change leadership (Change Management Institute 2013).

The figure 3 below provides an understanding of the relation of the knowledge areas with the change management maturity model. The study considers project-based change, as this is what the 1st edition focuses on. The CMI themselves consider change management a developing profession and state that the CMBoK reflects that and, is a constant “*work in progress*” that will be updated regularly. The knowledge areas are not inter-related and can be read separately.

Figure 4: CMBoK Knowledge area and related competencies (Change Management Institute 2013)

CMBoK Knowledge Area	Project	Business	Organization
1/ A Change Management Perspective	Concepts that are influential in introducing a change	Concepts that are relevant to a business undergoing frequent change	Concepts that relate to a complex range of changes inside and outside of the organization
2/ Defining Change	Defining the individual change the project is aiming to deliver	Defining the landscape into which changes are implemented and the journey from one change to the next	Defining the integrated map of changes that will deliver the organization's strategy
3/ Managing Benefits	Understanding and working with the benefits of a specific change	Understanding the benefits required from all past, current and future change and the combined effect of managing these	Actively managing an integrated benefits map that supports prioritisation and decision making across the organization
4/ Stakeholder Strategy	Identifying and engaging stakeholders involved in or impacted by a specific change	Identifying and engaging stakeholders involved in building and maintaining business wide processes and systems to enable change	Identifying and engaging internal and external stakeholders involved in setting direction and maintaining the organization's road map of change
5/ Communication and Engagement	Identifying and delivering the communication strategies, plans, activities and measures relating to a specific change	Managing and maintaining 'business as usual' communication skills, strategies, channels and measures	Managing and maintaining organization communication policy, standards, channels, feedback loops and measures internally and externally
6/ Change Impact	Identifying the impact of a specific change on the environment into which it is being delivered	Identifying and managing the cumulative impact of change on each role or department	Monitoring and managing change impacts of internal and external events across the organization

FIGURE 4 CONTD: CMBoK KNOWLEDGE AREA AND RELATED COMPETENCIES (CHANGE MANAGEMENT INSTITUTE 2013)

CMBoK Knowledge Area	Project	Business	Organization
7/ Change Readiness, Planning and Measurement	Developing and executing strategies and plans to build readiness for a specific change	Developing and executing strategies and plans to build ongoing change readiness in the people and environment receiving change	Developing and executing strategies and plans to set standards and develop change readiness required to deliver future business strategies and plans
8/ Project Management	Working as part of a project	Playing an active and effective role in projects	Actively managing the organization's strategy and road-map of change to guide project governance
9/ Education and Learning Support	Analysing skills gaps and developing training and support strategies and plans to support a specific change	Developing and maintaining learning and support channels, enabling capacity for learning, building general skills and setting standards	Providing and maintaining organization-wide standards, partnerships, policies and channels for learning and support
10/ Facilitation	Facilitating a process or event in relation to a specific change	Creating an environment where consultation is valued and effective	Providing the frameworks, skills and facilities for effective internal and external group engagement
11/ Sustaining Systems	Ensuring all aspects of a specific change and the environment into which it is being implemented support the lasting effects required of that change	Maintaining awareness of the changes that are or will be embedded and managing their interdependencies. Monitoring and remediating change after implementation	Providing the culture, policies, frameworks and processes to support sustainable change across the organization
12/ Personal and Professional Management	Being a role model for people involved in or impacted by a specific change	Building and maintaining change leadership, emotional management and resilience in those receiving change	Building, role modelling, rewarding and maintaining high levels of self-awareness and self-management across the organization
13/ Organizational Considerations	Avoiding or leveraging organizational elements in support of a specific change	Prioritising and managing the cumulative effects of change on processes, policies, performance and structures	Providing and maintaining the organizational structures, IR, HR, IT and risk management policies to enable change

Process of Comparison

The two books of knowledge were reviewed to identify the similarities and differences in knowledge areas / practices. A comparison was made between the 13 knowledge areas of

change management and 10 knowledge areas of project management. As a result, the next two sections identify the differences and similarities between the two books of knowledge.

In essence, the PMBoK and the CMBoK both have different focus. The analysis of the knowledge areas showed that neither provide step by step, activity by activity methodical guidelines on how to manage a change initiative. Each focus on their domain, viewing a project life cycle with a different perspective. Moreover, the PMBoK states that it is a guide and that project managers must follow standard methodologies (Part 1 Guide – page 2, (PMI 2017)). In the introduction pages, the CMBoK states that it consists of knowledge areas required for change managers to practice effective change management (Change Management Institute 2013).

As a result of the review of the two books of knowledge, the activities proposed in each book were extracted. Activities from the knowledge area that were named the same or described in a similar manner are documented on the same line and those that are clearly different, are documented on separate lines.

Table below lists all activities extracted from the two books of knowledge (Change Management Institute 2013; PMI 2017)

Table 5: List of activities / practices in the books of knowledge

What activities Project managers perform? PMBoK	What activities Change managers perform? CMBoK
Manage stakeholders and stakeholder engagement	Engage Stakeholders
Develop Project Management Plan	Develop change strategy and change management plan
Develop Benefits management plan (project benefits)	Develop benefits management plan (change benefits)
Schedule Management	Change delivery management
Plan human resource requirements	Plan team / resource requirements
Manage the project team	Conflict management across the organization
Reward and recognize team	establish reinforcement systems
Manage communication - team, internal and external stakeholders	Manage Communication and engagement
Manage project risks	Manage benefit realization risk

What activities Project managers perform? PMBoK	What activities Change managers perform? CMBoK
	Apply effective change management practices
	Apply behavioral change models
	Manage employee resistance to change
	Develop change vision
	Conduct change readiness
	Develop the change budget plan and resource plan
	Monitor benefit realization across the project lifecycle
	Manage change team
	Coach, enable and support at all levels of the organization
	Deep knowledge and understanding of the organizational culture
	Assess and manage the risks of change and Business continuity and contingency during change
	Conduct core business process review
	Work with business to ensure business continuity
	Manage stakeholders: internal and external
	Develop the training plan
	Manage transition: Support the business/project managers to transition to the new change
	Manage training: to ensure the new state is adopted Identify training needs, develop L&D plan
	Facilitate workshops

What activities Project managers perform? PMBoK	What activities Change managers perform? CMBoK
	Design, plan and implement sustaining systems
Develop Project Charter	
Direct and Manage Project Work	
Manage Project Knowledge	
Monitor and Control Project Work	
Perform Integrated Change Control	
Close Project or Phase	
Develop business case	
Scope Management	
Manage Budget and Cost	
Manage Project Quality	
Develop team competencies	
Manage project procurement	

Activities mentioned in the table above are from the PMBoK and CMBoK which could be a minimum requirement in terms of practice for project and change managers. This is an interpretation based on the fact that the books of knowledge state that they provide guidance, not methodologies. Based on this, project and change managers may identify models and methodologies to utilize that require them to conduct more activities than what is mentioned above. Project and change managers may require more effort and to conduct more activities than those stated above, in an effort to implement successful change; it depends on the change initiative.

Activities on the same line within the table are similar activities, but not the same. The reason is due to the difference in context and focus between the two bodies of knowledge. This is further detailed below.

The next section describes the differences between the knowledge areas of the PMBoK and CMBoK.

Differences between PMBoK and CMBoK knowledge areas

Based on the method described in the previous section, this section provides the reader with the differences that were identified between the two knowledge areas. This is done in

terms of terminologies, expected competencies from the professional and the thought process. Some terminology utilized are similar, but have different meaning to each profession or one profession teaches on focusing on self whilst another may encourage profession inclusion. Such teachings frame the mindset of the professionals. The differences in teaching aids this study by understanding the challenges to interprofessional collaboration and whether paradoxes are seen due to such teachings or perhaps the differences are clear and hence clarity in roles and responsibilities allowing the professions to work together knowing their boundaries, roles and responsibilities.

The PMBoK does not define or cover any aspect of change leadership (strategies to improve change acceptance), but focuses on project change control, under the monitoring and controlling process group, which spans across most of the knowledge areas (refer to [Figure 2](#)). Change Control referenced in the PMBoK in knowledge area process 4.6 Perform Integrated Change Control under knowledge area Project Integration Management, focuses on managing the changes within the project such as change in scope, schedule, procurement etc., but does not focus on the human element of change. Such a distinction in the practice provide room for the two professions to work together, giving change managers an opportunity to bring the people side of change perspective within the project lifecycle.

As explained earlier, the PMBoK is one of many guides published by the PMI and is recognized as good practice, which can be applied to different types of projects most of the time, thus improving the probability of project success in practice. A secondary benefit is the standardization of terminology or vocabulary within the profession. It is the decision of the project manager and team to determine the most suitable and feasible practice of the change initiative that they are working on. Such decisions are based on the project governance framework, that is identified based on the project.

Project governance in the PMBoK (page 44) refers to the framework, processes, authorities that guide the project management activities, clearly stating that such governance should be tailored to *the organizational culture, type of project and needs of the organization*. In a situation where the project manager does not have the required competency or experience, may possibly not develop an appropriate governance structure that is inclusive of other professions who need to be part of the project. The guidance in the PMBoK is not sufficient or clear, to guide project management activities in a specific manner. Can such a situation cause tensions between project managers and other professionals involved in the project?

The PMBoK further provides guidance to project managers in the section “1.3 Linking organizational governance and project governance” on page 545, by providing the components

of project governance. Key components and processes that must be established are listed below (PMI 2017)

- Stage gate or phase reviews;
- Identifying, escalating, and resolving risks and issues;
- Defining roles, responsibilities, and authorities;
- Process for project knowledge management and capturing lessons learned;
- Decision making, problem solving and escalating topics that are beyond the project manager's authority; and
- Reviewing and approving changes to project, and product changes that are beyond the authority of the project manager.

In contrast, the CMBoK, under knowledge area 3, managing benefits, and knowledge component 3.1, benefits management principles and processes, state that an effective change manager must have the following knowledge:

“Governance frameworks to ensure accountability and responsibility for enabling business changes upon which benefits are dependent.”

It does not provide detail guidance on the components, guiding principles or processes to be developed for effective governance. Whilst the PMBoK focuses on what project managers should be doing, with no mention of other professions, the CMBoK guides change managers, under several knowledge areas, by stating that they must work “alongside” project managers to establish effective governance (knowledge area 6, page 86, knowledge area 8, page 109).

CMBoK guides change managers into thinking holistically and focuses on the project environment within which the change initiative needs to operate. There is a specific knowledge area that focuses on Project Management (knowledge areas 8), where effective change managers are required to be aware of project management methodologies. It requires change managers to work closely with project managers throughout the change initiative life cycle.

“Throughout the life of the change initiative, effective change managers work closely with project or programme managers ensuring that the two disciplines are in step, with a mutual agreement on the timing and nature of the deliverables and tasks required.”

Contrary to the PMBoK, the CMBoK guides change managers to work closely with project managers and considers the project environment and related governance. Such differences in attitude and behavior can perhaps cause tensions between the two professions, especially when one is guided to focus on self, the project team and technical delivery, whilst the other is guided to work closely with project managers specifically to ensure project success.

Within the same knowledge area (8), project management, the CMBok requires effective change managers to have the knowledge of project concepts and terms, methodologies including agile, project roles and their relations to change management and project planning software. Project management is seen as an integral part of the knowledge change managers require and must consider when managing change initiatives. However, none of the PMBoK knowledge areas cover any aspect of change management within the context of CMBok change management. It only focuses on what PMBoK calls “*change management or configuration management system*”, also known as change control; a change that impacts any aspect of the project baseline plan, such as schedule, cost, scope etc. Basically, the change management plan defines the process for managing change on the project.

Change management plan is described in section 4.6.1, page 116 in the PMBoK as below. It is not a knowledge area but is considered an input into a knowledge area. It focuses on change control within the project, which is different from change management in the context of the CMBok.

The change management plan provides the direction for managing the change control process and documents the roles and responsibilities of the change control board (CCB).

In contrast, the CMBok describes change management plan on page 12 of the CMBok 1st edition as follows:

Change management plan: we have used this term for a plan that typically includes change impact, the organization’s change readiness, capability, and capacity for change, meeting key learning needs and achievement of outcomes

As seen above, both mention change management plans, however, they have different meanings and contexts. Both professions view change management differently and have developed approaches to managing change differently. As a result, each professional body of knowledge, is utilizing similar names to describe different things, which can lead to confusion and possible tensions between the two professions. Although both conduct the activity of managing change or developing change management plans, they cannot work together to conduct “change management”, due to different focus and context. They could, however, understand the different context associated with the different functions, identify appropriate roles and responsibilities in the context of change management and identify methods of working together and collaborating to make projects successful.

Along with project governance, the PMBoK provides guidance on identification of appropriate structures that facilitate a successful project. They identify key variables that must be considered when designing the structure. Some key variables from page 46 are:

- Specialization capabilities,
- Clear path for escalation of decisions,
- Clear line and scope of authority,
- Accountability and Responsibility assignment,
- Clear communication (e.g., policies, status of work, and organization's vision).

The above variables are linked to the six key enablers of interprofessional collaboration discussed in chapter 3. The PMBoK discusses these in terms of project managers and project teams. Should appropriate structures and governance be put in place, project teams will be able to work effectively and efficiently.

Structures are also mentioned in the CMBoK. It states that effective change managers must be aware that some organization structure and cultures can restrict change, whilst some enable change. It recognizes two of the six key enablers mentioned in chapter 3 under knowledge area 1, change management perspective, and knowledge component 1.3, change and the organization. It states that an effective change manager must have the knowledge of:

How the boundaries inherent in traditional hierarchical organization structures can inhibit change. How alternative and parallel structures can be used to enable change to happen more freely.

Knowledge component 2.2, drivers of change, state that effective change managers must understand the nature of organizations and be aware of the formal and informal structures, processes, culture and methods of communication in order to make change successful. The CMBoK places emphasis on organization structure, culture, leadership, processes as change managers focus on the entire organization and not only the project, related team, and stakeholders.

One of the differences in the knowledge areas is managing transition, a knowledge component under knowledge area 8, project management. The last knowledge component is ensuring that project deliverables transition smoothly into operations where the responsible employees are ready and willing to take ownership of the deliverables. This is a knowledge area that is not mentioned in the PMBoK, which alludes to the role of the project manager ending once the project deliverables are completed. The change managers role continues until the deliverables are adopted. This too is monitored and reported, as per knowledge area 3, managing benefits. Managing transition could be considered as project implementation, where project managers are involved. However, there is no guidance in the PMBoK for project

managers in terms of their role and responsibilities and how they can work with change managers to embed the change.

Moreover, change managers learn managing transition and take it as their responsibility, based on the knowledge area stressed by CMBok. Such a situation can be a cause of conflict between the two professions, where one believes they are better placed in terms of knowledge and competence to ensure smooth implementation or transition of project deliverables. This can possibly cause the paradox of organizing to surface, where there is competition between the two professions, and at the same time are required to collaborate to ensure the project deliverables are adopted. Lack of clarity on the enablers as described in chapter 3, will lead to challenges in interprofessional collaboration.

Another key difference is in knowledge area 11, sustaining systems which focuses on ensuring that change is sustained. Change managers must design, plan, and implement sustaining systems to ensure the change sticks. This requires new behaviors and ways of doing things to become part of the organizational system, which covers both people and process aspects. This knowledge area covers all components of the organization as its objective is to ensure the change sticks. It has 5 knowledge components, which focus on embedding the change and monitoring progress. They include, training and development, redefining roles and responsibilities and may require a change in the target operating model and structure of the organization, new performance measurement methods, rewards, and incentive schemes amongst others.

Sufficient time is required for ensuring change is embedded as it requires reframing, establishing new ways of doing things and then ensuring the organization learns the new ways. It involves change managers to engage the entire organization in terms of 2nd order changes, from top management, leadership to those affected by the change. They are required to work with subject matter experts including organization development specialists to devise appropriate interventions to sustain the change. To embed the change, change managers must work closely with people at various stages of the project lifecycle. This is a clear distinction in knowledge area, where clearly, only change managers are required to possess the knowledge and skills to conduct. Such a distinction provides clarity in the role, process, responsibilities and can be integrated into the project management approach or methodology, facilitating interprofessional collaboration between project and change managers.

Difference can be seen in knowledge area 12, personal and professional management. This knowledge area specifically focuses on the skills effective change managers need to

develop to manage their emotions and reactions during the change. The CMBoK states under knowledge area 12 page 159

Developing skills in areas such as personal leadership and emotional intelligence equips change managers with the resources required – not only to develop resilience but also to manage themselves more effectively and to lead others by example.

The knowledge area stresses on self development for change managers. It requires effective change managers to develop personal and professional management skills such as (Change Management Institute 2013)

1. Leadership principles
2. Building team effectiveness
3. Emotional intelligence
4. Effective influence
5. Negotiation
6. Conflict management

The objective of the above skills is to equip effective change managers with “strong interpersonal communication, effective influencing, negotiation and conflict management skills”, thus empowering them with approaches and strategies to deal confidently with diverse people, subject matter experts and professions at all levels within the organization.

These are soft skills that are not included in the knowledge areas of the PMBoK. Possessing such skills may lead to change managers displaying more professionalism and being more collaborative and collegial in their behaviors and work towards the concept of finding ways to work together. This is evidenced in the CMBoK, knowledge area 12, knowledge component 12.1 leadership principles, where it states that the ability of change managers to “build relationships, to engage with people and to influence them”, allows them to gain people support to achieve a shared purpose.

Knowledge area 13, the last knowledge area of the CMBoK, Organizational Considerations, is a knowledge area that brings together knowledge that change managers should be aware of but is outside the discipline of change management. The CMBoK states that such matters are the responsibility of the organization and not of the change managers, however, they must be aware of them. They are required to have knowledge of the following stated on page 176 of the CMBoK, knowledge area 13 in order to conduct change impact assessment and have meaningful conversations with the subject matter experts.

1. The Change Manager and Human Resources
2. Safety, health, and environment issues in change

3. Process optimization in organizations

4. Financial management for change managers

Such a knowledge area does not exist in the PMBoK. Project managers are required to learn ten knowledge areas and related knowledge area processes, which are process related. Within the knowledge areas, project managers are not encouraged to learn or be aware of other subject matters that may impact the project. This can perhaps create inflexibility, causing paradoxes of learning and belonging, where project managers have conflicts between the need for change and collaboration but at the same time wanting to retain the knowledge taught, a sense of self and belonging to the project management profession.

The CMBok 1st edition, has a complete knowledge area dedicated to facilitating group events, called Facilitation, knowledge area 10. It has three knowledge components, namely, the role of the facilitator and the skills required, preparing a group process and facilitating a group process. The objective of the knowledge areas is to enable change managers and the working groups to improve collaboration and shared learning to reach a set of objectives. Additionally, to communicate with all stakeholders, obtain buy in and work together to attain common solutions. In knowledge area 10, page 135, the CMBok states:

Good facilitation builds ownership of the outcomes and, because of this, is a useful tool for engaging with stakeholders and assuring robust results

As described in this section, change management focuses on the entire organization and its ability to adopt the change and sustain it. This requires change managers to practice facilitation across the organization, which requires them to bring together large groups of people to achieve an objective. The CMBok focuses on facilitation as a knowledge area to ensure change managers are equipped with the right guidance on conducting successful facilitation. Some of the expected behaviors of a good facilitator are provided in knowledge component 10.1, role of the facilitator and the skills required.

An effective facilitator is practised, confident, able to listen and question well, self-aware, respectful, open, honest, flexible and observant.

Most of the behaviors listed above are collegial behaviors, which would facilitate interprofessional collaboration. It demonstrates that change managers are taught to practice collegial behaviors through the CMBok and collaboration with other specialists and disciplines is encouraged by the body of knowledge. Such behaviors or practices are not mentioned in the PMBoK knowledge areas.

It may be that change managers are willing to collaborate, however, much of the challenges come from project managers who may not be keen on collaborating with change

managers, or perhaps do not have the skills or knowledge to collaborate. This is an area that can be further explored through research in practice.

“Education and Learning support” is knowledge area 9 within the CMBok. There are three knowledge components to this knowledge area. In the PMBoK, project resource management is a knowledge area, 9 in [figure 2](#), where one knowledge process group within this knowledge area focuses on develop team. CMBok places emphasis on managing the change and development within people who are impacted by the change. Change initiatives may require individuals to learn new knowledge and perhaps unlearn old behaviors and adopt new behaviors. Change managers recognize that and the CMBok provides detailed guidance on how effective change managers can support the business and project managers. They are guided to develop a change management plan that includes training and coaching elements focused on the organization to help employees learn how they can work effectively in the future state. Effective change managers communicate and work with all levels within the organization. Knowledge area 9, within the CMBok, page 126 states

From time-to-time senior leaders seek out the change manager for personal advice and support on challenges they face in designing, implementing or embedding change initiatives.

Such instances require effective change managers to have coaching skills, knowledge of learning techniques, ability to work with the organizations learning and development function to develop learning and training requirements and plans and, develop behavioral change management techniques. The focus of managing training from a change management perspective is inclusive of the entire organization and mainly on the adoption of the change.

The PMBoK knowledge area project resource management, page 307 of the PMBoK, 6th edition states

Project Resource Management includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project. These processes help ensure that the right resources will be available to the project manager and project team at the right time and place

The guidance focuses on planning physical and team resources required to deliver the change initiative, developing, and managing the team through the lifecycle of the project. The scope here is limited and does not include the entire organization. Knowledge area process 9.4, page 336 states

Develop Team is the process of improving competencies, team member interaction, and the overall team environment to enhance project performance. The key benefit of this process

is that it results in improved teamwork, enhanced interpersonal skills and competencies, motivated employees, reduced attrition, and improved overall project performance.

Project managers as per the PMBoK are required to possess the skills to lead and inspire project team with the objective of meeting the project's objectives. PMBoK page 337 requires project managers to develop high performing teams by employing the following:

- Using open and effective communication,
- Creating team-building opportunities,
- Developing trust among team members,
- Managing conflicts in a constructive manner,
- Encouraging collaborative problem solving, and
- Encouraging collaborative decision making.

All these behaviors and guidance is around ensuring successful project delivery. The CMBok as compared to the PMBoK is people oriented, requiring the effective change managers to have a wide range of knowledge and competencies to practice change management.

Such a difference can be valuable and used as complementing practices between the two professions. This is an opportunity for project and change managers, in practice, to discuss the two knowledge areas, identify ways of working and areas of focus, bringing clarity in what project managers must practice and what change managers must practice within the two knowledge areas respectively, they may be able to work through the tensions and be able to facilitate interprofessional collaboration. This links back to the six key enablers of interprofessional collaboration, where clarity in roles, responsibilities, authorities and understanding the points of integration within the practices will facilitate interprofessional collaboration.

Project risk management is a knowledge area within the PMBoK which is detailed in chapter 11, page 395 of the PMBoK 6th edition. This is one of the key knowledge areas of project management and includes seven project risk management processes. The PMBoK states that project risk management is conducted to identify and mitigate risks in order to optimize the prospects of project success.

Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.

Managing project risk is limited to the risks associated with the project and related successful delivery of the project. The PMBoK encourages project managers to understand the interrelationship between projects and the organization by determines how business and strategic factors could affect the project, one of the factors being benefits realization expectations and strategies, covered under chapter 3, role of the project manager (page 60). However, this is not described or discussed in any of the 10 knowledge areas in detail.

In contrast, effective change managers practice benefits management, discussed in the CMBoK under knowledge area 3, Managing Benefits – ensuring change delivers value and mentioned in several other knowledge areas. Change initiatives can result in positive and negative effects, called benefits and dis-benefits. Change managers are required to address both in their change management plan. CMBoK identifies benefits with the entire organization and links it to the strategic goals of the organization. It states:

Benefits management is concerned with identifying, mapping, analysing, quantifying, and realizing the benefits of a change initiative. It also focuses on alignment of benefits with the strategic goals of the organization

Moreover, the CMBoK guides effective change managers to work with business stakeholders, subject matter experts and project managers to identify and quantify benefits. The CMBoK acknowledges the role of the project manager and encourages the effective change manager to work with them throughout the book of knowledge. It requires change managers to manage benefit realization risk by identifying the risks to achieving the benefits, monitoring and managing them throughout the change initiative. It also acknowledges the importance of business continuity by addressing it under knowledge area 6, change impact and detailing it under knowledge component 6.3: business continuity and contingency during change. They are guided to work with specialists and the business to ensure that the impact of change is reduced where possible and that processes are updated accordingly to maintain business continuity. The aim is to work with the specialists within the organization to reduce or minimize the impact of the change to business as usual.

As seen above, the PMBoK's focus is narrow and around projects. In contrast, the CMBoK's focus is across the organization and meeting strategic objectives. Different context, and different focus; yet there is tension between the two professions. Could the lack of knowledge in practices be a cause of the tensions? As seen in chapter 3, without the flow of information and knowledge between professions, a knowledge gap is created, which exacerbates the challenges in interprofessional collaboration for the reason that individuals are unable to relate or understand one another. This does not seem a cause for paradoxes to arise,

expect that lack of knowledge can cause tensions to arise when working on a change initiative together. Such tensions can be mitigated through collegial behaviors and implementation of the six key enablers of interprofessional collaboration. There is benefit in bringing together complementing practices which would provide a more holistic view and approach towards managing project risks and ensuring benefits are realized by the organization.

Other key differences between the PMBoK and CMBBoK are core project management practices seen in the table above table # 5. The activities are around managing the project through controlled activities such as directing and managing project work, controlling changes within the project in terms of schedule, cost, scope, managing the project schedule, quality, risks and procurement. All these activities are centered around the project requirements and ensuring project delivery success. Such differences should provide clarity in roles and responsibilities and in practices as there does not seem to be evidence of overlap in such practices. Are these practices the cause of tensions between the two professions? This can be further studied to identify whether clear differences in practices cause tensions in practice or whether these are areas where both professions are able to conduct their own activities feeding information to each other as and where required during the project life cycle. In such circumstances, project and change managers would share the same goal and objective but not the same responsibility thus leading to interdependence in a linear way (Bratianu 2007).

Change manager activities focus more around managing the change, applying behavioral models to manage employee resistance to change. They are guided by the CMBBoK to collaborate with project managers and begin their activities early in the project lifecycle. They focus on developing the change vision, conduct organizational change readiness, both of which can be fed into the project management plan as it provides insight to the project manager and project team in terms of delivery pace and stakeholder management. Such change manager activities can be interrelated, and feed into the project management plans, but are no cause of concern in terms of overlapping activities or being the same activity practiced by project managers. Such practices, if well understood by project managers, can reduce the knowledge gap and place both professions in a position to collaborate towards achieving project success.

Similarities between PMBoK and CMBBoK

This section aims to identify and analyze similarities in knowledge areas from the PMBoK 6th edition and CMBBoK 1st edition. It has been evidenced that some of the knowledge areas utilize the same terminology or mention practices with the same terminology, which are wholly or partially interpreted in a similar manner. Can such similarities cause paradoxes to

surface? Understanding the similarities in the teachings helps to identify ambiguities, thus lack of clarity in roles and responsibilities within a change initiative leading to challenges in interprofessional collaboration and possibly giving rise to paradoxes.

This section begins with stakeholder management, which is a common knowledge area and activity in both books of knowledge.

Project Stakeholder Management is a knowledge area within the PMBoK, chapter 13, page 503. It is described as:

Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution

Project manager activities within this knowledge area include identification of project stakeholders, planning, managing, and monitoring stakeholder engagement. They must consider that every project has stakeholders, and the stakeholders are either impacted by the project or can impact the success of the project in a positive or negative manner. Stakeholder analysis as per the PMBoK includes a list of stakeholders, their positions or titles in the organization, roles on the project, interests in the project, expectations, attitudes, and support towards the project. In order to manage stakeholders, it is important to classify them. Some techniques are provided in the PMBoK. Knowledge process Plan stakeholder engagement is described as follows in the PMBoK section 13.2:

Plan Stakeholder Engagement is the process of developing approaches to involve project stakeholders based on their needs, expectations, interests, and potential impact on the project. The key benefit is that it provides an actionable plan to interact effectively with stakeholders.

Stakeholder assessment matrix is an analysis tool mentioned in the knowledge area where stakeholders in the fourth quadrant of high interest in the project, high influence on the project success are prioritized at the top of the list.

The stakeholder engagement plan is developed early on as a component of the project management plan. It identifies the strategies and actions required to promote productive involvement of stakeholders in decision making and execution of the project. The plan is used to manage stakeholders, a knowledge area process with the key objective is that *it allows the project manager to increase support and minimize resistance from stakeholders* (13.3 manage stakeholder engagement, page 532). Key activity required is to manage stakeholder expectations through negotiating and communicating to ensure that *stakeholders clearly*

understand the project goals, objectives, benefits, and risks for the project, as well as how their contribution will enhance project success.

Stakeholder strategy is knowledge area 4 within the CMBok, chapter 4, page 63, that guides effective change managers in how to identify and engage stakeholders. The CMBok describes a stakeholder as follows:

A stakeholder is defined as ‘any individual, group or organization that can affect, be affected by, or perceive itself to be affected by a change initiative’

It further states that in order to identify problems that change initiatives need to resolve, it is key to identify stakeholders and manage their expectations. The change management plan must include a detailed analysis of stakeholder needs, issues, and priorities for the change. It is important to note that within the beginning of the knowledge area, CMBok guides change managers to work along side project managers in *leading, facilitating, and co-ordinating engagement with stakeholders through the full lifecycle of change.*

It further identifies three strategies that change managers must follow to manage stakeholders successfully, namely, identifying, and segmenting stakeholders, stakeholder mapping and strategy, managing relationships and mobilizing stakeholders.

Identifying and segmenting stakeholders from the CMBok is very similar to identify and plan stakeholders from the PMBok. Both focus on early identification and planning, categorizing based on power and influence with the main objective being ensuring they support the project / change. This is a practice that could be highlighted as a concern, due to the lack of clarity in who does want, when, and who takes the lead and has the authority to make decisions. Could such a situation create tensions between the two professions and possibly give rise to paradoxes? As seen in chapter 3, overlap and lack of clarity in roles and responsibilities, practices taught by the bodies of knowledge are same with little clarity on how the integration of the two practices should work and with little support on structures, authorities, governance, or culture from the organization, interprofessional collaboration is difficult. As seen in literature, ambiguity fosters disruptive conflicts due to mis-interpretations (Lewis 2000). Moreover, in such a situation, both project and change managers would share the same goal and the same responsibility, leading to interdependence and possibly synergy. However, such synergy is not easy to obtain as it requires intelligent team management (Bratianu 2007).

Stakeholder engagement should be timely, appropriate, and focused on raising awareness of the initiative and the change the initiative will bring, along with the impact it will have on all involved. Change managers are taught various techniques to engage stakeholders, including knowledge areas that focus on defining the change, facilitation and bringing

stakeholders together, communication and engagement across the organization, change impact, ensuring the organization is ready for change, planning and measuring the change readiness, project management and ensuring change is sustained. All knowledge areas of the CMBok focus on stakeholder management in various ways to achieve the objective of embedding the change.

The role of project management in terms of stakeholder management ends once the project is completed. Stakeholder engagement and management in project management is related to managing the stakeholders that impact the project positively or negatively to ensure project success is achieved. Herein lies the difference between the two bodies of knowledge, where the CMBok is more holistic and focuses on managing stakeholders until the change is embedded and sticks, whilst the PMBok focuses on ensuring project success. Despite of the use of similar terminologies and possible tools, the focus of both is different in some practices pertaining to stakeholder management. This can cause misunderstanding and as a consequence tension between the two professions.

Based on organization structures, should a project manager be required to conduct activities stated within the change managers role in CMBok, this could cause paradoxes of learning to surface as the project manager will require to learn new knowledge, which would conflict with what they have been taught to do. Eventually other paradoxes may surface at the same time, such as paradox of performing, for instance, if a change manager is required to conduct stakeholder management in terms of what is taught in the PMBok, it may not be as difficult due to the holistic view of the CMBok and that the change managers are aware of the practices of project managers.

Such situations can be avoided with the support of management. It is management that needs to provide the right environment for project and change managers to share knowledge, practices and enabling organization structure, as management by nature are integrators and enablers of synergy (Bratianu 2007).

Project Communication Management is a knowledge area within the PMBok, chapter 10, page 359. It is described as:

Project Communications Management includes the processes necessary to ensure that the information needs of the project and its stakeholders are met through development of artifacts and implementation of activities designed to achieve effective information exchange.

There are three knowledge area processes, namely, plan communications management, manage communications and monitor communications. This knowledge area guides project managers in developing communication strategies that serve the purpose of the project. Project

managers are expected to communicate with team members, project stakeholders and hence encouraged to have the knowledge to communicate with diverse stakeholders utilizing appropriate tools and techniques. The target audience for communication for project managers and their teams are stakeholders identified in the project stakeholder management knowledge area. Emerging practices in the PMBoK state that stakeholders must be included in project reviews and project review meetings. The choice of words used by the PMBoK on page 364 are *An effective communication strategy requires regular and timely reviews of the stakeholder community and updates to manage changes in its membership and attitudes.*

Using a paradox lens, and given the scope of this study, the statement above can be interpreted as the PMBoK encouraging a sense of community and belonging to groups, such as stakeholder community. And that project managers must manage such communities which they may not necessarily be a part of. Would such practices necessarily cause paradoxes to rise, perhaps not. However, this is to be tested in practice.

The key objective of the stakeholder management processes is to engage stakeholders by presenting relevant information in a timely manner. The knowledge area is focused on project information and engaging stakeholders to obtain successful project closure. It guides project managers to consider seeking expert advice from subject matter experts in various areas including those familiar with the practices of organizational change management.

Knowledge area process manage communications is described on page 379 as *the process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and the ultimate disposition of project information. The key benefit of this process is that it enables an efficient and effective information flow between the project team and the stakeholders.*

As part of communication, the PMBoK encourages project managers to consider using facilitation as a technique to communicate project information and build consensus around concerns that may arise during the project life cycle.

In contrast to the PMBoK project communication management knowledge area, the CMBOK covers communication under knowledge area 5, communication and engagement – communicating change effectively. It begins the knowledge area by stating that *communication and engagement are at the heart of any successful change initiative*. It brings a different perspective, where it recognizes that the people within the organization who are impacted by the change need to be prepared to adopt the future state and accept the change, else will result in resistance and rejection of the change initiative and its deliverables. The key objective of this knowledge area is to develop a common understanding of the change amongst the

stakeholders and gain their commitment to the change initiative throughout the initiative life cycle.

There are four knowledge area components in the CMBok, namely, theory of effective communicating, communicating change, communication channels and planning communications. Effective change managers are required to practice active networking, engaging with people to gather feedback throughout the change initiative life cycle, and adjust the approach as required based on the feedback. The key is to ensure engagement and acceptance of the change initiative. The CMBok specifically states that the effective change manager works closely with other staff, such as sponsor and project managers, to ensure the timely flow of information and tailoring of the key messages based on the audience (CMBok 1st edition, page 75). Throughout the book of knowledge, the CMBok recognizes the role of the project manager and provides required guidance to the change manager to work along side the project manager.

Although stakeholder management as a term seems similar and one would expect both project and change managers to manage stakeholders, the focus, the approach and objectives seem to be a differentiating factor. The CMBok , page 78, states that effective change manager whilst communicating the change, must consider *the emotional impact of change on the people affected*. Hence the practices adopted by the change managers are similar but with a different focus. Moreover, change management practices place emphasis on change adoption and reduction of resistance, hence utilize several other techniques and models. CMBok has other knowledge areas that are specifically dedicated to ensuring effective change managers learn and practice what's required to make a change initiative successful. Such as facilitation, business continuity, core business process review, transition management, sustaining systems amongst others. In terms of managing stakeholders, an effective change manager is required to work with the learning and development function and other experts to identify training needs, develop and monitor training plans to ensure that individuals understand and are able to adopt the new way of doing things.

However, without formal communication and flow of information between the two professions, stakeholder management as a knowledge area and the practices taught can cause ambiguity. Such ambiguity can lead to tensions between the two professions. The organization must provide the right culture, governance, structure and clarity in authority in terms of who leads what area of the project or provide direction at a granular level in terms of responsibilities within the project lifecycle. Without this, the tensions can lead to paradoxes of organizing and performing surfacing.

Other similarities in practices evidenced in the books of knowledge are developing a benefits management plan, developing team competencies, reward and recognize the team amongst others. The practices seem similar but the focus and context differ. Whilst benefits management plan is a document which describes how and when the benefits of the project will be delivered and how they will be measured, is mentioned within the PMBoK as an input document into several knowledge areas of the project. It specified that it is a project benefits management plan, focusing on the benefits the project will bring to the business, a document created prior to project starting. It does not clearly state whether the project manager is responsible for developing the document and how the project manager is involved in managing the benefits. Benefits realization is considered more at a program and portfolio level, which is beyond the scope of this study as well as project managers. However, change managers along side specialists are required to develop the benefits management plan which focuses on the change benefits. This is given considerable importance in the CMBok, where a knowledge area is dedicated to benefits management, called, Knowledge Area 3, managing benefits, that ensures that the change delivers value. The CMBok, on page 51 very vaguely distinguish the role of project and change managers when it comes to benefits management.

Change managers work with the business (often with business analysts, consultants and specialists in benefit management and realization) to help to identify, quantify and track the benefits from change. Programme and project managers ensure that projects deliver 'fit-for-purpose' products, on which benefits are dependent. In some organizations the role of benefits realization manager may be additionally defined, offering a specialized resource in this area.

Benefits management as per the CMBok includes several practices, such as, identifying the change benefits in collaboration with specialists, business and operational managers and project managers, manage the benefits in coordination with the business area to ensure benefits are owned by the appropriate area and are held accountable for the benefits realization. Change managers do not work in silo and do not focus only on the project benefits. They ensure that the change delivery methods utilized are in line with the benefits the change must realize. They do not conduct benefits analysis on their own, instead, work closely with all stakeholders, business managers and project managers to ensure alignment so that the most significant benefits are monitored and managed and strongly supported across the organization. This is further linked to risk assessment of benefit realization, which is conducted in collaboration with the business, specialists and project managers to ensure risks are identified and mitigated. Change managers focus on assessing the risks to the organization as well as the readiness of the stakeholders to embrace the change and avail its benefits. As a result, it is imperative that

the change manager understand and be aware of the role of project managers in terms of benefit realization and, the link between the project delivery plan and the planned benefits.

As seen in the analysis of benefits management, the terminology used may be similar in both books of knowledge, however, the focus, context and practices vary. The CMBok is evidenced to be more holistic and incorporates the role of the project manager in various knowledge areas, encouraging the change manager to work alongside the project manager.

Another similarity identified is developing the team and rewarding and recognizing teams. Analysis shows that project managers are required to develop team throughout the project life cycle using techniques suggested in the PMBoK, section 9.4, page 336. Some suggested techniques are team building, conflict management collaborative problem solving and enhancing their technical skills to deliver the project, amongst others.

The CMBok does not have a knowledge area dedicated to managing teams. Change management requires coaching, mentoring, and providing support to the change team and the entire organization across the project lifecycle. Various practices are identified across the 13 knowledge areas. Some practices are coaching and mentoring and providing support at all levels of the organization, understand the organizational culture and develop plans to manage the change accordingly, coordinate with specialists and HR and deploy appropriate rewards and incentives on an ongoing basis, monitor and measure them to ensure they remain effective (page 152, CMBok 1st edition).

Another example is manage communications, where project managers practice managing communications between the team and stakeholders, whilst change managers manage communication and engagement, where they maintain communication throughout the change initiative, with a deep focus on ensuring the key messages are communicated in the right manner at the right time to the right audience, keeping the emotional impact of change in mind, with the objective of reducing resistance and embedding the change.

The practices may be similar between the two professions; however, the focus and context are different. Such similarities may come across as common competencies, however, it is evidenced through the two books of knowledge and change managers focus on building relationships and utilize that to make the change a success, whilst project managers focus on the technical aspects of the project ensuring deliverable meet the required quality and scope and are delivered on time.

The next section brings this chapter to a close by discussing the findings and exploring its linkage to paradoxes.

5.3. Discussion

The exploratory study of the differences and similarities between the knowledge areas of the PMBoK and the CMBBoK shows that tensions can be created as a result of ambiguity within the knowledge areas. There are clear areas of differentiation, which could possibly be integrated with ease. Such clear distinctions would not create tensions as the roles, responsibilities, processes would be clear, thus facilitating interprofessional collaboration. Although, the six enablers of interprofessional collaboration, mentioned in chapter 3, must be in place for project and change managers to work together. The sections above analyzed the similarities and differences in the knowledge areas with the aim to detect paradoxes in the project and change management professional books of knowledge.

The analysis of the two books of knowledge allows the comparison of practices, however, where there are similarities, there are yet differences. It was not a matter of comparing apples and apples. Hence as a first step, the data was segregated into what are the differences in the knowledge areas and what are the similarities. Based on that, further analysis was conducted on the practices. Because there isn't a like for like comparison, and neither is there existing work conducted that can be utilized as a base; an interpretivist approach is utilized to explore the existence of paradoxes.

The knowledge areas may have utilized the same terminology, the practice seemed the same, however, when further analysis was conducted, it was evidenced that the focus and context were often different or the CMBBoK went into more detail compared to the PMBoK specifically when it was related to stakeholder management, communication, developing and managing teams, facilitation and sustaining the change, amongst others. The PMBoK is more project delivery focused, where several knowledge areas were purely focused on managing the project such as performing integration change control, closing a project, managing the scope, quality, schedule, procurement of the project and managing project risks.

This discussion confirms that the practices within the books of knowledge are vague, they do not provide the required clarity, guidance, methodologies that project and change managers must follow to manage 2nd order change initiatives. Both books of knowledge claim to be guidance, providing flexibility to each profession to identify the best methodology or model to adopt when managing the change initiative. The two bodies of knowledge have not attempted to co-develop the books of knowledge used in this study.

The CMBBoK touches on project management as a knowledge area and encourages change managers to work with project managers, however, none of the PMBoK knowledge

areas discuss change management or change managers or the requirement for project managers to work with change managers. They are both different in their thought process and the direction they provide to the members of the profession. It is evidenced in literature that there is a need to integrate both project and change management and that project and change managers as two professions must work together to make projects successful (Kuzmanova and Alexandrova 2017; Hornstein 2015b; Pádár et al. 2017).

The CMBok requires effective change managers to possess skills, competencies, and knowledge of areas outside of change management (refer to knowledge areas 8, 12 and 13), which gives change managers a more universal, broader mindset and appreciation for other professions. The CMBok ensures that change managers have the knowledge of the key interprofessional collaboration enablers mentioned in chapter 3. The PMBoK on the other hand, is focused inward, on the project management profession. None of the 10 knowledge areas mentioned in the PMBoK discuss change management, change managers, need for collaboration with change managers or other subject matter experts that do not contribute towards the project or are part of the project team. Such practices can cause tensions and paradoxes of learning to surface, specifically in situations where, the organization structure requires the project managers to manage change, and due to the lack of training and knowledge, effort is required to learn new knowledge, adjust and change practices thus building upon and destroying the past to create a new temporary future to meet organizational objectives.

As stated above, analysis of the knowledge areas identified several examples where on the surface the knowledge areas seemed similar, but the detail practices showed that the focus and context were different. An example being project resource management, PMBoK knowledge area discuss developing the team and the CMBok knowledge area Education and Learning Support discuss the development of all individuals affected by the change. The former focuses on team development to ensure project success, whilst the latter focuses on all layers within the organization to ensure the new state is adopted. CMBok places emphasis on the knowledge required by the effective change manager in order to facilitate this. Moreover, a separate knowledge area is dedicated to embedding the change through knowledge area sustaining systems. It is important for each profession to share the knowledge of their profession and understand what each profession practices to obtain clarity and reduce misunderstanding. Without clarity in who does what and how it should be done, tensions can arise, leading to various paradoxes surfacing as a result of unclear process. For instance, paradoxes of performing can surface where project managers are expected to achieve project

success and at the same time not possessing the skills required to ensure the adoption of the change.

As seen in the differences section, clear distinctions in the practices in the PMBoK and CMBok provide room for the two professions to work together, giving change managers an opportunity to bring the people side of change perspective within the project lifecycle. For instance, knowledge area process, Project stakeholder management from the PMBoK and Stakeholder strategy from the CMBok. How this is to be done, is not clearly provided by the PMBoK or the CMBok, and the practice is left to the project managers and change managers themselves. Such a situation, due to lack of clarity on the how and when, coupled with lack of authority, governance or structure and a positive culture, can give rise to tensions between the two professions thus challenging interprofessional collaboration.

Change management as a term is used in both project and change management books of knowledge. However, they mean different things and are used in different context. Should the two bodies of knowledge, work together, share knowledge and information, utilize common terms and perhaps, identify appropriate roles and responsibilities in the context of change management and clearly define methods of working together, it could facilitate interprofessional collaboration to make change initiatives successful. Without clarity in terms of roles and responsibilities and processes and approach to follow, between the two professions, tensions can arise should the different approaches or methods used intercept at some point. Moreover, paradoxes of performing may surface as decision of the approach or methodology to be used is made on a case-by-case basis depending on the type of project. If knowledge is shared, and each profession understood what change management meant to both, it would reduce tensions, and with collegial behaviors in play, the two professions can work together to complement the work they do focusing on one objective of making adoption successful.

As evidenced in literature, 2nd order change projects are complex by nature. Ambiguity and uncertainty in the process and practices can exacerbate the complexity of such projects as they are managed in an environment in which management, experts, employees and external stakeholders need to collaborate to achieve a shared goal. Such complexity along with ambiguity can cause tensions in management and operations of the project as well as ensuring that the change is adopted, embedded and sticks. However, such tensions can be reduced through trust between the various stakeholders, project and change managers. Moreover, trust enables knowledge sharing and as a result decreases uncertainties (Salmimaa et al. 2015). It is

evidenced in literature that an understanding of the sources of ambiguity and tensions is required to enable interprofessional collaboration leading to successful close of projects.

The analysis of the 13 knowledge areas of the CMBok indicates that effective change managers are taught, encouraged and required to 1) have knowledge outside of the change management discipline, 2) possess soft skills and interpersonal skills 3) be able to interact and communicate with diverse people groups, professions and subject matter experts 4) show flexibility in their methods of working to ensure inclusion of stakeholders at all levels within the organization and outside the organization and may more. They possess the skills and, required behaviors to facilitate interprofessional collaboration. They have an understanding of the organization structure, culture, processes, leadership, values etc. that would enable them to work within the environment or change the environment to ensure change success.

Paradoxes of organizing may surface as a result of the practices taught by the books of knowledge. The PMBoK practices place project managers in a project leadership role where they are taught to lead more than collaborate, whilst in practice, 2nd order changes are complex and require collaboration across diverse range of stakeholders within and outside the organization. In such situations, tensions may arise where project managers are directed to lead but are required to collaborate and make decisions based on consensus from all stakeholders. Research has shown that project managers believe that change managers should report to them, whereas change managers believed it should be joint responsibility without direct reporting to the project manager (Pollack and Algeo 2014b). Such beliefs come from taught practices and value systems established by the bodies of knowledge. These cause tensions and are a cause for paradoxes of organizing to develop as the tension between control and flexibility rises.

There is a dedicated knowledge area 8 on project management, which evidences the importance of project management in change management. However, this is not evidenced in the knowledge areas of the PMBoK. The value system instilled by the bodies of knowledge plays an integral role in either facilitating interprofessional collaboration or making it challenging. As seen in chapter 3, value systems can cause tensions between professionals, and in this instance, given that the PMBoK is very project manager / project management and project focused, through its knowledge areas, does not give an opportunity to project managers to develop the interpersonal skills required to make interprofessional collaboration a success. Based on the extensive knowledge requirements of the CMBok, it would be presumed that paradoxes in change management would be less apparent. Effective change managers would have the ability to recognize the existence of paradoxes and would be able to manage the tensions as they would possess the required skills to do so.

In summary, it can be concluded that the CMBok practices encourage collaboration with other specialists, professions, and all employees across the organization. The practices embed collegial behaviors and require effective change managers to collaborate. The practice of change management, if linked to chapter 3, encourages the characteristics of interprofessional collaboration. Moreover, their certifications are based around competencies of change managers, which promote collegial behaviors. Change managers are taught to identify methods of working together, specifically with project managers as the CMBok understands and recognizes the need for both project and change managers to work together.

This has not been evidenced in the PMBok, which is very project focused and guides project managers to practices of project management, whilst encouraging them to collaborate within the context of making projects successful. The focus of both practices is different (PMBok being project oriented and the CMBok being holistic, and organization focused), whilst some practices are similar in nature, but bearing a different perspective. Paradoxes of belonging can surface due to the tension between the individual and the collective and between competing values, roles and memberships (Smith and Lewis 2011). Due to different focus and context of the two books of knowledge, project managers as individuals, may hesitate to collaborate with change managers due to their sense of belonging within their profession and wanting to stay within the bounds of the practices taught by the PMI. This can be overcome with the support of management who can provide an enabling environment for interprofessional collaboration.

Paradoxes of performing can arise throughout the life cycle of the project based on the practices evidenced in the books of knowledge. 2nd order change projects are complex and usually involve several diverse stakeholders who may be seeking divergent organizational success giving rise to multiple and competing goals. Collaboration is a theme evidenced across all knowledge areas of the CMBok and based on the analysis of the practices, change managers are best placed to recognize such paradoxes and mitigate them due to the teachings of the CMBok and the knowledge and competencies required of change managers.

Change management as a profession professes more of the characteristics of professionalism and collaboration and promotes collegial behaviors. Might it be that the practices taught by the PMBok encourage the opposite amongst project managers thus instilling a culture of individualism and belonging to the discipline of project management and the PMI, a sense of power and authority when managing a project, and perhaps a more short-term, traditional approach to managing projects? Could it be that the tensions are caused more

by project managers compared to change managers due to their lack of flexibility when managing projects due to the practices instilled in them through the books of knowledge?

Perhaps if the books of knowledge worked together to identify how the practices can aligned to facilitate the interprofessional collaboration between project and change managers, providing sufficient guidance and methods to both, conflicts would not arise and project and change managers could work seamlessly.

Knowledge sharing is key to understanding what each profession does; such clarity allows for collegial behaviors where both professions will find a way to work together in practice. The CMBok has made effort to include a knowledge area called project management and encourages effective change managers to work alongside project managers to ensure project success. Perhaps, the PMBoK can do the same in its book of knowledge, and furthermore, they should work together to identify integrated practices that benefit both professions.

Specific paradoxes were not apparent through the analysis of the PMBoK and CMBok. However, effort has been made to interpret the practices and involve thought through identification of tensions leading to various paradoxes. It is confirmed through the analysis of the practices, that there is lack of clarity in the approaches and roles and responsibilities of the two professions during the life cycle of a change initiative. It is evident that the two books of knowledge have been written in isolation, each providing guidance to their profession. When required to work together, there is little guidance on how the two professions should collaborate. Due to the lack of guidance, it now lies on the project and change managers to make the collaboration work in practice. Over and above, the organization and leadership need to provide the right environment, structure, culture, governance etc, as seen in chapter 3, to enable interprofessional collaboration. In addition to that, the individuals themselves need to display collegial behaviors to make interprofessional collaboration work.

Where there are tensions, there is possibility of paradoxes arising. As discussed previously, project managers and change managers have ambiguity in practices and approaches to managing change initiatives (Pollack and Algeo 2014a; Crawford and Nahmias 2010). As stated by Smith and Lewis (2011) “tensions are inherent and persistent and depicts how purposeful and cyclical responses to paradox over time enable sustainability”. Embedding the change in the business can be achieved by managing tensions of an organization, including tensions between experts and teams (Salmimaa et al. 2015).

This chapter concludes that paradoxes can arise due to the practices in the bodies of knowledge due to ambiguity in activities, roles, responsibilities, and approaches. The PMBoK

practices are more traditional, linear, and technical, focusing on the members of their profession, the project manager and project team. Such practices are a reflection of the value system of the body of knowledge, the PMI. These instilled values and belief system of community and self that a project manager learns, can cause conflict when it comes to interprofessional collaboration, as they do not encourage collaborative and collegial behaviors. In contrast, the CMBok practices are more holistic and instill collaborative value system within change managers. They are probably more likely to manage tensions better than project managers and promote interprofessional collaboration.

6. Study summary and discussion

6.1. Introduction

This chapter summarizes the exploratory study undertaken to understand the social and human aspects involved in the interaction of the two professions, namely, change and project managers, using the constructs of professionalism, collaboration, and collegiality. It has been identified in literature that paradoxes can be barriers to collaboration. The study explores the application of this specifically to collaboration between project and change managers. The first part provides an overview of the study undertaken and a discussion of the findings, followed by contribution to knowledge and limitation. It aims to integrate the previous three chapters. The six key enablers are required for interprofessional collaboration; without which, as seen in chapter 5, paradoxes can rise increasing the challenges project and change managers face during change initiatives.

Various findings from the chapters covered in this document are summarized to illustrate once again the motivation behind the study. Literature has evidenced the need for integration between project and change management. Attempts have been made to identify the competencies of project and change managers, which resulted in findings similarities. The practitioner community has recognized the need for the two professions to collaborate and have attempted to work together on change initiatives, with little or no guidance from the books of knowledge or academia. Moreover, literature has evidenced that there is need for more than expert knowledge for the two professions to collaborate. Despite of the well-established fact that collaboration is required between project and change managers, as mentioned in chapter 1, they fail to collaborate and there is conflict and rivalry between the two professions. This is a paradox in itself, where there is recognition of the need for integration yet very little is being done to make it happen successfully.

The motivation behind this study was to understand the reasons behind the rivalry between project and change managers and despite of evidence in literature that there is a need for integration between project and change management, there is little evidence of it resulting in 2nd order change initiatives continuing to fail. One of the key reasons identified in literature was around people and social issues. This prompted the study of interprofessional collaboration between project and change managers using a paradox lens. Can paradoxes be detected in collaborative contexts in which project and change managers work and what paradoxes can be detected in case studies of project and change management?

Very few studies provide such analysis of issues and tensions in relationships between project and change managers. Without an existing base in literature to build on, this has been an exploratory study of the dynamics between project and change managers to understand why interprofessional collaboration between the two is difficult. Paradox theory is used as the underlying basis for the study. The study was designed to answer the following questions.

- Can paradoxes be detected in collaborative contexts in which project and change managers work?
- Can paradoxes be detected in the project and change management professional books of knowledge?
- What paradoxes can be detected in case studies of project and change management?

The study begins with literature review around three constructs of professionalism, collaboration and collegiality. The key characteristics and core values of the three constructors are similar and interrelated. These provide the basis and a deeper understanding of the challenges in interprofessional collaboration. Six key enablers are identified as a result of the literature analysis. The literature analysis section explores the paradoxes that may surface as a result of inadequacy or absence of the 6 key enablers. The six key enablers are namely, defined roles and responsibilities, an enabling structure to make the projects successful, communication and knowledge sharing, identification of where the practices can be integrated, and a positive culture supported by the organization.

6.2. Discussion

Paradoxes, are contradictory yet interrelated elements that exist simultaneously and persist over time (Smith and Lewis 2011) and are prominent during organizational change (Lewis 2000). Those leading the change and those required to change experience tensions between the old and the new because they are required to learn and adopt the new way(s), whilst at the same time conducting business as usual, hence a contradiction between need to change and adapt, and to maintain order and stability (Smith and Lewis 2011). The employees within the organization are required to deal with the change whilst at the same time maintain the current business as usual and related productivity. This can be a case of paradox of learning and organizing that employees go through during the change process, moreover it can lead to paradox of performing. Such tensions can increase the resistance to change.

There is evidence in literature of tensions associated with the complexity of setting goals and defining project success (Ospina and Saz-Carranza 2010). These are activities conducted early in the project life cycle and are associated with project planning and change

management planning. This activity requires both project and change managers to work together to define project and organizational goals, plan benefits and ensure linkage with strategic objectives. Without collaboration between the two professions, the tensions may give rise to paradoxes of organizing and performing, due to competing goals and divergent success criteria. Moreover, the more the professionals stress on their core capabilities, the more inflexibility is demonstrated (Lewis 2000) resulting in reduced collaboration, increased tensions and lack of new innovative practices. The very basis of organizational change is innovation, an enabler for an organization, which may lead to its downfall due to lack to collaboration between project and change managers.

In the PMBoK, the project managers are not provided with any guidance on how to manage resistance, however, in the CMBok, change managers are guided through managing resistance. Keeping such tensions in mind, it is necessary for project and change managers to work together collaboratively to ensure all stakeholders within the organization understand the change and adopt the change. Considering this requires the management of several stakeholders, such situations need to be managed very carefully. Literature has demonstrated that such paradoxical tensions might be due to lack of understanding and acceptance of the paradoxical nature of organizational change itself. If both project and change managers understood that organizational change itself is paradoxical in nature that gives rise to tensions, they may be better placed to recognize the tensions and deal with them accordingly.

Literature shows that defining 'who is involved' plays a significant role in successful collaborations (Huxham and Vangen 2000). Lack of clarity in roles and responsibilities may causes tensions creating one or all the paradoxes of learning, belonging, organizing, and performing. Paradoxes coexist. Paradox of learning causes tensions between known knowledge and new knowledge that needs to be learned in order to collaborate, paradoxes of organizing surface in such situations as interprofessional collaboration creates competing, complex designs and associated processes aimed at achieving a common desired outcome (Smith and Lewis 2011).

Paradoxes are associated with organizational change. For instance, a change initiative that requires a change in process, creates tensions between following the processes as required by the organization and the need for flexibility in adopting the new processes. This paradox of learning requires individuals to understand the need for the change, the importance of the change and how to transition from current processes to future state processes without feeling a sense of conflict. Who is best placed to help the organization transition from current state to future state? The study directs the reader to change managers, who through the CMBok are

required to manage the change, the associated training, manage resistance, facilitate workshops for solution identification and issue resolution and implement sustaining systems to name a few practices. If such a role is unclear, then conflict would arise between project and change managers, thus creating challenges in interprofessional collaboration. Conflicting requirements can further generate the paradox of performing as expectations are not met and outcomes are not achieved.

2nd order change initiatives are complex and usually require either building on or destroying the old and creating something new. They usually affect the entire organization. In such cases the paradoxes of learning and performing may arise as the organization balances the change into future state whilst maintaining continuity in current business. This requires individuals to see how the change is connected with the old and to see the transition journey as well as the benefits of the new. Such a linkage allows the individuals to connect the future with the past, see the transition journey and be more ready to embrace the change. Who would be best placed to recognize such paradoxes and manage them accordingly? The study indicates that change managers are best placed to identify such paradoxes and manage them. The CMBoK provides guidance on managing the change. The core practice of change managers is managing the change, which includes managing resistance and ensuring not only the adoption of change but also the embedding of the change. In such a situation, should a project manager be required through the organization / project structures to lead this aspect, paradoxes of learning and performing will surface in addition to the paradox of organizing. The project manager will be required to learn new knowledge of another profession and manage the expectations of several stakeholders whilst performing the role of a project manager.

Paradoxes are not always a hindrance, sometimes paradoxical tensions can initiate a change (Lewis 2000). For instance, during a change initiative, the business themselves may initiate a change in their existing processes on a continual basis in order to balance the tension between following current processes and need for flexibility in adopting future state processes. Who would be best placed to recognize positive influences of paradoxes? Individuals create and perceive contradictions in ambiguous, changing environments (Sutherland and Smith 2011), hence a paradoxical lens is a useful tool to study conflicts and tensions in organizational change initiatives. Smith and Lewis (2011) suggest that individuals can make sense of paradoxes, but they need to be able to recognize them, accept them and integrate them. The study implies that effective change managers are best placed to work with the organization to accept paradoxes and manage them accordingly.

In summary when it comes to managing the change and making the change stick, the study proposes that the change managers take the lead and work closely with project managers to ensure alignment. This would be a win-win situation for both.

Moreover, literature analysis concluded that the six key enablers are required to make interprofessional collaboration successful. Without one or many of the key enablers, tensions arise and paradoxes surface, namely, paradox of learning, paradox of belonging, paradox of organizing and paradox of performing. Paradoxes coexist, so in several instances where the analysis may mention one paradox, it must be noted that others may surface as well. Literature has evidenced ambiguity in practices and approaches to managing change initiatives (Pollack and Algeo 2014a; Crawford and Nahmias 2010). Such ambiguities in roles and responsibilities create tensions which in turn give rise to paradoxes. Organizations play a role in reducing tensions and conflicts. It is evidenced in literature that collaborations to work successfully, organizations must identify the process to encourage professionals to exchange resources and coproduce activities (Ospina and Saz-Carranza 2010).

Similarly lack of communication and knowledge of the practices of other professions cause tensions and conflicts. Such tensions can arise during collaboration between project and change managers because of ambiguity in practices and due to the silo behaviors of the professions. Specifically, the project management as seen in the analysis of the PMBoK, where there is little to no mention of collaboration with change managers specifically. Paradoxes of learning were evidenced during case analysis specifically when tasks were changed during the life cycle of the project requiring the project team to learn new knowledge and unlearn what they already knew. Similarly, the analysis of the books of knowledge evidenced cause for learning paradoxes to surface as a result of ambiguous roles, responsibilities and guidance provided in the practices by the PMBoK and the CMBOK.

The case study analysis utilized several practitioner research to explore the relationship between project and change managers and, whether paradoxes existed in the cases studied. It was evidenced that tensions existed between project and change managers resulting in various paradoxes. It was evidenced that paradoxes coexisted and were interrelated. Without the six key enablers identified in the literature analysis, conflicts and tensions arose. It is important to be reminded that both project and change management are regarded as separate professions, with their own value system, memberships and sense of community through their bodies of knowledge and practices that are taught in the books of knowledge and certification processes. Without the six key enablers in place, interprofessional collaboration is challenging.

As evidenced in the case studies, paradoxes of learning, belonging, organizing and performing surfaced in various circumstances. And the main reasons linked back to the six key enablers identified in the literature analysis, which are key to managing tensions and paradoxes. Through the case studies it has been evidenced that change is complex and more difficult to achieve than anticipated. There were some cases where the tensions were identified, and measures put in place to mitigate the tensions. It is difficult to find practical examples of organizations to have fully attained the organizational change they originally set out to achieve. However, there were some cases where corrective action was taken to obtain project success.

It has been evidenced in chapter 4, that clarity in roles, structure and authority are required to allow for interprofessional collaboration. As witnessed in the case study analysis, when the CEO took ownership of the project, assigned a C level sponsor, identified a project and change management structure, openly communicated the project details and the roles required and provided the required authority to the sponsor and the teams to take the project forward. It resulted in successful implementation of the technology roadmap. Additionally, communicating and encouraging joint problem solving facilitates reduction of conflict amongst individuals. It gives them an opportunity to not only share their expert knowledge, but also to listen and gain knowledge from other project team members. Problem solving allows participants to focus on one goal thus allowing individuals to focus on positive outcomes rather than focusing on the conflict. Case analysis demonstrated that, the solution to interprofessional collaboration was to enable focused, open communication and joint problem solving. The result was that the project team focused on keeping conflict at the task level and not at the relationship level, they embraced conflict and leveraged on their differences to produce innovative solutions, thus turning conflict into enabler of developing collective competence and understanding (Ruuska and Teigland 2009).

The knowledge areas within the books of knowledge published by the PMI and the CMI were compared in chapter 5, to explore whether paradoxes could be detected within the practices of the PMBoK and the CMBBoK. Several similarities and differences have been identified. However, as described in the previous chapter, the similarities themselves have differences mainly in context and area of focus. For interprofessional collaboration to work, the foundations of the working relationships need to be identified, detailed, documented and provided along with strong communication strategies that the collaborating parties need to adhere to (Hughes et al. 2017). Without such techniques and tools in place, the possibility of tensions arising is high, which can eventually lead to paradoxes.

The two books of knowledge, namely the PMBoK and the CMBok were analyzed to find out whether paradoxes can be evidenced in the practices taught. The PMBoK asserts that it is a guide and does not provide methodologies or approaches to managing projects. Project managers are encouraged to identify the best approach or methodology that meets their needs. The CMBok asserts the same but provides guidance on the types of models and methodologies change managers should utilize when managing change.

One of the key findings from the analysis in practices is that the PMBoK is more inward focused; as in focuses on practices, tools and techniques that project managers must utilize to achieve project success. The knowledge areas are more technical and within the bounds of the project. For instance, the PMBoK knowledge areas are Project Integration Management, Project Scope Management, Project Schedule Management, Project Stakeholder Management amongst others. All guidance is around managing the project and aspects of the project. Literature review in chapter 3 has evidenced that project management is a much older profession compared to change management and its evolution journey has been more linear and systematic focusing on techniques such as CPM/PERT and work breakdown structures. Only recently has project management introduced a book on organizational change management thus recognizing change management as an aspect of change initiatives.

In contrast the CMBok teaches the application of effective change management practices, including behavioral change models and managing employee resistance to change. It includes knowledge areas such as managing benefits to ensure change managers are guided in terms of ensuring the change delivers value. Change management is a fairly new profession which is considered an off shoot of organizational development profession. The CMBok guides effective change managers in delivering change using a change management perspective, where the theories and concept behind change are discussed. The CMBok is more inclusive as it provides project management guidance to change managers through a dedicated knowledge area called project management. The CMBok recognizes the role of the project manager and important of working alongside them to manage change initiatives. It requires effective change managers to have the knowledge of project management. In addition to this, the CMBok has a knowledge area dedicated to organizational considerations, which includes understanding what other professions do and leveraging the required expertise to support change initiatives.

Whilst the PMBoK focuses on closing projects, the CMBok focuses on transition management from the old state to the new state using various techniques, one of them being a knowledge area called facilitation and the other being personal and professional management.

Effective change managers are required to understand employee resistance, behaviors and techniques required to manage tensions and conflicts. The sustaining systems knowledge area in the CMBoK provides guidance to ensure that all aspects of the change are understood and adopted. This includes ensuring that the organizational environment in which the change is being implemented supports the incorporation of the change.

As mentioned previously, paradoxes are associated with organizational change. The study evidences the tensions between the two professions in the practices taught by the books of knowledge. Lack of descriptive precise methodologies causes ambiguity, which in turn causes tensions in interprofessional collaboration. Both bodies of knowledge teach different value systems, where one is more focus on the project management community and project management practices, whilst the other focuses on inclusion and working collaboratively with diverse stakeholders and experts throughout the change initiative. Such value systems and practices advocate different types of behaviors. Research has demonstrated that project managers are of the opinion that change managers should report to them, whilst change managers are of the opinion that they should work collaboratively together. Such value systems can lead to paradoxes. For instance, project managers are more power focused, seeking authority in leading projects and making decisions. When placed in an organization structure that requires them to collaborate with change managers on a change initiative, it will create conflict as power will be more distributed requiring collective decision making. This can cause paradoxes of organizing and performing to emerge. Another example could be individualism vs collectivism. For instance, project managers are more focused on meeting project objectives which are also usually their individual goals, however, a 2nd order change initiative would require collective goals and ensuring that the project team achieves the overall objective together. Moreover, for leadership, a change initiative is considered a success after it transitions into future state and is embedded within the organization. Such contradiction may lead to paradoxes of belonging, organizing, and perhaps performing.

Furthermore, there are clear distinctions in the books of knowledge between what project managers and change managers are guided to do. Within these differences, the various points of integration are not identified, thus placing the project manager and change manager to identify the areas of integration and iron out the details of how the inputs and outputs will be provided and utilized. The interpretation in this study is that such ambiguity can cause tensions if the two professions do not identify where within the practice must they collaborate. Is that the case in practice? Are project and change managers able to manage a collaborative

relationship when it comes to these distinct practices? These are questions that can be addressed through further research and are beyond the scope of this study.

Despite of evidence in literature that there is a need for integration between project and change management, the bodies of knowledge themselves have not made attempts to work together to identify integrated practices. Should such guidance be provided, it would guide project and change managers to work collaboratively within organizations and moreover, influence management to ensure that the six key enablers are established within the organization.

Project management as a profession has worked towards creating its boundary-work to promote its philosophy, importance which now serves as a framework for project management world view. Boundary-work intensifies the differences between rival professions thus promoting expansion of the profession's authority (Hall 2005); as an example where Project Management Institute (PMI) has released content on organizational change management as a competency requirement for project managers. This is the core competency of change managers. The PMBoK and the book released on change management are developed in isolation without contribution from the CMI. This can cause further tensions in collaboration creating paradoxes that might not be known, leading to the inability of the professions to identify ways of working together. It is commonly acknowledged in literature that project and change management are two distinct professions, conducting different activities and the skills required to practice project and change management are different (Algeo and Pollack 2014). This is also evidenced in the two books of knowledge where some competencies are addressed. This study does not explore the skills and competency requirements of project and change managers, as it focuses on the practices only. This is an area for further research.

The similarities identified in the practices between the PMBoK and the CMBoK reinforces the need for integration between project and change management practices. Practices such as managing stakeholders, communication, developing, recognizing and rewarding team, managing conflict amongst others, are mentioned in both the PMBoK and the CMBoK. Both are expected to conduct these activities, however, they are addressed in different context and have a different focus. Whilst the PMBoK guides project managers to manage the project team and to manage project stakeholder to ensure project deliverables are accepted, the CMBoK guides change managers to mentor, coach and support all levels of the organization for which they are required to have a deep understanding of the organization culture. Effective change managers are required to link organization culture, structure, leadership and other aspects to the effective management of change initiatives. Moreover, effective change manager is guided

to work alongside subject matter experts and human resources to identify training needs and manage training to ensure the end state is adopted. There is agreement in literature that the ambiguous and complex nature of collaboration generates tensions and that there is little research on how these tensions can be managed (Ospina and Saz-Carranza 2010). Collaboration is the nucleus of change management as evidenced in the CMBok. This leads to the interpretation that change managers are well placed to lead and facilitate interprofessional collaboration compared to project managers. Are project managers the cause of challenges in interprofessional collaboration? This concept can be studied further to validate.

6.3. Summary

Based on the data analyzed, specifically the practices taught through the books of knowledge, the study concludes that effective change managers are better placed to display collegial behaviors and facilitate interprofessional collaboration. Collaboration is a theme that is seen across the CMBok and several knowledge areas discuss collaboration. Moreover, the CMBok recognizes the role of the project manager and encourages the effective change managers to work alongside them to make change successful.

Professions often struggle to define their boundaries themselves. As an example, with the evolution of change managers into a profession, and their recognition as a requirement for transformation projects, has caused conflict and strain between the two professions (Pollack and Algeo 2014a; Crawford and Nahmias 2010). The two bodies of knowledge, PMI and CMI, could aid in providing clarity through their books of knowledge.

It can be deduced from the literature that project and change managers require different competencies to do different things on a 2nd order change project. It has also been evidenced through the study of the CMBok and PMBok, that the bodies of knowledge have different objectives and provide guidance in different contexts and have different focus. As seen in chapter 3, it is further implied that there are organizational factors which impact the success of a project, such as organizational structure, culture, decision making authorities, leadership, clear processes etc. There are several factors at play that challenge interprofessional collaboration. Hence not an easy topic to resolve through the limited scope of this dissertation and requires further deeper study specifically through primary research.

Literature states that processes and management help address collaboration challenges (Ospina and Saz-Carranza 2010). It must be noted that not all interprofessional collaboration challenges and conflicts can be resolved by practicing project and change managers themselves. The organization must support the collaboration through supporting structures,

enabling culture and environment with clear roles, responsibilities, governance, processes, authorities amongst others. This requires providing sufficient resources and tools, appropriate culture and governance and practical, implementable guidance to project and change managers that are tried and tested, just increasing their legitimacy and probability of adoption.

7. Conclusion

7.1. Introduction

This concluding chapter summarizes the study based on the previous 6 chapters. The researcher hopes to stimulate thought in this area and invoke further investigation into interprofessional collaboration between project and change managers. The rest of this chapter presents critical evaluation, recommendations, limitations and closing remarks.

7.2. Discussion

The thesis sets out to explore the challenges of interprofessional collaboration between project and change managers and investigate the reasons for rivalry between them. Everyone agrees that integration between the two professions is a must, however, very few have identified the solution. This study was undertaken to explore the challenges, but from a behavioral perspective. It aims to understand the limited collaboration between project and change managers using a paradox lens. To answer the three research questions below, an exploratory study was conducted using qualitative research of secondary data.

1. Can paradoxes be detected in collaborative contexts in which project and change managers work?
2. Can paradoxes be detected in the project and change management professional books of knowledge?
3. What paradoxes can be detected in case studies of project and change management?

It began with an understanding of the evolution of project and change management, professions and professionalism, collaboration and collegiality and finally integrating them within interprofessional collaboration. As a result of this literature analysis, six key enablers were identified, 1. Roles and Responsibilities 2. Knowledge gap 3. Points of integration through practices 4. Value systems 5. Enabling organization structure and 6. Positive culture. The analysis showed that the three key constructs of professionalism, collaboration and collegiality are inter-related.

Further analysis was conducted on practitioner exemplars using case studies and paradoxes of learning, belonging, organizing and performing were identified. The analysis shows that tensions arose due to lack of the six key enablers.

Chapters 3 and 4 present the requirements for interprofessional collaboration and answer the research questions 1 and 3. The study of knowledge provided by project and change management institutions shows that paradoxes can be found in the books of knowledge, thus answering question 2.

It must be noted that the thesis is an exploratory study and may not include detailed analysis. The intent is to take a holistic approach to understand the linkage of the three constructs, apply them to project and change management professions and to verify the existence of paradoxes in the context of project and change management. It provides the basis for further study in any of the areas identified within this study. It provides a one-of-a-kind study in the space of project and change management, which is insufficiently explored within academia.

With the three research questions being answered, the study has shown that paradoxes exist. It is not a matter of removing them but managing them which can lead to facilitating interprofessional collaboration. The next section provides some recommendations on managing paradoxes.

7.3. Recommendations on Managing Paradoxes

The integration of project and change management is a very broad topic, as the integration needs to take place at an organization level, practical level with defined roles and responsibilities, governance level and at an individual level. If the project and change managers themselves do not want to collaborate through collegial behaviors, change initiatives will not meet the required outcome. This study has explored the relationship between project and change managers through a paradoxical lens. Tensions cause conflict which in turn create challenges in interprofessional collaboration. However, there is sufficient literature on managing paradoxes which can be studied further and applied to the collaboration between project and change managers. As Lewis (2000) states, paradox management entails exploring, rather than suppressing. Paradox theory, at its core, presumes that tensions exist in complex system and they need to be recognized as contradictory yet intertwined and thus dealt with accordingly (Smith and Lewis 2011). Paradoxical tensions cannot be eliminated but rather need to be addressed appropriately (Vangen 2017) by first accepting the paradoxes, which means

learning to live with the paradox (Lewis 2000). Second is to recognize and accept the conflicting tensions (Smith and Lewis 2011).

Paradoxes emphasize inconsistencies, which then trigger anxiety due to lack of clarity and control in individuals who must make sense of underlying tensions in order to identify how to act in practice. The way forward for some would be to look for ways to regain clarity and control in their actions or not to take any action and avoid the tension (Vangen 2017).

There is ample research that discuss methods of managing paradoxes in different circumstances. None discuss management of paradoxes between project and change managers during a 2nd order change initiative. However, some of the methods mentioned in literature can be applied to this study. These are mentioned here as they link back to the six key enablers and are practices mentioned in the knowledge areas of the books of knowledge. It must be clarified that this is an interpretation of the researcher and application to the challenges of interprofessional collaboration. All of below have been referenced from Lewis, 2000.

Open communication is a means of managing paradoxes of learning (Lewis 2000) as confrontation may foster discussion between project and change managers and bring out divergent insights. Given the knowledge required of effective change managers, they are well suited to facilitate positive discussions leading to managing the tensions between the two professions. Implementation of appropriate structures, empowerment practices and governance are ways of managing paradoxes of organizing. Highly effective leaders who promote a balance between consistency, stability and control, passion, and courage (Lewis 2000) facilitate the management of paradoxes. Managing paradoxes of organizing promotes learning and creativity (Smith and Lewis 2011) which in turn leads to innovation. Establishing an enabling positive culture, where diversity is valued, and differing perspectives and capabilities are appreciated can help manage paradoxes of belonging. This allows for open communication without judgement, flow of information and knowledge sharing. Moreover, clarity in roles and responsibilities with a focus on who does what when and reducing discrepancies in power distribution and authority, help management paradoxes of belonging. Paradoxical tensions must be managed through strategies of acceptance and resolutions in order to promote sustainability (Smith and Lewis 2011).

7.4. Limitations of the Study and Future Research Opportunities

As stated in the previous chapters, this study is an exploratory study. It utilized secondary data for analysis. Throughout the study, areas of further research or knowledge gaps

have been identified. This section summarizes the limitations of the study and provides opportunities for future research.

The limitation of this study is that it is based on secondary data. However, utilizing this, the study has concluded that paradoxes exist thus challenging the interprofessional collaboration between project and change managers. There is opportunity for further study by conducting practice oriented primary research in organizations.

The study has been conducted across three areas; through literature analysis, case study analysis and analysis of the knowledge areas from the books of knowledge. This builds a foundation for understanding paradoxical nature of the collaboration between project and change managers. This provides opportunity for further guided study in each of the areas, where interprofessional collaboration between project and change managers can be studied.

Moreover, the study is limited to the exploration of the existence of paradoxes in the relationship of project and change managers. This provides an opportunity for further research into 1) validation of this through primary research 2) deeper analysis of other types of paradoxes that may exist 3) the cause of the paradoxes and 4) identify models that can be used in practice to manage such paradoxes.

A deeper study can be conducted in the similarities and differences in the practices of project and change managers using other books of knowledge and exploration into the required competencies of project and change managers.

All of the above will provide deeper insight into the study of interprofessional collaboration between project and change managers. Perhaps this can lead to the development of an integrated approach that can be utilized by both professions during 2nd order transformation projects.

7.5. Conclusion

Through literature review, the study establishes a) the interdependencies and integration of the three key constructs of collaboration, professionalism and collegiality b) the importance of having the six key enablers to facilitate collaboration c) the relation of the key six enablers with interprofessional collaboration and d) how paradoxes arise as a result of lack of the six key enablers (identified through case studies chapter 4). Paradoxes were seen in the context of interprofessional collaboration between project and change managers through the case study analysis.

It is recommended that practitioner project and change managers as a first step, become conscious of the existence of the six enablers and the relationship between professionalism,

collaboration and collegiality. They must work with the organization to ensure the six enablers are in place prior to beginning a change initiative. Secondly, both professions must focus on the common objective and find an approach with clear segregation of duties to achieve the objective. Third, they must be conscious of the characteristics of the three constructs and display those attributes and behaviors in order to create trust and facilitate interprofessional collaboration. Lastly, tensions can give rise to paradoxes, hence practitioner project and change managers must understand paradoxes, be cognizant of the existence of them in their circumstances and make determined efforts to manage the paradoxes.

This study has met its intended purpose and provided a base for further research and exploration into interprofessional collaboration between project and change management.

8. APPENDIX

Appendix I List of case studies used in the analysis in Chapter 4

Case ID number	Article name	Article authors	Article publication year	Description	Which paradox was identified in the case study, if any?			
					Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
1	Internal changes and project management structures within enterprises.	Eric Alsene	1998	Three recent internal change projects in large enterprises, where the project structure was hardly used, are studied (the transformation of a factory into focused factories, the institution of a succession program, the implementation of a new process control system in a new plant). Project structure is not used,	yes	yes	yes	

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				functional structure is used with the culture of the enterprise and the pressures towards conformity that exist there				
2	Prescriptions for managing change: A survey of their effects in projects to implement collaborative working between organisations.	David Boddy, Douglas Macbeth	2000	quantitative study of 100 companies - 46 succeeded and 54 failed in collaborative efforts of implementing supply chain partnering			yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
3	A roadmap for it project implementation: integrating stakeholders and change management issues.	Paul Legris	2006	Authors develop an integrated approach to IT implementation on the basis of research findings in the field of change management and IT implementation, coupled with lessons learned from the authors' field experience in change management. This approach is then piloted in two cases and is considered successful. It considers technical, project, and change management aspects, and			yes	

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				provides a roadmap of key factors to guide IT project leaders.				

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
4	A Comparison of Project manager and change manager involvement in organisational change project activities and stages	Pollack, Julien Algeo, Chivonne	2014	<p>Project Managers and Change Managers both contribute to the planning and execution of organisational change projects. However, it is not clear how these disciplines should work together to deliver these projects.</p> <p>Project Managers and Change Managers regard the contribution of both disciplines to different project stages and activities.</p> <p>An anonymous web-based</p>	yes	yes	yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				survey was used to collect data, and received 455 responses. The survey asked about respondents' perspective on the involvement of Project and Change managers in a list of project stages and activities relevant to the delivery of organisational change projects.				
5	Changes of organizations by projects. International	Roland Gareis	2010	The author has utilized literature, theory and case studies to show the relationship between change, processes, projects and programs and		yes	yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				how these are to be developed depending on the type of change (with a focus on transformational and radical new positioning)				
6	Connecting changes to projects using a historical perspective: Towards some new canvases for researchers	Lehmann, Valérie	2010	Conceptually, the management of changes as projects is a real challenge. A huge gap exists between conceptualizations in change management and in project management. A 100 articles / texts produced during the last twenty years were			yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				reviewed to study communication, change initiatives and change management. A historical perspective has been used to understand all divergent/convergent trends.				
7	People skills: Ensuring project success- A change management perspective.	Levasseur, Robert E	2010	Research based on systemic view of Organization development, also known as change management. The article examines project success rates, suggests reasons for projec failure, and	yes		yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				provides ideas for dramatically improving the odds of project success based on established chang management principles and processes				
8	Competencies for managing change	Crawford, Lynn Nahmias, Anat Hassner	2010	There is evidence of rivalry in the marketplace between Project Managers and Change Managers concerning who should be managing business change. This paper reports on research undertaken to explore the differences in approach and practice of Project, Program and			yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				Change Managers. The research utilizes literature review as a basis to conduct a comparative analysis of the competencies expected of Project, Program and Change Managers. Using that as a base, a similar comparison is conducted of practice across three case studies of organizational change projects.				
10	A Comparison of Project manager and change	Pollack, J. Algeo, C.	2014	Researches used anonymous web-based survey to collect data, and		yes	yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
	manager involvement in organisational change project activities and stages			received 455 responses to investigate the perspective on the involvement of Project and Change managers in a list of project stages and activities relevant to the delivery of organisational change projects.				
11	The need for integration between organizational project management and change management	Pollack, J	2016	It is argued that although there are differences between the philosophies underlying project and change management professions and these differences can cause tension, an integrated	yes		yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				approach involving project management and change management will be more effective in delivering organizational objectives than using either in isolation. The author does a comparison of the two professions based on literature review and concluded that there are differences that cause tension, but a balance is required between PM and CM approaches				

Case ID number	Article name	Article authors	Article publication year	Description	Which paradox was identified in the case study, if any?			
					Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
12	Bringing project and change management roles into sync.	Pádár, K., Pataki, B. and Sebestyén, Z.	2017	This is a systematic, bi-disciplinary meta-review that simultaneously studies relevant literature on roles performed during projects and changes. The purpose of this paper is to unfold how and in which domain(s) typical roles of the two disciplines correspond to each other.	yes			
14	Change Management and Project Management Integration.	Kuzmanova, Mariana Alexandrova, Matilda	2017	Empirical survey among Bulgarian business organizations operating in the IT sector was conducted to study the current status of project		yes		yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
	Leadership & Management			management and organizational change integration. It focuses on put issues with respect to organizational changes achieved through projects implementation – namely, project communications, leadership, and organizational culture. 108 surveys were utilized to conduct the analysis				
15	Managing Healthcare Integration: Adapting Project Management to the	Gordon, Aaron Pollack, Julien	2018	The article investigates practices used by project managers to make integration healthcare services projects	yes		yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
	Needs of Organizational Change			successful. Inductive analysis of data from integration of 10 healthcare networks was used. This study used an inductive research approach, involving multiple sources of data, including project records and documents, archives, and interviews.				
16	Managing public-private megaprojects: Paradoxes, complexity, and project design	Van Marrewijk, Alfons Clegg, Stewart R. Pitsis, Tyrone	2008	Megaprojects – large-scale, complex projects delivered through various partnerships between public and private organisations – often fail	yes		yes	yes

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Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
		S. Veenswijk, Marcel		to meet costs estimations, time schedules and project outcomes. This paper presents a theoretically-grounded view on what goes wrong by comparing the project designs, daily practices, project cultures and management approaches of two recent megaprojects in The Netherlands and Australia; The Environ Megaproject and North Side Tunnel Project (NSTP).				

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					Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
17	Ensuring project success through collective competence and creative conflict in public-private partnerships - A case study of Bygga Villa, a Swedish triple helix e-government initiative	Ruuska, Inkeri Teigland, Robin	2009	in-depth qualitative study of Bygga Villa, an e-government project partially financed by Vinnova, the Swedish Governmental Agency for Innovation Systems. As noted above, the purpose of Bygga Villa is to develop an innovative internet portal for “all information and services that are required for ‘The Andersson Family’ to effectively plan, build, and live in their house”. ³ The			yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				<p>project is organized as a Swedish consortium with a total of 16 organizations from industry, academia, and government (a triple helix partnership)</p> <p>Data was collected as semi-structured, thematic interviews as well as the analysis of secondary data during the period of May 2006 to May 2007.</p>				
18	The determinants of organizational change management success: Literature	Errida, Abdelouahab Lotfi, Bouchra	2021	This study identifies the various factors affecting change management success, as well as examine their relevance in	yes		yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
	review and case study			the case of a Moroccan construction company. It uses a combination of a literature review and action research. Specifically, an in-depth review of 37 organizational change management models was conducted to identify the factors that affect change management success				

Case ID number	Article name	Article authors	Article publication year	Description	Which paradox was identified in the case study, if any?			
					Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
19	The changing landscape of IS project failure: an examination of the key factors	Hughes, D. Laurie Rana, Nripendra P. Simintiras, Antonis C.	2017	Study through literature review of failing IS projects. The purpose of the paper is : first, to examine the key factors that influence project failure and an analysis of the major areas that can have a significant impact on success; and second, to explore some of the key aspects that have an impact on project management performance from the practitioner perspective and discusses the problems faced by			yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				organizations in the closer integration of change and project management				
20	Responding to competing strategic demands: How organizing, belonging, and performing paradoxes coevolve	Jarzabkowski, Paula Lê, Jane K. Van de Ven, Andrew H.	2013	This is a longitudinal real-time study that examines how a telecommunications firm copes with an organizing paradox between market and regulatory demands and how this paradox influences belonging and performing paradoxes for managers. In response to		yes	yes	yes

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				<p>new government regulation, Telco implemented a major restructuring plan that required them to grant fair access to all industry players on their distribution infrastructure. This case study documents how they did so and what effects this had in both short-term (up until now) as well as long term outcomes of the company's operations.</p>				

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
21	Creating a culture of partnership between project management and change management	O'Donovan, Gabrielle	2019	Author identifies ways in which Project Manager and Change Manager can collaborate to create synergies and achieve project success	yes	yes		yes
22	Issues of dual managerial roles in projects that are morphogenetic changes—Case studies	Pádár, K., Pataki, B. and Sebestyén, Z.	2016	2 cases were studied where technology roadmapping (TRM) was introduced. TRM is not only a tool for technologists but a company-level strategic planning method requiring inputs from several functions and is		yes	yes	

					Which paradox was identified in the case study, if any?			
Case ID number	Article name	Article authors	Article publication year	Description	Paradox of Learning	Paradox of Belonging	Paradox of Organizing	Paradox of Performing
				considered a 2nd order change project				

Appendix II Bibliography

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