THE UNIVERSITY OF
NORTHAMPTON

The Changing Role of the Chief Information Officer: An Inquiry into the
Demands, Constraints and Choices of the CIO

Submitted for the Degree of Doctor of Philosophy
At the University of Northampton

2012

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ABSTRACT

In recent years, the impact of global forces such as the increasing pace of technological innovation and the growing affluence of emerging economies has changed the role of Information Technology (IT). New sourcing models and increasing competitive pressure have had a significant effect on the way technologies are delivered and subsequently the role of the Chief Information Officer (CIO) has gradually been migrating from one of a support role to that of playing a crucial part in the execution of corporate strategies.

Whilst previous academic studies appear to be focused on the different competencies of the CIO, there have been few studies concerning how CIOs perceive their role and their future. Drawing on the various concepts from role theory, this PhD thesis constitutes the first known study aimed at presenting the role demands, constraints and the choices as perceived by the CIOs.

Using a qualitative approach, 25 semi-structured interviews were conducted with both CIOs and senior IT leaders. Empirical evidence highlights the critical importance of role choices in determining what type of CIO an individual will be. It has also enabled the development of two new CIO role models; the Abeyant CIO and the Transmuted CIO.

The Abeyant CIO model has been established to help understand the role enactment of CIOs who have not yet made the transition from a manager to a leader. In this scenario, it is asserted that individuals are the recipient of a role that was formulated by the role set, and that this ultimately determines the level of demands and constraints within the individual's environment. In contrast, the transmuted CIO scenario emphasises that individuals have been through a process of self-reflection and they have made conscious choices throughout their careers that have resulted in approaching the CIO role differently. It is theorised in the transmuted CIO scenario that individuals are not the mere recipient of role set expectations and that they are actively involved in role making.

I wish to express my gratitude to Judi Edwards, Sue Yoe, Anna-Maria Nenna and Guido De Simoni for opening a few doors on my behalf and introducing me to a number of participants.

Prof. Nada Kakadadse deserved her own paragraph in this acknowledgement section. For the last 8 years, Nada has been a true source of inspiration and this PhD thesis would not have come to fruition without her help, patience and dedication. I extend my gratitude to Dr Izabella Robinson, my second supervisor for her precious comments on the first draft of this thesis. Thank you.

I would like to thank my parents for their encouragement and for believing in me, my brother Dr Sandy Louchart, his wife Paula, my friends Simon, Danola and Fred for their continuous support over the years. I would like to thank Anne-Sophie and Dave for their kindness and for the warm welcome in their house during the occasional stay in Northamptonshire.

I am also deeply indebted to my partner Rachel for her help in finalising this PhD thesis and keeping me focused and motivated during the final stage of this project. Her wittiness, quirky sense of humour and unconditional kindness remind me on a daily basis that there is much to enjoy in life.

OUTPUTS AND DISSEMINATION

Refereed Book Chapter

Kakabadse, N. and Louchart, E., (2012)'Practical Approach to Elite Interviewing' in Kakabadse, A. and Kakabadse, N. (Eds.), *Elite: The Opaque Nature of Transnational Policy Determination*, Palgrave, London (forthcoming).

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CHAPTER ONE: INTRODUCTION

1.1   Chapter Introduction

This thesis explores the role and contribution of Chief Information Officer (CIO) with a specific focus on the perception that the CIOs have of their own role and responsibilities. The role of the CIO has changed drastically since the term was coined by Synnott (1981) and is expected to undergo further changes in the coming years (Nolan Norton Institute, 2001). Drawing on various leadership principles and theoretical models, the aim of this research study is to explore how the CIOs perceive the changes affecting their role and how they have adapted to these changes. This study aims to answer the call by McLeod et al. (1997) for an examination of how CIOs perceive their role and provides additional CIO role models as urged by La Paz et al. (2010); Edwards et al. (2009); and Peppard (2009).

The aim of this first chapter is to present information on the rationale behind this PhD thesis and to highlight the scope and objectives of this research study.

1.2   Research Rationale

There are a number of reasons that push researchers to undertake a research project such as a PhD thesis and the aim of this section is to reflect upon the rationale behind the decision to embark upon this empirical study of the role perceptions of CIOs. Three main components have played a key role in shaping this research project, a personal perspective, a literature perspective and a theoretical perspective.

1.2.1   A personal perspective

Completing a PhD thesis can be a life changing experience, and it is my personal belief that completing such an intense piece of research can only be achieved providing that the researcher has a keen interest in a given topic. In my case, it was clear upon the

completion of my MA thesis at the University of Northampton that I had to complete a PhD at some point during my life. Having observed several PhD students and seen the sheer amount of work that is required, I opted to complete this PhD thesis during the early days of my professional career.

When I joined research and advisory services firm Gartner in 2006 to work within their Executive Programs, I immediately spotted an opportunity to complete a PhD. Having developed a keen interest in role theory and the enactment of organisational roles during my postgraduate studies, I reached out to the University of Northampton with what was back then just an idea.

1.2.2   Literature perspective

When looking into the academic literature on the role of the CIO, it was noted that very few academics had explored the CIO role using role theory concepts, and not a single research study appeared to be aimed at exploring the CIO role from the perspective of the CIO. This apparent gap in the literature was also identified by McLeod et al. (1997:5) who assert,

> *'In spite of the attention, both pro and cons, which has been focused on the CIO, there has been little study of how the CIOs themselves perceive their role and their future. Do the CIOs view their problems and challenges in the same light as the observers?*

It appeared from extensive readings on the CIO role that there was still a great lack of clarity around the role of the CIO, this despite the attention that this role has received over the last few decades (Edwards et al., 2009). Edwards et al. (2009: 4) believe that academic studies over the years have added to the confusion surrounding the CIO role and note,

'Academic studies have tended to add to the confusion. Prior research seeks to discover the different competencies of CIOs (for example: strategist, relationship architect, integrator, information steward, IT educator and utility provider). Whilst useful, they are not grounded in a precise understanding of the job of the CIO and what incumbents are expected to achieve for their organization'.

Recent studies into the CIO role call for a need for more updated and pertinent CIO role models (La Paz et al., 2010; Edwards et al. 2009; and Peppard, 2009). With the lack of clarity surrounding the CIO role and the need for new role models, the author opted to focus the research on the role and perception of CIOs.

1.2.3 Theoretical perspective

A thorough review of the literature on the role of the CIO revealed that with the exception of the recent studies conducted by Preston et al. (2008) and Cohen and Denis (2010), few academic researchers have used role theory concepts to study the role of the CIO. The researcher found this particularly interesting given the perceived usefulness of concepts such as Stewart's (1982) Demands, Constraints and Choices framework. Wahlgren (2003: 231) highlights the pertinence of this framework in the study of managerial work and suggests,

"In my view, this model is best used in qualitative, emic approaches which aim to increase our understanding of managerial work, since the flexibility inherent in managerial work speaks against overgeneralizing. In studying how managers see their work, the research deals with subjective realities, perceptions, and sensemaking"

Using various frameworks and models adapted from the role theory, such as Stewart's (1982) demands, constraints, choices (DCC) model and Katz and Kahn's (1978) theoretical model of role formation, the researcher decided to offer an alternative view of the CIO role. From a theoretical perspective, as demonstrated in Chapter Six, this research study represents an attempt at combining the fields of organisational role theory, symbolic interactionist role theory and cognitive role theory.

1.3 Research Scope and Objectives

The role of the CIO has been in constant evolution since its introduction in the corporate world in the 1980s and today as judiciously pointed out by Broadbant and Kitzis (2005), CIOs are at a 'crossroads'. This PhD thesis was motivated by a real desire to understand on a deeper and more intimate level the role of the CIO and how the CIO perceives their role.

With this in mind, this research study addresses the following research question: ***How do Chief Information Officers perceive and adapt to the changes shaping their role***?

In order to successfully answer the above research question, four research objectives have been identified:

- *Thoroughly examine the existing literature.*
- *Empirically assess how CIOs perceive their role and contribution within their organisation.*
- *Explore the importance for CIOs to possess adequate leadership and boundary spanning capabilities.*
- *Propose a new model to understand the CIO role.*

1.4 Research Contributions

This section provides a high level view of some of the key contributions, described in more depth in Chapter Seven of this PhD thesis. This research study makes a number of contributions to practice, knowledge and theory. Despite being fundamentally a theoretical exercise, it was nevertheless important for the researcher that this PhD thesis contains some element of practicality and affords useful information to CIOs and other senior IT executives as well as aspiring CIOs. It is firmly believed that both research models presented in Chapter Five have the potential to be used by practitioners to reflect upon the demands and constraints existing within their role and to assess their personal

contribution to their organisation. Both models highlight the crucial importance of possessing the right mindset when working as a CIO.

This PhD thesis also made a number of contributions to knowledge. Firstly, the study answers McLeod et al.'s (1997) call for a deeper, more intimate understanding of the CIO role. The particularity of this study remains in the overall approach taken throughout the study that required participants to reflect upon their role and contribution within their organisation. In addition, this PhD study presented the opportunity to confirm or refute some of the findings presented in past academic research studies.

1.5   Thesis Structure

This PhD thesis is composed of seven chapters. The aim of this introduction chapter was to identify the research scope and objectives and to discuss the rationale of this research project. As previously mentioned, this introduction chapter enabled the opportunity to highlight the key contributions of the PhD thesis.

Chapter Two presents a review of the literature. Three research streams have been identified as being particularly relevant to this research study. Firstly, as stated in the research objectives section, it was the researcher's intention to undertake a thorough review of the existing literature on the CIO role. As noted by Edwards et al. (2009), the CIO role has received more attention than any other c-level role, and a thorough review was required to understand in more detail the role of the CIO. Broadband and Kitzis (2005) amongst others have judiciously pointed out that the role of the CIO has moved from a managerial role to one of leadership. With this in mind, the second stream of research identified for this PhD thesis is leadership. In this chapter, traditional leadership concepts and new paradigms are examined in light of the CIO role.

Chapter Three examines the overall approach to this research study. This chapter enabled the opportunity for the researcher to present the epistemological and ontological approach

taken throughout this study and the practical methodological choices, such as; research strategy, methods for data collection and data analysis.

Chapter Four presents the findings of this study. In this chapter, the researcher used Stewart's DCC model (1982) as an analytical tool and present the data in relation to the demands, constraints and choices offered in the CIO role.

Chapter Five is considered to be a continuation from the previous chapter, with a key focus on the exploration of the demands, constraints and choices in the CIO role. In contrast to Chapter Four, that focused mainly on presenting the data, Chapter Five aims to link the data presented in the previous chapter with key concepts from the role theory highlighted in Chapter Two. Chapter Five is also the opportunity for the researcher to present two new research models.

Chapter Six highlights the most relevant findings that have emerged from this inquiry and offers a series of propositions. This chapter enabled the opportunity for the researcher to discuss some of the implications of this research study, to evaluate its quality and reflect upon the achievement of the research aims.

Chapter Seven concludes this PhD thesis. The originality of this research study is discussed and the key contributions of this PhD thesis to various academic fields and the practitioner community are presented.

1.6   Definition of Key Terms

Throughout this PhD thesis, a number of key terms and concepts will be used on a regular basis, and it is necessary before embarking upon this study to define some of the most relevant ones.

CEO: A Chief Executive Officer (CEO) is the highest-ranking executive in charge of the total management of an organisation. An individual appointed as a CEO of a corporation, company, organisation, or agency typically reports to the board of directors.

CFO: The Chief Financial Officer (CFO) is a corporate officer primarily responsible for managing the financial risks of the corporation, financial planning and record-keeping, in addition to financial reporting to higher management. The CFO typically reports to the Chief Executive Officer and to the board of directors.

COO: A Chief Operating Officer (COO) is responsible for the daily operation of the company and usually reports to the Chief Executive Officer.

Charisma: 'Charisma is a specific, personal quality (variously described as magnetism, charm) that increases the individual's influence over others' (Atwater et al., 1997: 7).

Emotional Intelligence (EI): 'Ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth' (Mayer and Salovey, 1997: 10).

Executive Leadership: 'The ability to perform the multiple roles and behaviours that circumscribe the requisite variety implied by an organisational or environmental context' (Denison et al., 1995: 526).

Locus of Control Construct: A concept introduced by Rotter (1966). Individuals differ in their perception of the way things happen. "External" individuals tend to think that outcomes are determined by fate, chance or destiny. "Internal" individuals on the other hand are convinced that they have a total control over their direct environment.

Managerial Discretion: A concept developed by Hambrick and Finkelsein (1987) defined as 'executives' ability to affect important organisational outcomes (Carpenter and Golden, 1997: 187).

Organisational Boundaries: 'The limits of organisations and departments within organisations. These boundaries regulate the flow of knowledge between the organisation and its outside environment, and between the functional departments' (Hoe, 2006: 9).

Role Ambiguity: 'Lack of clarity of role expectations and the degree of uncertainty regarding the outcomes of one's role performance' (Miles, 1975: 335).

Role Conflict: 'Degree of incongruity or incompatibility of expectations associated with a role. Role ambiguity is defined as the lack of clarity of role expectations and the degree of uncertainty regarding the outcomes of one's role performance' (Miles, 1975: 335).

Role Expectations: 'Key concept within the role theory framework and is a combination of individuals' own expectations of their role and the expectations of other individuals within the same role-set' (Campbell, 1999: 5).

Role Making: A key concept within the role theory framework which suggests that individuals are not simply reactive to other individuals' expectations but that they also enact their own roles. Petrvis (2006: 24) notes; 'whilst role taking is about how the focal person perceives role expectations and acts upon them, role making is about the focal person attempting to create and/ or change role expectations and communicate those to the role senders'.

Role Set: A concept developed by Merton (1957) which refers to 'any feature of the organisation that is able to send role expectations / requirements and role pressures to the manager' (Shivers-Blackwell, 2004: 41).

Role Theory: 'The study of behaviours that are characteristic of persons within contexts and with various processes that presumably produce, explain, or are affected by those behaviours' (Biddle, 1986: 67).

Servant Leadership: A concept introduced by Greenleaf (1977), 'servant leaders approach the leadership role from a non-focal position and seek to fulfil the interests of the organisation and its members rather than maximise personal ambition' (Morris et al., 2005: 1339).

Shared Leadership: The rationale behind this concept is that it is possible to identify more than one leader within any given organisation. Within shared leadership configuration, leadership is not entrusted to a single individual but shared amongst several co-leaders who co-create an environment within which a shared vision is achieved (Lee-Davies et al., 2007).

Strategic Planning: 'The process of evaluating the enterprise's environment and its internal strengths and then identifying long and short range activities' (Rugman and Hodgetts, 1995 :609).

Transformational Leadership: 'The process of influencing major changes in the attitudes and assumptions of organisation members and building commitment for the organisation's mission or objectives' (Yukl, 1989: 204).

Transactional Leadership: 'Transactional leadership is characterised by the two factors of contingency reward and management-by-exception. The active transactional leader, through an exchange with subordinates, emphasises the giving of rewards if subordinates meet agreed-upon performance standards (contingent reward)' (Bass et al., 1987: 74).

Transcendental Leadership/ Spiritual Leadership: These ideologies are rooted in the servant leadership ideology. Transcendental leadership offers a more holistic approach to leadership taking into consideration the four essences of human existence namely; body,

mind, heart and spirit (Liu, 2007). The concept of spiritual leadership is inextricably linked to the transcendental ideology where it is believed that a tough economic climate calls for the development of spirituality within the workplace.

Upper Echelon Theory: A concept developed by Hambrick (1984) who suggests that 'executives act on the basis of their highly personalised interpretations of the situations and options they face. That is, executives inject a great deal of themselves, their experiences, personalities, and values into their behaviours' (Hambrick in Smith and Hitt, 2007: 109).

1.7   Chapter Summary

This chapter has introduced the aims and objectives of this research study and outlined the structure of this PhD thesis. In addition to this, the chapter has provided an opportunity to discuss the rationale behind this study, highlight some of the key contributions of this PhD thesis and define some of the key terms. The following chapter consists of a literature review where the relevance of academic research studies is critically examined.

CHAPTER TWO: LITERATURE REVIEW

2.1 Chapter Introduction

This chapter consists of a review of the literature, a process that Hart (1998: 13) defines as 'a selection of available documents on the topic which contain information, ideas, data and evidence written from a particular standpoint'.

Three different research streams compose this literature review. The first part of this chapter reviews in detail some of the most relevant research studies to date on the role of the Chief Information Officer (CIO), including a review of role and responsibilities and critical success factors to perform the role.

A number of research studies conclude that possessing excellent technical skills is no longer sufficient and that CIOs must exhibit executive leadership behaviours. The second section of this literature review chapter concentrates on executive leadership, a concept considered as the most important capability to be successful in the CIO role. Finally, it is believed that the role of the CIO and the changes impacting this role can be analysed using a mid-range theoretical framework, such as; the role theory. Role theory has proved to be a popular and useful framework in reviewing managerial roles and this last section introduces several concepts that will be crucial for the analysis of the CIO role.

Figure 2.1 represents the structure of the literature review chapter.

Figure 2.1: Literature review structure
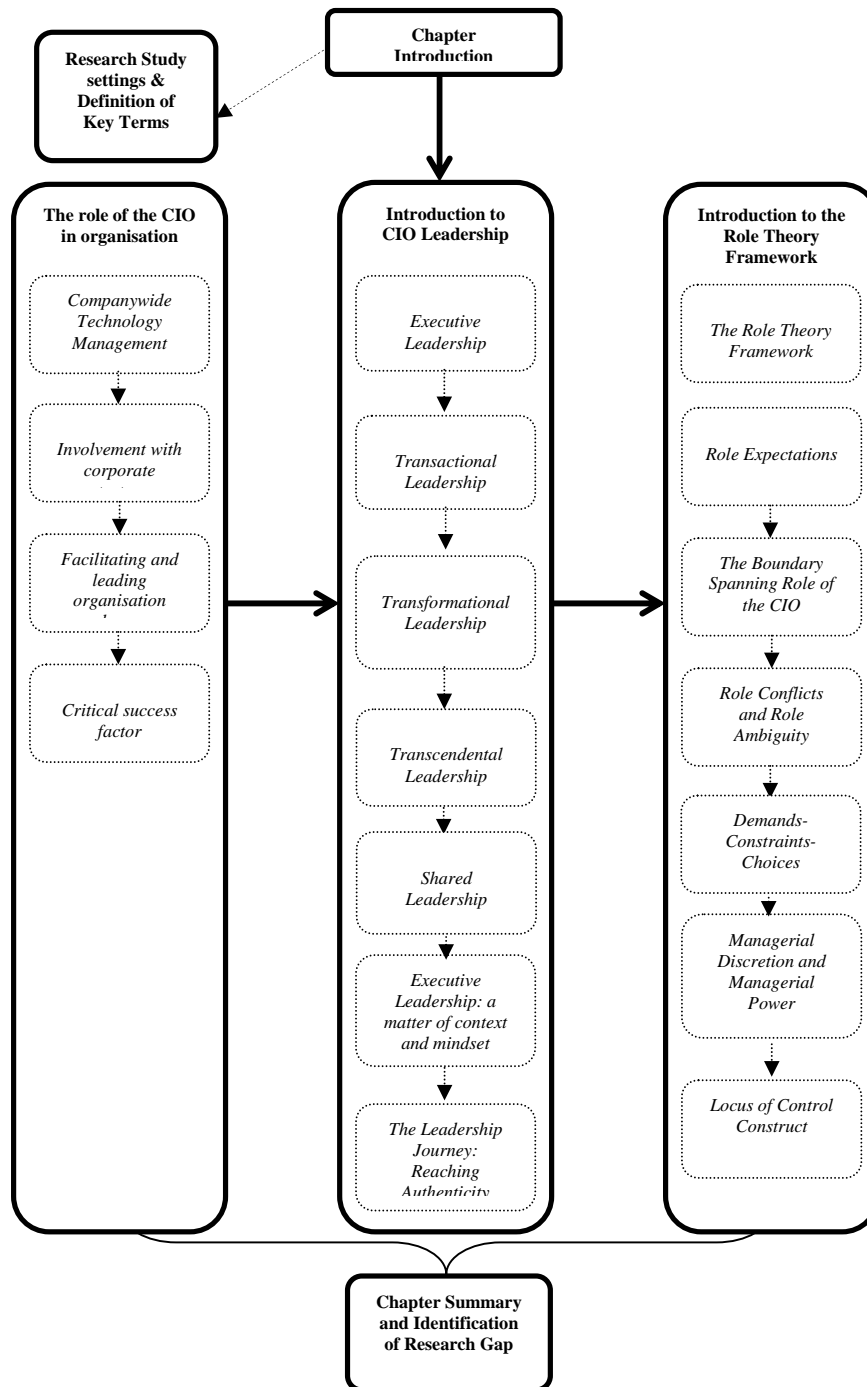
2.2 Research Study Settings

In recent years, global forces such as; the increasing pace of technological innovation, access to telecommunications and the growing affluence of emerging economies have changed the role of Information Technology (IT) and the way IT is perceived within the organisation. The availability of new sourcing models, business processes and increasing competitive pressure have had such an impact on the way technologies are delivered that IT is now moving from a support function to playing a crucial part in the execution of corporate strategy (Jones et al., 1995 and Earl and Feeny, 2000).

Academics and industry analysts recognise that this new IT order began in the early 1980s in the most information intensive industries (i.e. banking and insurance) before spreading across virtually every industry. The extent of this phenomenon has been highlighted by Broadbent and Kitzis (2004) and more recently by Casper (2008: 62) who notes that 'information systems lie at the heart of virtually every key business process and operation for most companies today'.

Many academics and practitioners have tried to come up with an official definition for the CIO, but similar to Maruca (2000: 55) are sceptical that there will ever be a general description for the CIO role. The latter argues, 'the CIO's role has never been well defined. What isn't clear is whether there will ever be a general, boilerplate description for the position'.

As the role of the CIO has evolved, so have the definitions. McLeod et al. (1995: 30) have an insightful view of what a CIO is and what a CIO does. According to them, 'the CIO concept regards the information services (IS) manager as a top-level executive, participating with other executives in charting the strategic course of the firm'.

For the purpose of this literature review, the definition by Grover et al. (1993: 108) will be adopted as it is believed it encapsulates the true essence of the ever-multifaceted role of the CIO. They define the CIO as,

'The highest-ranking IS executive who typically exhibits managerial roles requiring effective communication with top management, a broad corporate perspective in managing information resources, influence on organisational strategy, and responsibility for the planning of IT to cope with firm's competitive environment'.

2.3 Part I: The Role of the CIO in the Organisation

Previous studies into the CIO role suggest that CIOs perform both a tactical and a strategic role (Planes and Castillo, 2002; Lindstrom et al., 2006). Gottschalk (1999) has found evidence that the CIO can perform up to six key roles within their organisation (chief architect, change leader, product developer, technology provocateur, chief operating strategist and coach). Whereas, Sojer et al. (2006) have identified five generic roles that CIOs perform, namely; enabler, driver, supporter, cost cutter and project manager. Cash and Pearlson (2004) on the other hand suggest that the CIO fulfils four primary roles; business strategist, IT functional leader, technology advocate and change agent.

Romanczuk and Pemberton (1997: 19) adopted a very pragmatic view of the responsibilities of the CIO and note that there is a split between official roles and unofficial roles, such as; diplomat, protocol officer and influencer of the company's public image.

According to Earl and Feeny (1994: 11), it is critical for the reputation of IT and the reputation of the CIO to be perceived as adding value and making a general contribution to the direction of the organisation, 'the CIO can and must add value, or IS will be seen as a problem instead of as a recognized strength'. CIOs can play a variety of roles within organisations, but all must lead to the same goal: adding business value.

The role of the CIO is a challenging one (Karlgaar, 2002; Remenyi et al., 2005), and according to Heresniak (1999) CIOs are often caught in situations where they can be blamed regardless of the decisions that are being made. Heresniak (1999: 52) asserts that,

> *'CIOs are damned if they cause problems by changing too quickly (upgrading hardware or software to get alleged new function), because they cause instability. There are damned if they don't change quickly, because a technological advance – say, a good e-commerce solution can make a business'*

Maruca (2000: 56) suggests that all too often, CIOs are not appreciated to their true value for the simple reason that organisations often do not understand their true potential. Despite the skepticism, there is strong evidence in the academic and practitioner literature to suggest that the CIO is a true executive as opposed to being just a functional manager (Stephens et al., 1992; Fitch, 1987). Synnott (1987: 47) believes that 'the CIO is not a new name for the same old thing'.

CIOs today stand at a crossroads (Broadbent and Kitzis, 2005: 1), the role of IT has become indispensable for the survival and the prosperity of organisations (Boyle and Burbridge, 1991); which in order to survive have to find new ways of distinguishing themselves and to quickly adapt to their ever changing environment.

The role of the CIO has gradually been moving from a focus on technology to a focus on business performance. As pointed out in a research study conducted by the Nolan Norton Institute (2001: 125), 'the brokering, ambassadorial and advisory roles of the information executive have increased tremendously'. It appears from the literature that CIOs, in addition to being technology leaders must also be business leaders, in other words CIOs must bring both a technology and a business perspective to their role (Gottschalk, 2000).

In the early 1990s, the role of the CIO has moved away from the traditional focus on IT operations to a more strategic role (Jones et al., 1995; Sutton and Arnold, 2005) where CIOs are expected to deliver not only improved efficiency but also make a significant contribution to the overall strategy and the competitiveness of the organisation (Casper,

2008). This view is shared by Cash and Pearlson (2004) who suggest that if CIOs'
concern is around IT management issues as opposed to innovation and business
leadership, there is a strong possibly that these CIOs will fail to make a positive
contribution to the overall organisation. Onan and Gambil (2001:90) argue that,

> *'responsibilities have moved away from just being in charge of data*
> *processing for all information services of an enterprise, to someone who*
> *also fully understands a company's strategy and business plans'*

It appears that from the very beginning, the CIO role was bound to evolve. As foreseen
by Benjamin et al. (1985: 180), 'CIOs will not simply be the custodian of the data.
Rather, he or she will be the corporate officer who truly understands the interconnection
of the information flow to the business'. When looking at the future role of the CIO, May
(1998: 127), notes that it has become important for individuals to be ready to manage the
unexpected, what they are not yet aware of. Edwards et al. (2009: 5) note that the CIO
role follows an evolutionary pathway, in which the role of the CIO evolves as
"organisations' need for improved information capabilities develop".

Polansky et al. (2004) firmly believe that the responsibilities of CIOs in organisations
extend outside of the traditional scope of information and technology. According to
Polansky et al. (2004) the 21st century CIO will have the responsibility for 'developing,
articulating and selling an enterprise-wide vision of technology at every level of the
organisation from the boardroom to the mail-room'. Cash and Pearlson (2004: 29),
suggest that CIOs should focus their time and energy on the future and on the strategic
horizon of the organisation, think of themselves as CEOs of an IT company.

2.3.1 Company-wide technology management

The rapid development and introduction of new and more advanced technologies means
that organisations can suffer from technology overload (Romanczuk and Pemberton,
1997: 16) and this is the reason why keeping up with the technology revolution has
become the sole responsibility of the CIO and his/ her team. However, as suggested by

Earl and Feeny (1994), it is crucial for CIOs to demonstrate a high level of integrity when tracking key technologies. As the executive in charge of company-wide technology programs, it is crucial that CIOs keep track of all technologies that could potentially have an impact (positive or negative) on the organisation, and that 'each initiative is driven by business imperatives, not technology aggrandisement' (Earl and Feeny, 1994: 18).

2.3.2 Involvement with corporate strategy

It appears that there are several key areas in which CIOs are believed to have the required knowledge and skills to make a significant contribution and it seems that involving the CIO in formulating the corporate strategy has now become unavoidable. A study by Stephens et al. (1992) concluded that almost 60 percent of the CIOs time was spent on strategic planning and coordination.

The 'upper echelon' perspective developed by Hambrick and Mason (1984) enables us to shed some light on the debate as to whether or not a CIO should be involved in the formulation of corporate strategy. Cohen and Dennis (2010) note that in the upper echelon perspective, organisations are considered as a reflection of the background, values and belief systems of its top executives Cohen and Dennis (2010) suggest that any attempt at understanding organisational outcomes must take into consideration the profiles and mindset of key executives. Bowman and Kakabadse (1997: 199) suggest,

> *'Diversity in top management team characteristics is found to be beneficial to the organisation in order to provide different views of the environment and to gain a better understanding of the overall internal and external context and thereby work towards a more effective strategy'*

If diversity in the top management team is a key element to effective strategy, one could argue that given the CIOs' process centric attitude and understanding of critical business processes, the CIOs' inputs into corporate strategy could be beneficial (Chatterjee et al., 2001; Earl and Feeny, 2000; Hoffman and Stedman, 2008). Earl and Feeny (2000) and Jones et al. (1995) note that factors such as; the increasing pace of technological

innovations and the increasing competition within established and emerging markets have transformed organisations' use of technologies in such a way, that quite frequently IT issues have a direct impact on the execution of corporate strategy. Hoffman and Stedman (2008: 14) suggest that increasingly, CIOs are to some degree involved in the formulation of corporate strategy, 'at many companies, the new name of the game is melding technology and business operations, with CIOs getting a say in setting not only IT plans but business strategies as well'.

However, for CIOs to be involved in shaping the corporate strategy, they must demonstrate that the initiatives they have put forward are aligned with the overall strategy of the organisation.

2.3.3 Facilitating and leading organisational change

According to IBM research (2008a), increasingly, CIOs are expected to take the role of change agent or strategic change agent (King, 2008: 188) and play a greater part in enabling changes and implementing transformation. The 2007 IBM Global CEO survey (2008a) revealed that 83 percent of CEOs expect major disruptions and changes within their organisations in the coming years. Consequently, the most successful CIOs will have a track record of managing large and complex technology and change management programs (IBM research, 2008b). Gottschalk (2000) found evidence that operational responsibilities amongst IT leaders have actually decreased, and that IT leaders spend the majority of their time involved in change management activities.

It is undeniable that involving CIOs in change management and transformation initiatives can have positive repercussions, especially when considering CIO's process driven attitude and their overall view of the organisation (King, 2008). As judiciously highlighted by Gius (in Hoffman and Stedman, 2008: 16), 'managers of business units may know the most about their own fiefdoms, but they never see what [another department] over there is doing'.

Maruca (2000: 60), notes that the CIOs' role in organisational change is far from being a new phenomenon, 'CIOs in the 1990s have been asked to wear two other hats: those of "change master" and of "strategy maker", CIOs have increasingly been given formal responsibilities for business change'. Laud and Thies (1997: 26) also acknowledge the change agent role of CIOs and assert that despite the importance of technical skills, more and more CIOs are required to have the ability to 'understand, manage, and govern large scale change'. Moreover, as pointed out by Remenyi et al. (2005), not only are CIOs expected to cope with change as it occurs within a wider organisational context, they also must be able to manage rapid changes occurring within the IT organisation.

Melymuka (1999: 49) suggests that CIOs and CEOs should work closely together in large change management projects, 'CEOs are change agents in a company, CIOs are the change architect. CIOs are more implementational'. A research study by IBM (2008e: 3) concluded that the forthcoming challenge for CIOs will be to 'drive transformation as change leaders and implementing transformation as change agents. However important it is for CIOs to be perceived as change agents, Earl and Feeny (1994) suggest that the disruption brought by large change and transformation programs often result in the accumulation of a number of powerful enemies. From a CIO perspective, Earl and Feeny (1994) believe that it is preferable for CIOs to take a role of facilitator in large change management programs.

Despite spending more time working on strategic issues, CIOs still get involved in the management of the day to day operations. Many researchers (O'Riodan, 1987; Stephens et al., 1992; Earl and Feeny, 2000; Grover et al., 1993; Weil, 2008) suggest that CIOs should delegate some of the tactical responsibilities to lower managerial levels. Earl and Feeny (2000) and Weil (2008) stress that surrounding oneself of talented technical individuals that can take ownership of the day to day activities is a key characteristic of a successful CIO.

2.3.4. CIOs additional responsibilities

King (2007) believes that there are several additional roles that CIOs can perform within their organisations. Sutton and Arnold (2005) argue that the role of the CIO has expanded drastically with the implementation of corporate governance directives[1]. Corporate social responsibility (CSR) is an area where CIOs seem to have the required profile to make a significant impact. It appears that for the past few years, CIOs have had a major role in driving initiatives falling into organisations' CSR strategy (energy saving, green IT, sustainability) (IBM Research, 2008b) and have also played a key role with issues around customer information retention and data privacy. The 2008 Gartner CIO agenda revealed that over 50 percent of CIOs have now taken additional responsibilities over and above IT.

In addition to being involved in transformation programs, CIOs can also make a contribution in the area of business intelligence (via analysis of business and customer data) (Soat, 2008).

Table 2.1 presents a summary of the literature on the CIO role.

Table 2.1: Role of the CIO in the organisation: Literature review table

Researcher(s)	Study Type	Sample Size	Key Focus	Relevance to research study
Benjamin (1985)	Quantitative	25	CIO role evolution	'CIO will not simply be the custodian of the data. Rather, he or she will be the corporate officer who truly understands the interconnection of the information flow to the business' Benjamin (1985: 180)
Broadbent and Kitzis (2005)	Qualitative	25	Role of IT within organisations	The growing dependence of organisations on technology has had a direct impact on the role of IT but also on the role of the CIO
				CIOs today stand at a "crossroads" and are faced with the choice of managing the IT function and focus on the operational side of their role or lead the IT function to make it play a key role in the transformation of their organisation.

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[1] Sections 404 and 409 of the Sarbanes-Oxley directive

Cash and Pearlson (2004)	Qualitative	Unknown	Role of the CIO in organisation	CIOs play four primary roles, namely; business strategist, IT functional leader, technology advocate and change agent
Casper (2008)	Qualitative	1	Role of IT within organisations	IS lies at the heart of key processes and operations of every organisation
Coghlan and Hurley (1996)	Quantitative / Survey	Unknown	CIO Critical Success Factors	CIOs earn the credibility of their peers by demonstrating a general knowledge of business and management
Earl and Feeny (1994)	Qualitative	14	Role of the CIO in organisation	CIOs to be perceived to be adding value and making a general contribution to the direction of the organisation
			CIO Critical Success Factors	CIOs must delegate the tactical responsibilities to lower managerial levels
Enns et al. (2003; 2007)	Quantitative	69	CIO Critical Success Factors	Companies' decision making process is moving away from a single decision maker to a model where decisions are made between a group of key executives, CIOs must be able to influence their peers
Feeny et al. (1992)	Qualitative	14	CIO Critical Success Factors	CIOs have to demonstrate political and relationship building skills
Feld and Marmol (1994)	Qualitative	Unknown	Role of the CIO in organisation	Lack of understanding between IT and business executives is considered as a source of frustration for both CIOs and CEOs
				CIOs must assist CEOs to bridge the gaps between the changing business needs and technology
Gottschalk (1999)	Quantitative	471	Role of the CIO in organisation	CIOs perform up to six key roles; chief architect, change leader, product developer, technology provocateur, chief operating strategist and coach
Gottschalk (2000)	Quantitative / Survey	101	CIO role evolution	CIOs must bring both a technology and a business perspective to their role
				Operational responsibilities amongst IT leaders have actually decreased
Heresniak (1999)	Qualitative	Unknown	Role of IT within organisations	CIO is the most maligned and misaligned occupation around
Highbarger (1988)	Qualitative	Unknown	Role of IT within organisations	The complexity and difficulties in performing the CIO role is misunderstood and consequently the contribution of the CIO is not always appreciated

IBM research (2008a)	Qualitative	300	CIO role evolution	CIOs are expected to play a greater part in enabling changes and implementing transformation
Jablokow et al. (2010)	Qualitative	26	CIO role evolution	'Several participants discussed how some individuals prefer to stay on a technical track as they develop professionally, while others welcome the opportunity to span the technical and management domains as they develop into the "next generation" of CIO'
Jaska and Hogan (2006)	Qualitative	7	CIO Critical Success Factors	CIOs must communicate their vision, downwards, upwards but also across functional silos.
Jones et al. (1995)	Quantitative	39	Role of IT within organisations	IT is moving from a support function to play a crucial part in the execution of corporate strategy
			Role of the CIO in organisation	CIOs have traditionally played a more implementational role and were left to implement strategic plans that other executives had made
King (2007)	Qualitative	4	CIO role evolution	CIOs can have several additional roles, i.e. environmental steward, revenue generator, holistic business expert and change management architect
Maruca (2000)	Qualitative	6	Role of the CIO in organisation	CIOs in the 1990s have been asked to wear two other hats: those of "change master" and of "strategy maker"
				CIOs are not appreciated to their true value as organisations often do not understand the potential of CIOs
				The CIO is not clearly defined, and probably never will be
				For CIOs to be accepted within the c-level suite, they must have a deep understanding of all the major functions of their organisation
May (1998)	Conceptual	N/A	Role of the CIO in organisation	It is crucial for CIOs to be ready to manage "the unexpected"
Melymuka, (1999)	Qualitative	7	Role of the CIO in organisation	CIOs and CEOs should work closely together in large change management projects
Nolan Norton Institute (2001: 125)	Quantitative	Unknown	CIO role evolution	'the brokering, ambassadorial and advisory roles of the information executive have increased tremendously'
O'Riodan (1987)	Qualitative	Unknown	CIO Critical Success Factors	CIOs must delegate the tactical responsibilities to lower managerial levels

Pemberton (1992)	Qualitative	Unknown	Role of the CIO in organisation	The primary role of the CIO is to bridge the gap between IT and other business units
Planes and Castillo (2002)	Qualitative	1	Role of the CIO in organisation	CIOs perform both a tactical and a strategic role
Remenyi et al. (2005)	Literature review	N/A	Role of IT within organisations	There is a cultural gap existing between business and IT executives
			CIO Critical Success Factors	Technical competence, knowledge of ICT trends, corporate strategy competency and appropriate qualification mix are four most important skills for CIOs
Romanczuk and Pemberton (1997)	Literature review	N/A	Role of IT within organisations	It is more difficult to demonstrate the benefits of technology initiatives than the benefits of any Finance, Human Resources (HR) or Operations initiative
Rusu et al. (2009)	Qualitative	5	CIO Critical Success Factors	CIOs face two types of barriers; managing the day to day operations and processes of IT and the environmental challenges that organisations face when working across global markets.
Stephens et al. (1992)	Qualitative	5	Role of the CIO in organisation	The CIO is a true executive as opposed to being just a functional manager
				Almost 60 percent of CIOs time was spent on two activities; strategic planning and coordination
			CIO Critical Success Factors	CIOs must delegate the tactical responsibilities to lower managerial levels
Stephens and Loughman (1994)	Qualitative	5	CIO Critical Success Factors	Strong communication skills, (both verbal and written) are considered to be one of the most important skills that CIOs ought to possess.
Sutton and Arnold, (2005)	Qualitative	Unknown	CIO role evolution	The role of the CIO has been moving away from the traditional focus on IT operations to a more strategic role
Soar (2008)	Qualitative	Unknown	CIO Critical Success Factors	It has become clear that it is no longer sufficient for CIOs to possess only technical skills.
Sojer et al. (2006)	Secondary research	544	Role of the CIO in organisation	Four generic roles for CIOs are identified; enabler, driver, supporter and cost cutter/project manager.
Synnott (1987)	Qualitative	Unknown	Role of the CIO in organisation	CIO is a business man first, manager second, and technologist third

Varajao et al. (2008)	Qualitative	54	CIO Critical Success Factors	The CIO role greatly depends upon a number of factors, such as: the nature and size of the organisation, as well as the geographical location of the organisation Three main barriers exist in the CIO role; the lack of time to think and define strategies, an overwhelming number of requests and projects and inappropriate budgets.
Weil, 2008	Qualitative	12	CIO Critical Success Factors	CIOs must delegate the tactical responsibilities to lower managerial levels

Source: compiled by the researcher

2.4 The Successful CIO - Critical Success Factors

The aim of this section is to establish some of the skills required to be a successful CIO. For the purpose of this discussion, success in the CIO role is defined as being perceived as playing a critical part in the execution of corporate strategy and being considered by other executives as a business leader.

The role of the CIO is changing, but as suggested by Broadbent and Kitzis (2005: 2), 'these changes are evolutionary, not revolutionary'. As the senior IT leader, it is crucial that CIOs possess a strong grasp on technology. However, it is increasingly common for senior IT executives not to have a deep and specialised knowledge of technology (Nolan and Norton Institute, 2001).

The CIO has a complex and undefined role that varies to a great extent according to the overall maturity of the organisation and senior executives' technology acumen (Maruca, 2000; Feeny et al., 1992; Marchand, 2007). Remenyi et al. (2005: 4) identified, technical competence, knowledge of ICT trends, corporate strategy competency and appropriate qualification mix as the four most important skills that CIOs ought to possess. It appears that to be successful, CIOs must be recognised by their executive peers as a business executive (Coghlan and Hurley, 1996). Coghlan and Hurley (1996) also note that CIOs

have more chance of earning the credibility of their peers by demonstrating a general knowledge of business and management than demonstrating technical knowledge. CIOs must behave first and foremost like any other business executives (Maruca, 2000). 'Chief information Officer is a business man first, manager second, and technologist third' (Synnott, 1987: 48).

When looking at the profiles of successful CIOs, Cash and Pearlson (2004) note that, quite often they have a varied career history, including several years of experience spent outside of IT. Remenyi et al. (2005) posit that, given the challenging environment faced by CIOs, the characteristics needed to be a successful CIO can be compared to the features of a chameleon, in other words CIOs ought to be able adapt to their environment, see in multiple directions, strike fast when required and hang on when the situation gets tough. Cramm and May (1998) note that the key difference between successful and less successful CIOs stand in their approach to the use of internal and external resources. Findings by Cramm and May (1998) suggest that successful CIOs do not work alone and make great use of various sources of expertise such as vendors, industry analysts and consultants as well as executive coaches.

2.4.1 Business acumen

In order for the CIO to be accepted within the c-level suite, it is imperative that the individuals have a deep understanding of their own organisation and all of its major functions (Maruca, 2000), understand how the organisation operates, how revenues are generated and who the key competitors are (Hoffman and Stedman, 2008). As pointed out in Hoffman and Stedman (2008: 16), 'CIOs need to learn the business at their companies, otherwise "no one will respect any ideas that you bring to the table". Despite the importance of possessing a deep understanding of their own organisations, Tom Maruca (2000) suggests that a great level of expertise in each and every function is not required, CIOs very much like CEOs 'should be able to assess accurately how all of the components of the business fit together' (Maruca, 2000: 62).

A research study by IBM (2008c: 5) concluded that increasingly (especially in the time of economic turmoil), CIOs are expected to demonstrate in financial terms the value delivered by technology projects. It is posited that,

> *'by thinking more in terms of shortened business cycles, time to market, ROI, ROA and return on Equity, as opposed to technical measures such as response time, server utilization rates and consolidation ratios, CIOs can more compellingly communicate the business value and risks of IT projects'.*

Having solid financial competences may prove to be a very valuable skill to possess. A research study by Polansky et al., (2004) revealed that financial accountability and transparency is one of the CIOs' top concerns. If the CIO is to be successful within their own organisation, not only must they be technology savvy, but more importantly business savvy (IBM Research, 2008f). In other words, a successful CIO must first and foremost be a business executive. Soar (2008) notes that it is virtually impossible for any organisation to recruit the "perfect CIO", however, it has become clear, that possessing only technical skills is no longer sufficient. As suggested by Onan and Gambill (2001: 92), 'perhaps the ideal resume of the CIO would include both technical qualifications, plus a background in finance, marketing and strategic planning'. The notion of technology-business versatility crops up on a regular basis and Applegate and Elam (1992) have found evidence that there are a growing number of senior IT executives combining both IS management experience and business experience.

Pemberton (1992: 42) draws a very interesting picture of what an effective CIO should be perceived as. According to his research, an effective CIO is someone who has 'good business and management skills and is knowledgeable about a broad range of information disciplines, services, techniques, and technologies', in other words, an individual who would have the ability to translate business needs into 'realistic technical specifications and delivery schedules' (Hinde, 2005: 15).

2.4.2 Appropriate communication style

As is often in relationships involving generalists and specialists, communication problems are cited as a primary cause of discrepancy. It appears that strong communication skills (both verbal and written) are considered to be the most important skills for CIOs to possess. Stephens and Loughman (1994), when observing CIOs' communication strategies noted that sound writing skills are equally as important as oratory skills. This is especially true as often the target of the communication is outside of the IT function.

CIOs must have the ability to communicate effectively their vision, downwards, upwards (Jones et al., 1995) but also across functional silos (Jaska and Hogan, 2006). As suggested by Andriole (2007: 71), 'business technology leaders communicate often and predictably; leaders communicate good news and bad news in business terms'. Andriole (2007) makes an interesting point in suggesting that CIOs must communicate in business terms. Indeed, IT professionals and CIOs have often been found guilty of using specialist language when communicating with key stakeholders. As noted by Onan and Gambil (2001), since CIOs often communicate with individuals outside of the IT organisation, it is crucial that they use the most widely spoken language in any organisation: the language of business (Andriole, 2007: 69). Trigo et al. (2009) note that the lack of a shared language and understanding between CIOs and the top management team is one of the most cited reasons for poor IS strategic alignment. Trigo et al. (2009: 66) suggest, 'the ability to communicate effectively is critical in working with business counterparts to learn and understand different business needs'.

It is also critical that the CIO avoids using esoteric language and engaging in discussions likely to turn into technical ones. Stephens et al. (1992: 464), suggest that successful CIOs speak to their peers in business language and defer to others 'when technical expertise was needed'. This was confirmed by Earl and Feeny (1994) who concluded that successful CIOs adapt their language to their audience to communicate their vision. Earl and Feeney (1994: 18) note that,

'the key requirement is communication in the literal sense; these CIOs are able to absorb and use the language of production or marketing and show understanding of and sensitivity to their colleagues concerns'

CIOs' ability to use a different language to communicate more effectively with business peers is considered by Jask and Hogan (2006) as a key interpersonal communication skill. Stephens and Loughman (1994) noted that are two communication elements that differentiate effective CIOs from others. First they have a strong ability to demonstrate empathy and appreciate situations from others' perspective, and they tend to structure their whole communication with non technical people around the use of metaphors and anaphors. Enns et al. (2001) have found evidence that CIOs using IT language when seeking commitment from non technical peers encountered strong opposition to some of the initiatives proposed, however, the technical background of CIOs did not in any way affect their ability to influence executive peers' behaviours (Enns et al., 2007: 37).

2.4.3 Relationship management skills

Feeny et al. (1992) note that amongst many soft skills CIOs have to demonstrate political and relationship building skills. The ability to build trust (Applegate and Elam, 1992), defuse conflicts and to be a skilled reader of situations and people (Stephens et al., 1992; Stephens, 1993) are skills that CIOs can ill afford not to possess. This is especially important as often CIOs are required to execute strategic initiatives that require collaboration with key executives (i.e. Chief Financial Officers) (Gawiser, 1994). As highlighted by Westerman and Weil, (2005:1) effective CIOs not only manage the IT function efficiently, 'they also manage their non-IT relationships better'.

Applegate and Elam (1992) and King (2008) suggest that IT executives should also have the ability to develop both internal and external networks, however, Applegate and Elam (1992: 480) acknowledge that 'the IS executive has traditionally been very weak in establishing such networks'. Enns et al. (2003) and Enns and Huff (2003) also suggest that CIOs have to possess the ability to influence. This skill is particularly important as noted by Enns and Huff (2003) that companies' decision making process is moving away

from a single decision maker to a model where decisions are made between a group of key executives (Enns and Huffs, 2003).

Equally important is the ability to quickly establish good relationships and manage expectations (Potter, 2003), in other words, educate key stakeholders (Passino and Severance, 1988; O'Riodan, 1987). Because the CIO's executive peers may not be completely familiar or comfortable with various technology concepts, 'the ability to teach others ways in which technology can help them achieve their goals is an important skill' (DeLisi et al., 1998: 69). Jablokow et al. 's (2010) 26 study participants agreed that the success of CIOs in managing problems depends more on the individuals' ability to deal with people effectively and working with them towards a solution rather than on the technical solution itself.

Table 2.2: The Successful CIO – Critical Success Factors Table

Researcher(s)	Study Type	Sample Size	Key Focus	Relevance to research study
Applegate and Elam (1992);	Qualitative	64	CIO critical skills	Demonstrate superior political and relationship building capabilities; skilled reader of situations and people; manage expectations
Cramm and May (1998)	Qualitative	2	Resources management	Successful CIOs do not work alone and make great use of various sources of expertise such as vendors, industry analysts and consultants as well as executive coaches.
Earl and Feeny (1994)	Qualitative	14	Communication	Ability to adapt one's communication style to various audiences
Enns et al. (2003); Enns and Huff (2007)	Qualitative	Unknown	CIO critical skills	Ability to influence, educate and manage expectations of executive peers
Feeney et al. (1992)	Qualitative	14	CIO critical skills	Demonstrate superior political and relationship building capabilities; skilled reader of situations and people; manage expectations
Hoffman and Stedman (2008)	Qualitative	6	CIO critical skills	Understanding of organisational environment

IBM (2008c)	Qualitative	300	CIO critical skills	Ability to demonstrate the business value delivered by technology projects
Jaska and Hogan (2006)	Qualitative	7	Communication	Ability to communicate effectively across functional silos
Jones et al. (1995)	Quantitative	39	Communication	Ability to communicate effectively across functional silos
Maruca (2000)	Qualitative	6	CIO critical skills	Deep understanding of the organisation and all its major functions
Onan and Gambill (2001)	Quantitative	29	CIO critical skills	Key competencies include technical skills and background in finance, marketing and strategic planning
Passino and Severance (1988)	Qualitative	120	CIO critical skills	Ability to influence, educate and manage expectations of executive peers
Pemberton (1992: 42)	Qualitative	Unknown	CIO critical skills	Key competencies include technical skills and background in finance, marketing and strategic planning
Remenyi et al. (2005: 4)	Literature review	N/A	CIO critical skills	Technical competencies; knowledge of ICT trends; corporate strategy competencies; appropriate qualification mix
Stephens and Loughman (1994)	Qualitative	5	Communication	Strong oratory and writing competencies
Stephens et al. (1992)	Qualitative	12	Communication	Ability to adapt one's communication style to various audiences
			CIO critical skills	Demonstrate superior political and relationship building capabilities; skilled reader of situations and people; manage expectations
Trigo et al. (2009)	Qualitative	54	Communication / personal branding	The lack of a shared language and understanding between CIOs and the top management team is one of the most cited reasons for poor IS strategic alignment. 'If CIOs do not get better at projecting themselves into the centre of the corporate decision-making process, their job will not steer the company towards its next competition-crushing opportunity and will probably be taking orders and putting out fires' (Trigo et al., 2009: 66)

Source: Compiled by the researcher

2.5 Summary of Part I: The Role of the CIO in the Organisation

The first part of this literature review chapter focused on the role of the CIO. It was demonstrated that although often assimilated to a technical role, the CIO role is very much a business role. It appears from the literature that in the 1990s, the role has evolved from a tactical role to a strategic one and that an increasing numbers of CIOs are involved in activities that sit traditionally outside of the IT arena. It was suggested that CIOs, providing they possess strong business acumen should be considered by other executives as individuals who can make a tremendous contribution to strategy and large change programs.

The first section of this literature review chapter enabled the opportunity to take a closer look at some of the critical success factors when working as a CIO. It was posited that CIOs like any other clevel executives must possess a number of skills that are judged to be critical. Amongst many attributes, it was demonstrated that there is a strong commercial aspect in the CIO role and consequently, CIOs ought to demonstrate business astuteness. Strong communication skills also appear to be a key success factor when working as a CIO. It was argued that CIOs ought to adapt the way they communicate to their audience and to avoid using esoteric language.

2.6 Part II: An Introduction to CIO Leadership

There is a strong body of research in the CIO literature that supports the idea that CIOs like other executives must possess adequate leadership capabilities (Broadbent and Kitzis, 2004; Onan and Gambill, 2001; Applegate and Elam, 1992; Polansky et al., 2004). According to Tauhert (1999), the lack of leadership capabilities is what has historically prevented many CIOs from gaining access to CEO or general manager type positions.

Given the current social demographic (Graetz, 2000) and the economic shift, rapid expansions into emerging markets and strategic alliances with new partners (IBM research, 2008e), CIOs need more than solid management skills, they require leadership

capabilities. Karahanna and Watson (2006: 173) suggest that IT leadership 'lies at the intersection of cognitive, political and social processes'.

Jablokow et al. (2010) identified four leadership capabilities that are required by CIOs. According to Jablokow et al. (2010), CIOs as the leader of the IT function must bridge the cognitive gaps existing between the IT function of the other business functions of the organisation; build and manage a team of individuals each specialising in solving particular issues, be heavily involved in business process management; and manage change. Waller et al. (2010) identified seven leadership skills that CIOs ought to possess to drive results; commiting to leadership first, everything else second, leading differently than one thinks, embracing one's softer side, forging the right relationships, driving the right results, mastering communications, inspiring others, building people not systems. As previously highlighted, whereas it was perfectly acceptable for CIOs working in organisation where IT was perceived purely as a support function to be just competent managers and technical experts (Applegate and Elam, 1992), for the past few years more than efficient infrastructure management has been expected from CIOs. Cramm and May (1998) argue that given today's environment, the *raison d'être* of executive leaders is no longer managing an existing business but transforming the organisation.

2.6.1 Executive leadership

Beyer (1999) and Broadbent and Kitzis (2004) remind us of an important distinction that first appeared in the mid-70s: managers are different to leaders (Zalesnik and Kets de Vries, 1975). Whereas, management is about execution and control, leadership on the other hand is about changes, vision setting, inspiration, challenging the *status quo*. Katz and Kahn (1978) in Day and Lord (1988: 459) acknowledge that 'leadership at lower levels is qualitatively different than upper-level leadership'.

According to McCrimmon (2005: 1069), challenging the *status quo* is 'an essential component of all leadership' (McCrimmon, 2005: 1069) and should be considered as one of the five key leadership principles (Kouzes and Posner, 2002). It is important at this

point to introduce the notion of executive leadership. Executive leadership is defined by Denison et al. (1995: 526) as 'the ability to perform the multiple roles and behaviours that circumscribe the requisite variety implied by an organisational or environmental context'. The notion of environmental context is recurrent in the executive leadership literature (Bolman and Deal, 2006; Leban and Zulauf, 2004) and is discussed later in the study.

It is apparent from the executive leadership literature that adaptability is one of the key capabilities of leaders. As noted by McCarthy et al. (2005: 461), leaders consistently navigate through paradoxes and complex change, and it is crucial for them to accept the fact that 'paradoxical tensions are a normal part of contemporary organisational life'; executives must 'drive change fast and slow; both dictate and dialogue about vision, and drive change and empower others to be change leaders' (McCarthy et al., 2005: 472).

2.6.2 Executive leadership: towards a combined approach

Figure 2.2: Executive Leadership: Global Model
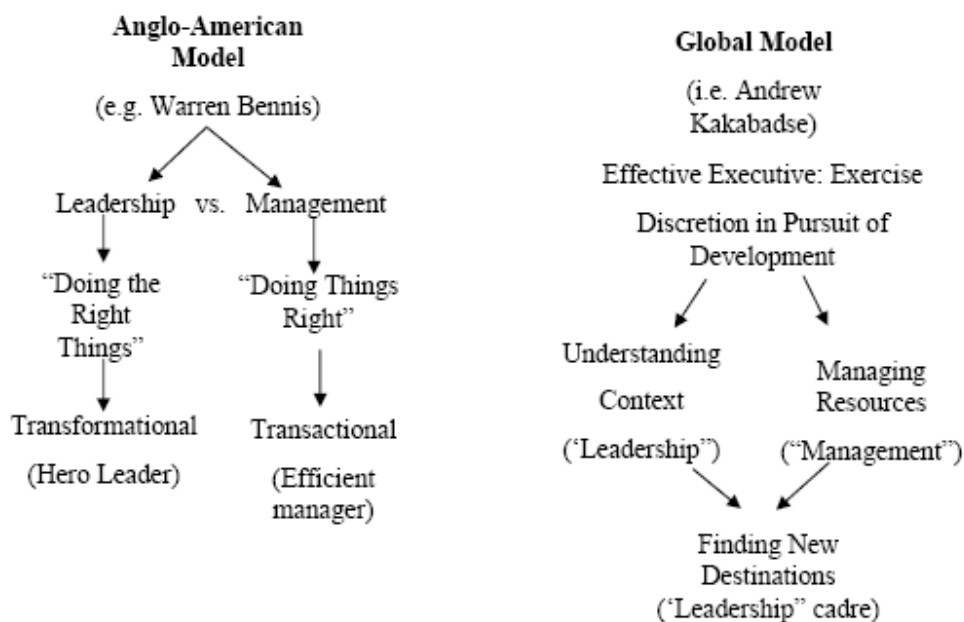
The global model as presented above (Kakabadse and Kakabadse, 2008) represents a synergised approach to executive leadership where the resource management and the contextual aspect of the role of the executive leader are combined. This specific model is in line with some of the current thinking in the field of leadership suggesting that executive leaders should possess elements of both transformational and transactional leadership (Avolio and Bass, 1988; Bass, 1985; Berson et al., 2001; Schepers et al., 2005).

Bryant (2003) by taking the example of Apple's late founder and CEO, Steve Jobs demonstrates how leaders can, depending on the context of the organisation and the requirements of the situation, adopt both a transformational and a transactional approach to achieve their vision. Transformational leadership despite being universally recognised as more effective and promoting greater organisational performance should not be viewed as a replacement for transactional leadership (Lowe and Kroeck, 1996) in so far as different organisational contexts will call for a different approach to leadership.

2.6.3 Transactional leadership

The field of leadership has been subject to a growing concern around the terminology used in the leadership literature, and this has occurred since Burns (1978) introduced the concept of transactional leadership. Burns (1978) suggests that transactional leaders influence others 'by appealing to their self-interest primarily through the exchange of valued rewards for services or other desired behaviours' (Burns, 1978 in Brown and Posner, 2001: 403).

There is a general misconception that anyone in a position of authority is essentially in a leadership role, and consequently the terms transactional manager or transactional supervisor (Conger, 1999) would be more appropriate when talking about individuals who are strong on the transactional components but weak in transformational activities.

The difference between these two concepts is reinforced by Conger and Kanungo (1998) who suggest that whereas transactional managers use influence to achieve specific targets, transformational leaders, on the other hand excite followers and urge them to work hard towards long term strategic objectives. Berson et al. (2001) found evidence that transactional managers and transformational leaders also differ in the focus of their respective visions for the organisation. The transactional leadership model has also yet to explain the reasons underpinning individuals' willingness to sacrifice their own interests for the welfare of their organisations (Avolio et al., 1991).

2.6.4 Transformational leadership

As noted by Conger (1999) and Mastrangelo (2004) several key areas of leadership have been subject to much interest and consequently many theoretical frameworks and empirical investigations have emerged over the last three decades. When looking at the importance of professional and personal leadership, Mastrangelo et al. (2004: 447) concluded that 'an organisation's members are more likely to willingly cooperate when they perceive that the leader truly cares about them'. Mastrangelo et al.'s (2004) research study provides the opportunity to introduce the concept of servant leadership developed by Greenleaf (1977) that greatly contributed to the organisational theory literature (Stone et al., 2003). According to Greenleaf (1977), servant leaders' primary objective is to serve and meet the needs and interests of followers. As noted by McMinn (2001), servant leaders see followers' development as a vital process and often place followers' interests before their own personal interests and ambitions. Sendjaka and Sarros (2002: 60) share the same view and posit,

> 'The primary reason why leaders exist is to serve first, not to lead first. To put it differently, the servant leader operates on the assumption that "I am the leader, therefore I serve" rather than "I am the leader, therefore I lead"'

The transformational leadership paradigm developed by Burns (1978) and popularised by Bass (1985) is often considered as a new force in leadership research (Thite, 1999). Its

similarities to servant leadership have pushed academics to question whether there are any tangible differences between those two concepts. Despite the numerous similarities and the general idea that both concepts are complementary ideologies, Stone et al. (2003: 349) noted that in the case of transformational leadership, it is the actual behaviour of the leader which reinforce followers' commitment to organisational objectives. In the case of servant leadership, the leader's focus is on the followers, and the achievement of organisational objectives is a subordinate outcome. Bass (1990: 21) provides an insightful view of transformational leadership and notes,

> '*Leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group*'

Avolio et al. (1991) gathered evidence that transformational leaders display four main characteristics; the four 'I's' of transformational leadership. According to Avolio et al. (1991), transformational leaders are considerate of followers' needs on an individual level and foster an intellectually stimulating environment perceived as inspirational by followers. Transformational leaders, by creating and developing a vision of where the organisation is heading to and growing individuals around them are able to create an atmosphere that inspires, stimulates and motivates followers beyond self-interest (Avolio et al., 1991; Bass, 1997; Hater and Bass, 1988; Sidani, 2005). Conger (1999) posits that empowering followers should be considered as the end result of leadership.

To be accepted within the executive suite, the CIO is expected to create a vision for the IT function and to share this vision with executive peers. Bohn and Grafton (2002) argue that sharing a compelling vision of the future develops organisational efficiency but also satisfies an individuals' basic needs for meaning (Frankl, 1963 in Popper and Zakkai, 1994). Burdett (199: 7) reflects,

> '*A vision statement is a powerful and vivid description of what tomorrow looks like, feels like and sounds like. When framed effectively, when the language is rich and compelling, tomorrow overwhelms today*'

Research studies undertaken in the field of transformational leadership have highlighted the many benefits offered by authentic transformational leadership behaviours, i.e. enhanced performance (Hater and Bass, 1988; Howell and Aviolo, 1993; Seltzer and Bass, 1990), organisational citizenship behaviours (Bycio et al., 1995), consensus decision making process and team effectiveness (Flood et al.: 2000).

One must however distinguish pseudo transformational leadership from authentic transformational leadership (Bass, 1985, 1996, 1997). The concept behind authentic leadership (Bass, 1985) is that leaders set the example so that the appropriate behaviours are emulated by followers; leaders consequently set high moral standards and demonstrate honesty and integrity, two key characteristics of transformational leaders (Avolio et al., 1991). Graetz (2000) argues that transformational leadership only occurs within organisations where executives 'walk the talk'. This point is particularly well articulated by Crom and Bertels (1999: 163) who posit,

> *'Is is necessary but not sufficient to have a vision that provides direction*
> *for the organisation. To bring this vision to life you need to live it in the*
> *day-to-day business, visible for all members of the organisation'.*

The study of leaders' personal traits and characteristics has been the subject of many controversies (Kirkpatrick and Locke, 1991). The same researchers argue that effective leaders exhibit the following characteristics; strong drive, motivation, honesty, integrity, self-confidence, cognitive ability and knowledge of the business. Avolio et al. (2004) assert that hope, trust and integrity are the three most important characteristics that authentic leaders exhibit. Pillai et al. (1999) gathered evidence that these traits foster positive expectations, cooperation and organisational citizenship behaviour.

A Harvard business research study of 125 authentic transformational leaders (Buell, 2008) concluded that leaders' success was not due to extraordinary skills but to a relentless focus on further developing oneself. Avolio et al. (1991) notes that transformational leaders, over the course of their career, constantly develop themselves and encourage followers to do the same. Conger and Benjamin (1999) argue that

effective leaders develop a learning mindset within their organisation and this creates a falling dominoes effect on followers (Avolio et al., 1991; Bass, 1990).

As noted by Conger and Kanungo (1987), academic researcher have for a number of years shied away from undertaking studies into charismatic leadership. Shaskin (1992) argues that charismatic leadership should in fact not be assimilated in any shape or form with transformational leadership. There is however a large body of research that suggest the opposite (Aaltio-Marjosola and Takala, 2000; Bass, 1985; House, 1977, Weber, 1947). Weber (1947: 48) defined charisma as a 'quality of an individual personality by virtue of which he [the leader] is set apart from ordinary men and treated as endowed with supernatural, superhuman, or at least specifically exceptional qualities'.

In the context of this literature review, the term charismatic leadership will be used in a business context as proposed by Sidani (2005). When reflecting upon Weber's definition of charisma, one could argue that charisma emanates from individuals' personal characteristics. This is confirmed by Conger and Kanungo (1987: 640), who argue that charisma is not an attribute made about individuals because of their rank in the organisation, but because of the behaviours they exhibit.

Bass (1985) argues that charisma, along with intellectual stimulation and inspiration is one of the three distinct characteristics of transformational leaders. Charismatic and transformational leaders exhibit so many common characteristics that these concepts are often referred to as the practically identical twins (Conger, 1999). Conger and Kanungo (1987) posit that charismatic leadership is the most exemplary form of leadership (Conger, 1999).

Charismatic leaders are very similar to servant leaders in terms of personal attributes (self-confidence, expertise), concerns for followers (Conger and Kanungo, 1987) and self-sacrifice behaviour (Sidani, 2005). Charismatic leaders are often perceived by followers as possessing a strong sense of humility.

The importance of this trait is highlighted by Buell (2008: 24) who believes that being humble is a trait all leaders should possess. Humility appears to play such an important role in the leadership process that Collins (2001) developed a leadership humility scale on which leaders can be assessed and ranked. Ellemers et al. (2004) concluded that despite their elevated status, charismatic leaders share the same identity as their followers as well as the same beliefs and values (Katz and Kahn, 1978; House and Baetz, 1979).

Many researchers have investigated the reason why some leaders are perceived by followers as more charismatic than others. Aaltio-Marjosola and Takala (2000) concluded that charisma is a combination of both personal characteristics and an ability to articulate an inspiring vision. Conger and Kanungo (1987) found that there are four variables that could explain why some leaders are perceived as more charismatic than others; degree of discrepancy between the *status quo* and the future vision, leaders' ability to bring radical changes using unconventional means, realistic assessment of the current organisational environment and leaders' impression management methods.

The new leadership paradigm literature seems to make the assumption that charisma is a relatively common phenomenon (Beyer, 1999) and thus should be viewed by organisations as a learnable skill (Atwater et al., 1991). However, as pointed out by Beyer (1999), Weber's theory of charisma (1947) suggests that charisma is a rare phenomenon, which is engendered only when leaders possess truly exceptional personal qualities. Beyer (1999) also notes that for charismatic leadership to occur, a leaders' vision has to be fully realised. This implies that the leader stays with the same organisation for a relatively long period of time, which realistically speaking, rarely happens.

2.6.5 Transcendental leadership

The concept of transcendental leadership was developed by Diane Larkin, a PhD researcher (Gardiner, 2006) who observed leaders exhibiting certain characteristics, which she described as transcendental. Fry (2003) argues that the transcendental ideology represents a more holistic leadership style which 'taps into the fundamental needs of both

leader and follower for spiritual survival and aims to improve the spiritual development of both the leader and followers' (Liu, 2007: 4). It is believed in the transcendental leadership ideology that values, attitudes and behaviours, such as; altruistic love, hope and faith, and vision are characteristics that leaders possess which motivate followers and create a sense of spiritual survival (Liu, 2007). Although closely related to the concepts of transactional and transformational leadership, both ideologies according to Fry (2003) fail to address the fourth element of human existence; spirituality. Reflecting upon the importance of spirituality in the workplace, Liu (2007) notes that the global economic climate has led many organisations to drastically alter their operating and business models, which consequently increased the number of restructure, mergers and acquisitions, thus creating a climate of uncertainty and insecurity in the workplace.

Sankar (2003) argues that leadership excellence should be measured in relation to core values, such as; integrity, trust and human dignity, rather than in terms of charismatic behaviour. Lui (2007: 4) articulates in a particularly concise manner the concept of transcendental leadership. The latter notes;

> *'Without the desire to manipulate others, transcendental leaders address the weakness of transformational/charismatic leadership by providing the motives behind a leader's practices, that is, altruistic love, a sense of wholeness, harmony, and well-being produced through care, concern, appreciation of both self and others, and authentic selfless concern for people.'*

Fairholm (1998) suggests that the transactional, transformational and transcendental ideologies can be ranked from managerial control to spiritual holism. The notion of spiritualism is recurrent in the transcendental leadership ideology. Korac-Kakabadse et al. (2002) argue that historically, spirituality is deeply rooted in religion, but Fowler (1981) suggests that spirituality and faith should be considered as 'a human way of making sense of one's existence' (Sanders III et al., 2003: 8). Judge (1999) asserts that the concept of spirituality can no longer be ignored by society and organisations, especially as societies experience a spiritual revolution (Hassnoot, 2000) and workplaces have become insecure environments (Brandt, 1996). There is a strong body of research that demonstrates the

positive effects of transcendental leadership. In a study by Sanders III et al. (2003) it was concluded that as leaders evolve along this continuum, the consciousness and the moral character dimensions of spirituality become more developed, thus increasing the leader's effectiveness. When reflecting upon the spirituality and leadership praxis, Korac-Kakabdase et al. (2002: 169) argue,

> *'The enlightened leader is service not selfishness; a moderate ego demonstrates wisdom; the leader speaks simply and honestly and intervenes only to shed light and create harmony; the leader sets-time for self reflection; the leader should not lose sight of the single principle of how everything works'*

As demonstrated by Sanders III et al. (2003), as leaders become more focused on their spirituality, they place greater importance on the non materialist aspect of their life.

2.6.6 Shared leadership

The idea behind the concept of where shared leadership originated is that leadership can be (given the culture and context of the organisation as discussed further) shared equally or distributed amongst members of a group. In recent years, it has become apparent that there are a number of organisations worldwide which have opted for a shared leadership type of model. Indeed, in May 2008, professional software giant SAP announced the decision to appoint Leo Apotheker and Henning Kagermann as co-CEOs.

As pointed out by Lee-Davies et al. (2007) previous models of leadership present hierarchical leadership structure, where leaders are often presented as heroes and possess fashionable characteristics, attributes and traits. However, Bligh et al. (2006: 297) note that,

> *'The increasing emphasis on team-based knowledge work, or work that involves significant investment of intellectual capital by a group of skilled professionals, is forcing us to expand our traditional models of leadership, as vested in one individual, to encompass more complex models of leadership'*

Lee-Davies et al. (2007) argue that it may be possible to identify within a given organisation more than one leader. These "ghost leaders", Lee-Davies et al. (2007: 247) can evolve on different organisational levels and may well have influenced some of the thinking behind critical decisions. Graham (2007) points out that in a more traditional leadership structure, the overall performance of the organisation is dependent on the appointed leader. Kakabadse and Kakabadse (2004) note, that shared leadership represents a shift from a focus on hierarchical power to a focus on interaction, shared sense making and learning. Jackson (2000) argues that when shared leadership occurs, individuals approach problems 'in collaborative ways, engaging each other in defining the work to be done, facilitating interaction and sustaining action so that goals can be realised'.

It is anticipated that when deployed effectively, shared leadership can take organisations to a higher level of corporate performance. Graham (2007) presents six fundamental elements that, according to him, are prerequisite to the success of a shared leadership model. Graham (2007) argues the team's values should be based on respect, trust, personal accountability, effective communication, discipline and a sense of working towards common goals. Jackson (2000) presents a variety of barriers to the adoption of shared leadership, such as; team attitude, turf wars, individual career goals, corporate culture and organisational context as discussed later in the chapter.

As pointed out by Bligh (2006), the shared leadership model is not appropriate for every single organisation. Indeed, Lee-Davies et al. (2007) note that this model of leadership calls for an environment where opinions can be expressed and debated and where meanings can be shared. Bligh (2006: 307) suggests that as the shared leadership model evolves 'team members become comfortable enough to truly give and receive mutual influence when confronted with varying tasks, allowing them to move fluidly among different types of leader behaviour, including; directive, transactional, transformational and empowering behaviour'.

One could argue that the enactment of shared leadership could potentially put some strain on the leadership team and create role ambiguity and role conflict. However, Wood and Fields (2007) found that higher level of shared leadership is related to lower levels of role conflict, role ambiguity and stress, in addition to higher levels of role satisfaction.

2.6.7 Executive leadership: a matter of context

Many variables are said to influence the style of leadership of the executive. According to Katz and Kahn (1978), leadership can be an attribute of personality, a reflection of individuals' actual or perceived position, but also an attribute of context. Willner (1984) for instance, when reflecting upon charisma as being a key particularity of successful leaders notes that, charisma is neither an attribute of personality or context, but an attribute of perception. Meindl (1990) adopts a similar position and suggests that leadership has more to do with the mindset of followers than the personal characteristics of an individual. Kirkpatrick and Locke (1991) conducted research on the key personal characteristics of leaders and concluded that charisma, along with creativity, originality and flexibility has less in the way of clear cut evidence of its importance to leadership.

There is a significant body of research (Conger and Kanungo, 1987; Bass et al., 1987; Schepers et al., 2005; Sidani, 2005) to suggest that the context within which leadership occurs determines the success or failure of leaders. Bass (1985), Bass et al. (1987) noted that 'charismatic leaders are more likely to be emulated and followed in times of agonizing doubt and crisis if their message seems like the appropriate solution' (Bass et al., 1987: 84). This is confirmed by Sidani (2005) whose study concluded that while a leader's speech is important, the context of what is being said is equally as important as the message being delivered.

The context within which leadership occurs has pushed academics to reflect upon the necessity for leaders not to adopt one style of leadership but adapt their style depending on the environment and the specifics of their organisations. Goleman (2000); Leban and Zulauf (2004); Bolman and Deal (2006) suggest that leaders should not rely on a single

style of leadership, but have a repertoire of behaviours. According to Goleman (2000: 80), 'leaders with the best results do not rely on only one leadership style; they use most of them in a given week seamlessly and in different measures depending on the business situation'.

According to Goleman (2000) mastering the following leadership styles; authoritative, democratic, affiliative and coaching helps leaders to create a positive effect on climate and results. Bolman and Deal (2006) in their exploration of two executive archetypes (the wizard and the warrior) also concluded that great leaders must be able to switch between those two styles depending on the organisational context. Pawar (2003: 400) argues that different types of organisational contexts can in fact create different 'degrees of need for transformational leadership'

2.6.8   *The role of emotions in the leadership process*

Avolio et al. (2004) note that the role of emotion in the leadership process has received a fair bit of interest in the last decade (Ashkanasy and Tse, 2000; Brief and Weiss, 2002; Finneman, 1993; Forgas, 1995; George, 2000; Goleman, 1998, 2000; Huy, 1999). Kerr et al. (2005: 268) argue that,

> *'Leadership intrinsically is an emotional process, whereby leaders recognize followers' emotional states, attempt to evoke emotions in followers, and then seek to manage followers' emotional states accordingly'*

According to Goleman (2000: 90), if leaders are to switch from one leadership style to another, the latter must have an awareness of which 'emotional intelligence competencies underly the leadership styles they are lacking'. The concept of emotional intelligence (EI) is recognised to be most useful in helping to understand the role played by emotions in the leadership process. EI is defined by Mayer and Salovey (1997: 10) as,

'The ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth'

There have been many research studies supporting the idea that EI is an important component of effective leadership (George, 2000; Palmer et al., 2000) and that EI is shown to have a positive impact on followers' enthusiasm, confidence, optimism (Goleman et al., 2002), enhance individuals' capability to deal with change (Huy, 1999) and helps in resolving interpersonal conflicts (Kirkpatrick and Locke, 1991).

George (2000) argues that there is strong relationship between transformational leadership behaviours and high levels of EI. Yammarino et al. (1993) concluded that individuals' emotional range is the fundamental distinction between transactional managers and transformational leaders. Humphrey (2002) and Palmer et al. (2000) have also found evidence that transformational leaders are more emotionally aware than transactional leaders.

George (2000) argues that emotions can be used to stimulate certain kinds of cognitive processes, and one could argue that leaders high on EI are more likely to maintain high levels of cooperation and trust, as well as developing a sense of enthusiasm, excitement and cooperation. Conger et al. (2000) noted that leaders' behaviour can have an effect not only on the relationship between the leader and the subordinates but also on the way subordinates perceive their own contribution within the organisation. Groves (2006) found evidence that leaders with greater emotional competencies are more likely to exhibit visionary leadership capabilities; which as it was demonstrated previously, is a key attribute of executive leadership. Research studies by George (2000); Palmer et al. (2000) concluded that successful leaders over the years learn to carefully manage followers' emotions but also their own emotions. It is widely accepted that leaders must exhibit a level of empathy which is considered by some as a central attribute of EI (Huy, 1999).

Wasielewski (1985) suggests that leaders' emotional capability has a direct impact on the success or failure of large transformational and change management initiatives. As pointed out by Kanter (1983: 63), 'change is disturbing when it is done to us, exhilarating when it is done by us'. This assumption was also noted by Darcy and Kleiner (1993) who argue that leaders must understand the effect that the forthcoming changes will have on individuals. This last point is particularly interesting given the change agents role that CIOs are expected to play within their respective organisations (IBM Research, 2008 (b); King, 2008; Laud and Thies, 1997; Maruca, 2000).

2.6.9 The leadership journey: reaching authenticity

George and McLean (2007: 10) posit that 'leadership is a long journey into your soul. It's not like anyone can tell you how to do it'. This statement introduces the concept of journey which is recurrent in the executive leadership literature.

Several research studies lead us to think that leadership excellence is a long journey within oneself and through challenging terrain (George and McLean, 2007). Avolio et al. (2004); Bennis (1989); Harter (2002) suggest that the essence of authentic leadership is synonymous with knowing oneself. Avolio et al. (2004: 802) argue that authentic leaders are individuals 'who know who they are, what they believe and value, and act upon those values and beliefs while transparently interacting with others'.

The ability and the willingness to continually re-examine oneself has been demonstrated to be a key characteristic of transformational leaders; 'it is essential for the leader to know his/ her strengths because from these strengths the leader will derive personal power' (Avolio et al., 1991: 12). Sosik (2001) gathered evidence that high level of self-awareness can be considered as a predictor of managerial performance and charismatic leadership.

Moore (2008) suggests that growing up (in terms of responsibility) is an important part of the leadership journey, however, this should be considered by leaders as only part of the

leadership journey. Growing as a human being is equally as important as going up the corporate ladder.

Table 2.3 presents a summary of the literature on CIO leadership.

Table.2.3: CIO Leadership: Literature review table

Researcher(s)	Study Type	Sample Size	Key Focus	Relevance to research study
Aaltio-Marjola and Takala (2000)	Qualitative	1	Charismatic leadership	Charismatic leadership is a combination of personal characteristics and an ability to articulate an inspiring vision
				Charisma is one of the three distinct characteristics of transformational leadership
Avolio et al. (1991)	Literature review	N/A	Transformational leadership	Transformational leaders display four main characteristics: individualised consideration, intellectual stimulation, inspirational motivation and idealised influence
Avolio et al. (2004)	Literature review	N/A	Transformational leadership	Hope, trust and integrity are the three most important characteristics that authentic leaders exhibit
Bolman and Deal (2006)	Qualitative	2		Leaders shall not rely on a single style of leadership, but on a repertoire of behaviours
Buell (2008)	Secondary qualitative research	125	Transformational leadership	Leaders' success has nothing to do with possessing extraordinary skills or having a specific trait of characters, but to a relentless focus on further developing themselves
Burns (1978)	Conceptual	N/A	Transactional leadership	Transactional leaders influence others by appealing to 'their self-interest primarily through the exchange of valued rewards for services or other desired behaviours' Brown and Posner (2001: 403)
Conger (1999)	Literature review	N/A	Executive leadership	Followers empowerment should be considered as the end result of leadership
Conger and Kanungo (1987)	Conceptual	N/A	Charismatic leadership	There are four variables that could explain why some leaders are perceived as charismatic: • The degree of discrepancy between status quo and future vision • Ability to bring radical changes using unconventional means • Realistic assessment of the current environment • Use of impression management methods
Crom and Bertels (1999)	Conceptual	N/A	Transformational leadership	Transformational leadership occurs only within organisations where executives 'walk the talk'.

Ellemers et al. (2004)	Unknown	Unknown	Charismatic leadership	Charismatic leaders share the same identity, beliefs and values as their followers.
George (2000)	Literature review	N/A	Emotional intelligence in leadership	There is a strong relationship between transformational leadership and high levels of EI. EI has been shown to have a positive impact on followers' enthusiasm, confidence, optimism, ability to deal with change and resolving interpersonal conflicts.
Goleman (2000)	Quantitative	3871	Executive leadership	Leaders shall not rely on a single style of leadership, but on a repertoire of behaviours.
House and Baetz (1979)	Conceptual	Unknown	Charismatic leadership	Charismatic leaders share the same identity, beliefs and values as their followers.
Katz and Kahn (1978)	Conceptual	N/A	Executive leadership	Leadership at lower level is qualitatively different than upper-level leadership.
		N/A	Contextual aspect of leadership	Leadership can be an attribute of personality, a reflection of individual's actual or perceived position, but also an attribute of context.
		N/A	Charismatic leadership	Charismatic leaders share the same identity, beliefs and values as their followers.
Kirkpatrick and Locke (1991)	Secondary qualitative research	10+	Emotional intelligence in leadership	There is a strong relationship between transformational leadership and high levels of EI. EI has been shown to have a positive impact on followers' enthusiasm, confidence, optimism, ability to deal with change and resolving interpersonal conflicts.
Leban and Zulauf (2004)	Quantitative	24	Executive leadership	Leaders shall not rely on a single style of leadership, but on a repertoire of behaviours
McCarthy et al. (2005)	Qualitative	1	Executive leadership	Leaders consistently navigate through paradox and complex changes
Palmer et al. (2000)	Quantitative	43	Emotional intelligence in leadership	There is a strong relationship between transformational leadership and high levels of EI. EI has been shown to have a positive impact on followers' enthusiasm, confidence, optimism, ability to deal with change and resolving interpersonal conflicts.
Tauhert (1999)	Qualitative	Unknown	CIO leadership	The lack of leadership capabilities is what has prevented many CIOs from assuming CEOs positions
Waller et al (2010)	Qualitative	34	Executive leadership	Waller et al. (2010) suggest that there are seven leadership skills that CIOs ought to possess to drive results (commiting to leadership first everything else second, leading differently than one thinks, embracing one's softer side, forging right relationships, driving right results, master communications, inspiring others, building people not systems)

| Zalesnik and Kets de Vries (1975) | Qualitative | Unknown | Transactional / Transformational leadership | Managers are significantly different to leaders |

2.7 Summary of Part II: An Introduction to CIO Leadership

As demonstrated in the first section of this literature review chapter, it appears that the role of the CIO has been evolving over the last few decades. The aim of the second part of this literature review chapter was to introduce some key leadership concepts and discuss some of the main characteristics of executive leaders.

This section on CIO leadership introduced the four principal leadership ideologies (transactional, transformational, transcendental and shared leadership) as well as other relevant developments that have occurred in the leadership research field over the last few decades. The concepts discussed in this introduction to CIO leadership will be particularly useful when reflecting upon the mindset and attitude that is required to be a successful CIO.

2.8 Part III: An Introduction to the Role Theory Framework

The last section of this literature review chapter aims at presenting several key role theory concepts. Although a nebulous framework (Neiman and Hugues, 1951), role theory is considered as a useful and insightful framework (Hales, 1986) and has been used by social researchers when carrying research into managerial roles. According to Biddle (1986: 68) the role theory framework provides a perspective 'for discussing or studying many social issues'.

It is believed that using selected elements of a mid-range theoretical structure (Solomon et al., 1985) like the role theory will shape our understanding of how CIOs perceive their role and the changes affecting them. Fondas and Stewart (1994: 85) argue that the role theory framework is particularly useful 'for explaining how a manager affects and effects

the expectations others hold of his or her behaviour in the job'. As highlighted in previous sections, the role of the CIO has been gradually moving from a tactical and operational role to a more strategic one (Jones et al., 1995; Sutton and Arnold, 2005). The changes in the role and responsibilities of CIOs have had a drastic impact on the duties that CIOs are expected to perform and the expectations that business executives hold of them. A research study by Preston et al. (2008) highlighted the importance of expectations in the success of CIOs and concluded that CIOs who join an organisation which has had a recent history of dissatisfaction with IT performance are less likely to be granted sufficient latitude of action to make the required changes within the IT function. Preston et al. (2008) argue that in some cases, executives' expectations act as self fulfilling prophecies and lead organisation into a circle of IT failures.

2.8.1 The notion of role

Social researchers have tried very hard to demystify the concept of role within a social environment. Role has been defined as:
- 'a particular patterned sequence of learned actions or deeds performed by a person in an interaction situation' (Sarbin, 1954: 225).
- 'a particular set of norms that is organized about a function' (Bates and Harvey 1975: 106).
- 'a comprehensive pattern for behaviour and attitude' (Turner 1979: 124).
- 'what actor does in his relations with others seen in the context of its functional significance to the social system' (Parsons, 1951: 25).
- 'a behaviour referring to normative expectations associated with a position in a social system' (Allen and Van de Vliert 1984a: 3).

As Campbell (1999: 2) points out, some elements of these definitions overlap and consequently increase the confusion around the concept of role. Biddle (1986) suggests that role theory should in fact be treated as a science and is defined as 'the study of behaviours that are characteristic of persons within contexts and with various processes that presumably produce, explain, or are affected by those behaviors' (Biddle, 1986: 67).

Biddle's definition appears to integrate 'the various elements and conceptualizations in role theory' (Campbell, 1999: 2).

As noted by Biddle (1986: 68) role theory started as a theoretical metaphor or dramaturgical metaphor (Solomon et al., 1985: 102). Indeed, within the role theory framework, individuals are compared to actors (Parsons, 1951). Biddle and Thomas (1979: 4) explain in a particularly concise manner the reasons underpinning such a comparison,

> *'When actors portray a character in a play, their performance is determined by the script, the director's instructions, the performances of fellow actors, and reactions of the audience as well as by the acting talents of the players. Apart from differences between actors in the interpretation of their parts, the performance of each actor is programmed by all of these external factors; consequently, there are significant similarities in the performances of actors taking the same part, no matter who the actors are'.*

Merton (1969) a widely recognised key contributor to role theory developed the concept of role set. The role set of an individual consists of the different people with whom a manager interacts and 'who have a stake in and hold expectations about the manager's performance in the job' (Fondas and Stewart, 1994: 85).

2.8.2 The role theory framework

The role perspective arose in the late 1920s and early 1930s (Campbell, 1999; Westbourne et al., 1998) and offers an interesting perspective to social researchers as it links fields, such as; sociology, social psychology, anthropology and organisational behaviour (Biddle, 1986; Hales, 1986; Katz and Kahn, 1978). Fondas and Stewart (1994: 84) suggest that role theory is a useful framework 'for analysing both the influence of expectations on managerial behaviour and the effect of individual actions and preferences on behaviour'.

Campbell (1999), Fondas and Stewart (1994) and Sarbin and Allen (1968) argue that the term 'theory' is somewhat misleading in the context of role theory and that the role theory framework should be considered as a series of research streams organised in a non cohesive manner. It is widely accepted within the social research community that this confusion is the result of a lack of consistency with the terminology used over the years (Bidle, 1986; Breese, 1997; Campbell, 1999). Fondas and Stewart (1994) argue that over the years, researchers interested in the role theory perspective have developed their own concepts without linking them to concepts developed in previous research studies. As noted by Breese (1997: 113) 'one finds common words and ideas used in rather disparate, confusing and arbitrary ways. Eventually what has emerged is rather divergent traditions under an umbrella-like catch phrase known as role theory'.

Similar to the literature review conducted by Campbell (1999), this literature review will present the five key perspectives in role theory as identified by Biddle (1986) (Figure 2.3).

Figure 2.3: The Role Theory Framework
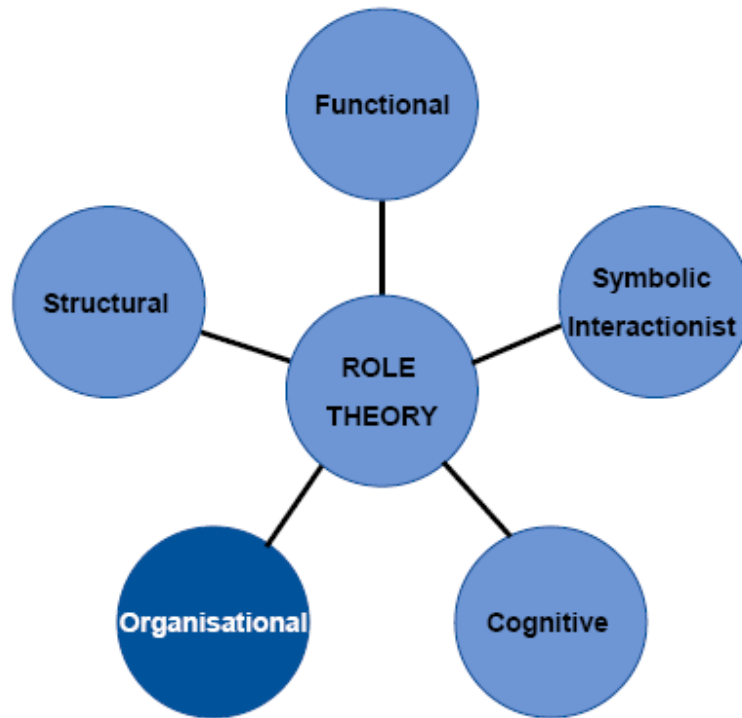
2.8.3 Functional role theory

Linton (1936), Parsons (1951) and Parsons and Shils (1951) are recognised as key contributors to functional role theory (Campbell, 1999). Biddle (1986) argues that functional role theory has focused on the behaviours of individuals occupying a social position within a stable social system. This perspective suggests that individuals within their social systems are taught norms and are expected to conform to those norms and sanction individuals who do not. As noted by Campbell (1999: 3), in the functional framework, 'roles are conceived as the shared, normative expectations that prescribe and explain these behaviours'.

2.8.4 Symbolic interactionist role theory

The interactionist perspective was greatly influenced by the work of Mead (1934) and Sarbin (1954) and is recognised as being a more dynamic interpretation of role, where roles are created through interactions with others (Biddle, 1979; Breese, 1997). As noted by Fondas and Stewart (1994: 90),

> 'Role expectations and behaviours are adjusted in the course of interaction in an evolving, dynamic process of negotiating and mutual influence which reflects the preferences of the jobholder as well as those of role senders. Both parties send and receive messages; furthermore, the jobholder's messages consist of not only responses or 'feedback' to a role sender but also attempts to actively recast expectations so the will be more acceptable and consistent with the jobholder's own preferences'

2.8.5 Structural role theory

In the structural perspective, individuals' roles are associated with the position of individuals within a specific social structure (Petrovic, 2006). Structural role theory is as noted by Biddle (1986: 72) 'focused on social structures, conceived as stable organisations of sets of persons (called social positions or statuses) who share the same, patterned behaviors (roles) that are directed towards other sets of persons in the structure'.

2.8.6 Cognitive role theory

The key focus of cognitive role theory has been on role expectations and behaviour (Biddle, 1986), and especially how an individual perceives others' expectations and how these expectations affect the behaviour of this individual.

Biddle (1986: 74) notes,

> *'As a rule, this work has focused on relationships between role expectations and behavior. Attention has been given to social conditions that give rise to expectations, to techniques for measuring expectations, and to the impact of expectations on social conduct. Many cognitive role theorists have also concerned themselves with the ways in which a person perceived the expectations of others and with the effects of those expectations on behavior'*

2.8.7 Organisational role theory

Organisational role theory represents 'a perspective among researchers interested in the roles of formal organisations' (Campbell, 1999: 4). In the organisational role perspective, roles are viewed as 'a pattern of behaviours associated with an individual occupying a particular position/ job within the structure of the organisation which links the individual to his/ her work group in order to perform the assigned organisational tasks' (Petrovic, 2006: 13). As suggested by Biddle (1986), this specific role theory perspective is focused on task-oriented, pre-planned and hierarchical social systems.

There are many contributors to the development of the organisational role theory, amongst which Kahn and Katz (1978: 219) who perceived it as the opportunity 'for linking the individual and organisational levels of research and theory'. Solomon et al. (1985) asserted that the study of roles in organisations enables researchers to study defined positions as opposed to studying the characteristics of individuals who occupy these positions.

Kahn et al. (1964) asserted that individuals' roles within organisations can be interpreted in different manners, and therefore individuals' behaviours will be different to others' despite the similar organisational context. Bassett and Carr (1996: 38) argue that roles are partly formed within a social context by both 'behavioural modelling and specific role enactment demands placed on individuals'.

2.8.8 Role theory: key concepts

Several concepts in the role theory framework have been identified as being particularly relevant to this research study. As suggested previously, the CIO role has been evolving over the last few decades and so have the expectations of the role and it would be beneficial for the purpose of this literature review to highlight some of the consequences a change of expectations have on individuals as well as the challenges faced by individuals whose role spans across organisational boundaries. It is also believed that in order to fully understand an individual's perception of their role, one must understand and explore their approach to managerial power and level of discretion as well as their perception of the level of control that they possess over their fate. This section therefore aims at examining the concepts of role expectations, boundary spanning, role conflicts, role ambiguity, managerial discretion, managerial power and locus of control.

This section is also the opportunity to present in detail the demands, constraints, choice (DCC) model developed by Stewart (1976; 1982) and its relevance to this research study. For the purpose of the next section of this literature review, the recommendations of Fondas and Stewart (1994) and Campbell (1999) around the choice of terminology are followed and consequently the researcher uses a consistent terminology throughout the thesis. For the purpose of this study, the terminology developed by Katz and Kahn is adopted as the researcher feels that it best encapsulates the subtleties of role theory.

2.8.9 Role expectations

Role expectation is a key concept within the role theory framework and it is a combination of individuals' own expectations of their role and the expectations of other individuals within the same role set (Campbell, 1999: 5). As suggested by Biddle (1986), most versions of role theory suggest that expectations generate behaviours. The latter also argues that individuals are aware of the expectations they hold and that they are learnt through experience. Szilagyi (1997: 376) posits that individuals in organisations are

'continually exposed to a variety of expectations from their work environment that may affect the perceptions of their organisational roles'.

Figure 2.4: Theoretical Model of Role Formation
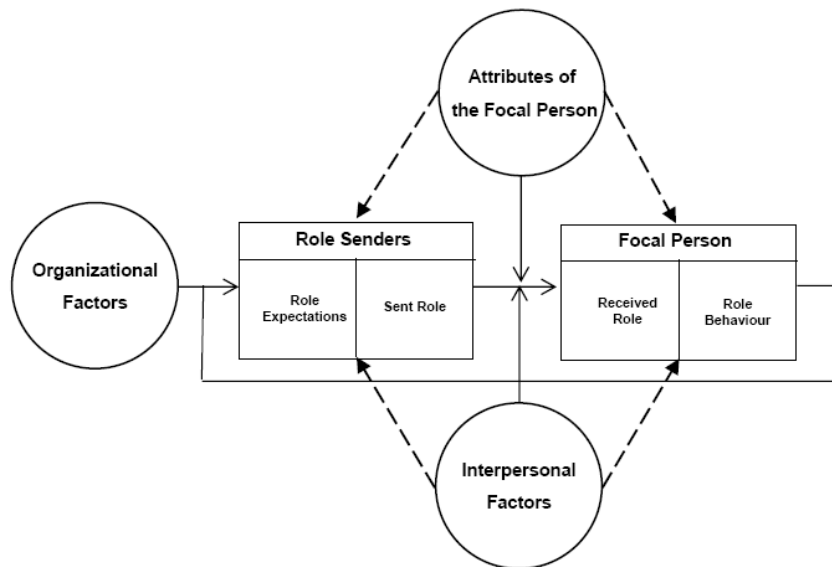
Katz and Kahn (1978: 196) argue that role formation is a four step process (Figure 2.4) where a focal person is the recipient of the role senders' expectations, which will in turn influence the role behaviour of the focal person. As illustrated by Katz and Kahn (1978), the expectations of the role senders are influenced by organisational and interpersonal factors as well as by the focal person's attributes and characteristics. By interpersonal factors, Katz and Kahn (1978) refer to certain attributes which are likely to influence the relationship between role sender and the focal person. To illustrate the importance of interpersonal factors, Bergsteiner and Avery (2003: 53) note,

> *'a CEO and her personal assistant may both exhibit a certain attribute (e.g. trustworthiness). This fact is likely to influence their interpersonal relationship, which, in turn, is likely to have an impact on the expectations that both hold with respect to each other.*

Fondas and Stewart (1994: 85) provide a meaningful and concise explanation of Katz and Kahn (1978)'s role formation model:

> *'The sent role refers to the acts of communication and influence by the role set to convey role expectations. The received role consists of the manager's perceptions of the messages sent by the role set. 'Role behaviour' is what the manager does in response to the messages he or she has perceived and in response to his or her own expectations create demands and constraints on the jobholder, while the manager's role behaviour provides the role set with information about the extent of compliance with expectations'*

Fondas and Stewart (1994) propose a model of expectation enactment in managerial jobs (Figure 2.5). This is particularly interesting when reflecting upon the importance of role expectations and will be further explored when presenting the concepts of the abeyant CIO and the transmuted CIO. According to Fondas and Stewart (1994) there are four factors that influence the enactment of expectation in managerial jobs.

Fondas and Stewart (1994) concluded that the characteristics of the role set (authority and distance, expectation strength) and the characteristics of the focal manager (power and achievement motivation, internal locus of control) along with factors external and internal to the role set influence the enactment of expectations.

Figure 2.5: Model of expectation enactment in managerial jobs
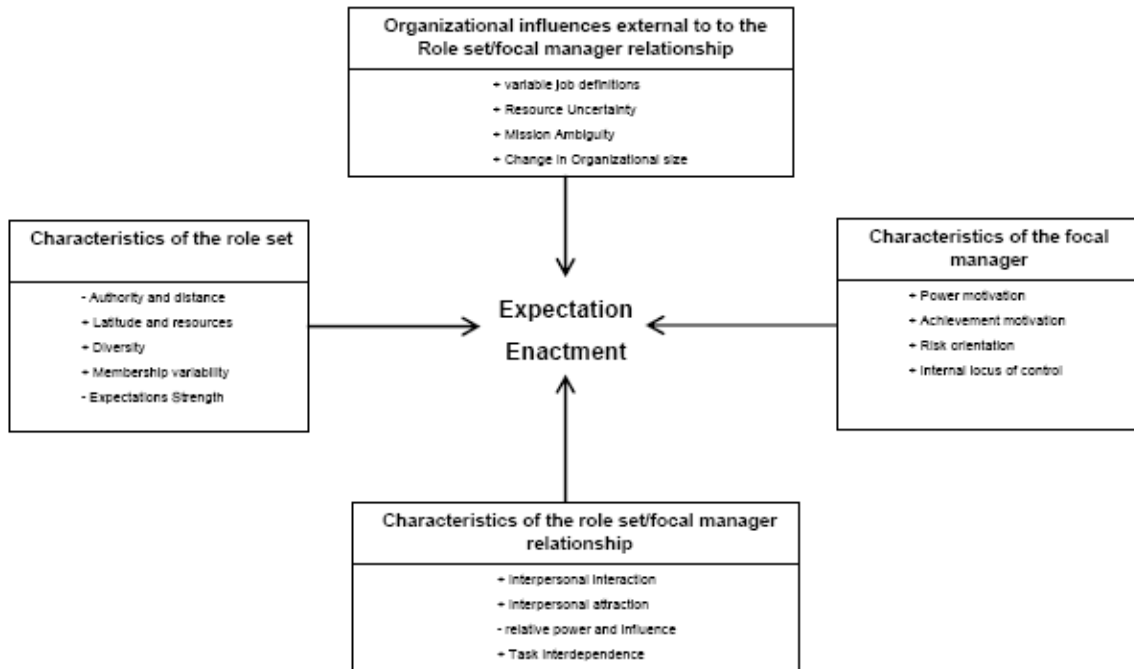
Source: Fondas and Stewart (1994: 92)

Inextricably linked to the notion of role expectation is the notion of role interdependence (Solomon et al., 1985). According to Solomon et al. (1985: 103), individuals' behaviour is 'interdependent with the behaviour of those in complimentary positions. One's role conduct must take into consideration the role behaviour of others'. This phenomenon was also highlighted by Rodham (2000: 72) who concluded, 'because all members of a focal person's role set depend upon his or her performance in some fashion, they therefore develop beliefs and attitudes about what he/ she should or should not do as part of his/ her role'.

Building on the research by Fondas and Stewart (1994); Katz and Kahn (1978) and Rodham (2000), it would beneficial for the purpose of this literature review to take a step back and look at some of the criticisms of the CIO role. It is believed, that by doing so, the researcher will highlight some of the expectations that individuals within

organisations hold of the CIO role. Shivers-Blackwell (2004) suggest that the role set of individuals in an organisation consists of the individual's immediate manager, his or her subordinates and key stakeholders with whom the individual works closely with. It can be assumed that the role set of a CIO is composed of each member of the c-level suite, business peers (i.e. head of business unit), direct reports and key strategic partners (i.e. major strategic vendors).

It is widely acknowledged that a cultural gap (Remenyi et al., 2005) and a lack of understanding (Coghlan and Hurley, 1996) exists between IT executives and their executive peers. Grover et al. (1993) noted that CIOs are often perceived by executives as outsiders. Kaarst-Brown and Robey (1999), when conducting ethnographic studies on cultural assumptions in IT management concluded that disputes between IT and other organisational functions erupt from a cultural mismatch between business functions and the IT function due to different sub-unit cultures (Kaarst-Brown and Robey, 1999).

It appears that CIOs have the challenging task of running a function that uses a lot of resources but 'offers little measurable evidence of its value' (Earl and Feeny, 1994: 11). Heresniak (1999: 51) argues that the CIO role is about 'the most maligned and misaligned occupation around', and that all too often CIOs are 'neither understood nor appreciated for their contributions' (Highbarger, 1988: 53). Shortly after the creation of this new senior executive role, several skeptics suggested that the CIO phenomenon was 'a bit of a dead-end job (Thurow in Keen, 1990: 60), nothing more than a fad, an excuse to pin a fancy title and highly salary on the same MIS directors already in place in most companies' (Romanczuk and Pemberton, 1997: 15).

Nicknames like 'computer czar' (Romanczuk and Pemberton, 1997: 15) or 'corporate eagle of tomorrow', (Pemberton, 1992: 42) are fairly common in the CIO literature. Westerman and Weil (2005) argue that most of the dispute between IT and other parts of the organisation is due to unclear expectations. This lack of mutual understanding was documented by Feld and Marmol (1994) and considered as a source of frustration for both CIOs and CEOs.

Romanczuk and Pemberton (1997: 23) observed that 'if by nature they [CIOs] are good at the technical IS aspects, they may, by nature, tend to be cautious, logical, and inexperienced as communicators and promoters'. IT executive's lack of business acumen is a recurrent criticism in the literature. Cramm and May (1998) note that executive roles are by nature multidisciplinary and demanding, but they argue that the CIO role is even more demanding when considering factors, such as; the ever-changing technology landscape, shortage of qualified resources and the lack of understanding surrounding the CIO role. Cramm and May (1998) suggest that some individuals in the CIO role can feel isolated, out of step with their organisation and completely misunderstood.

All the concepts explored in this section on role expectations have proven to be particularly useful. Fondas and Stewart's (1994) model of expectation enactment represents a key component of the reflection presented in the research conclusion chapter.

2.8.10 The boundary spanning role of CIOs

One of the key roles of CIOs is to bridge the gap between IT and the rest of the organisation, in other words, translating business needs into tangible solutions based on the use of IT. Donovan (1988) argues that CIOs should act as network managers, a spokesman (/woman) whose primary function is to act as a bridge between the IT function and other business units. Jaska and Hogan (2006: 467) noted that the most successful IT executives are the ones who can 'straddle the fence, knowing both the business needs and how technology can help the organisation meet these business needs'. Pemberton (1992: 42) suggests that bridging this gap is the main reason for creating the CIO position in the first place.

Stephens et al. (1992) believes that CIOs have a role in bridging the gap between IT and other functional units, and that CIOs should act as catalysts and 'broaden the vision of other departments and encourage them to use IT in innovative ways' (O'Riodan, 1987: 55). The pace of change within organisations constantly increases and it is imperative for

CIOs to assist CEOs to bridge the gaps between the constantly changing business needs and technology (Feld and Marmol, 1994).

This key responsibility for CIOs brings us to the concept of boundary spanning, which has drawn much attention amongst organisational scholars and practitioners (Oliver and Montgomery, 2005). This concept will prove to be particularly helpful to understand more deeply some of the consequences of working across organisational boundaries. There have been many attempts at defining the concept of organisational boundary. It is defined by Hoe (2006: 9) as,

> *'The limits of organisations and departments within organisations, these boundaries regulate the flow of knowledge between the organisation and its outside environment, and between the functional departments'*

Boundary spanners (Sarason and Lorentz, 1998) are individuals who operate at the boundary of an organisation performing activities relevant to running and developing the organisation. One could argue that boundary spanners act as a linking pin (Organ, 1971) between the various entities located within and outside the organisation (Leifer and Delbecq, 1978; Hoe, 2006). Ashkenas (2000) noted that organisations in order to promote speed, flexibility, integration and innovation are now required to loosen boundaries between functional units and across geographies to implement changes. These changes as pointed out by Balogun et al. (2005) often require partial or complete realignment of existing internal organisational boundaries. This statement is echoed by Carlile (2002) who asserts that individuals involved in boundary spanning activities face the challenging task of convincing other functions to alter some of their key operational and functional processes. Haselkorn (2003) argues that CIOs' toughest problems rarely occur when dealing with a functional manager, but when the level of involvement spans across functional and hierarchical boundaries.

When considering that the CIO is one of the few individuals within organisations that has an overall view of key business processes (King, 2008; Hoffman and Stedman, 2008) one could postulate that they should be considered as suitable candidates to lead boundary

spanning activities. Haselkorn (2003) shares similar views and suggests that when an ICT issue is identified at a company-wide level, CIOs ought to take ownership and provide guidance. Levina and Vaast (2005) argue that CIOs and IT professionals through the support of a boundary object (Star and Griesemer, 1989) (i.e. Enterprise Resource Planning solutions or other solutions having a company-wide impact) are prime examples of individuals who span inside and outside their organisation to perform their role. Adler et al. (2003) and Pawlowski and Robey (2004) argue that given the current organisational settings, a wide range of IT professionals ought to develop their boundary spanning capabilities.

Levina and Vaast (2005) noted that there is much theoretical support for the idea that strong boundary spanning capability is a key organisational competence, a 'nexus of competition' (Golden and Veiga, 2005: 178). Despite, the complexity of communication' dynamics across organisational boundaries, Weedman (1992: 257) posits that cross boundaries communication can be a source of 'new information and awareness of environmental change' and is therefore beneficial to the overall health of the organisation. Ancona and Caldwell (1992) have found evidence that teams engaged in boundary spanning activities tend to be perceived as performing better and more likely to achieve organisational goals. According to Boulton et al. (1982) boundary spanners during the course of their activity gather information (whether formally or informally) (MacDonald, 1995) which can be of great value and relevant to 'short term tactical managerial decisions' (Boulton et al.,1982: 501).

Cross and Parker (2004) support this view and suggest that boundary spanners facilitate the sharing of expertise by enabling different groups of individuals geographically or functionally separated to collaborate. Loosening organisational boundaries has also been demonstrated to enable a 'healthy and brisk flow of ideas, energy and information' (Ashkenas, 2000: 11). One must however bear in mind that for this flow of idea to take place, boundary spanners must have the ability to convince others to support their initiatives (Balogun et al., 2005). Crossing boundaries implies interacting with groups of individuals who may have different norms (Cadwell and O'Reilly III, 1981) and who

differ in their willingness to communicate across boundaries. This last point reinforces Jaska and Hogan's (2006) assumption that CIOs' ability to use different languages when communicating with different shareholders is a critical skill to possess.

Since IT is now at the core of every single business function, one could argue that CIOs must possess the ability to quickly identify organisational boundaries and understand the mechanisms and dynamics behind them. However, as noted by Fennell and Alexander (1987), the fierce competition has led many organisations to merge, partner or acquire other organisations or subsidiaries; which has tremendously increased the complexity in integrating, identifying and defining organisations' boundaries.

The difficulty in crossing organisational boundaries was documented by Katz and Kahn (1966) who noted that specialised sub-units are often separated from each other but also from external entities. Tushman and Scanlan (1981) suggest that although this sub-unit isolation phenomenon can potentially increase the development of knowledge within units, it also creates obstacles to information sharing between functional units. This phenomenon was partly attributed to the use of esoteric and sometimes technical languages within sub-units (Arrow, 1974 ; March and Simon, 1958). Carlile (2002: 443) based on Lawrence and Lorsch's (1967) differentiation and integration model argues that differentiation will arise because 'sub-units (i.e. sales, R&D, production) face environments with different degrees of uncertainty'. When researching the ways to improve communication across boundaries, Nonaka (1994) concluded that individuals in boundary spanning positions must develop interactions through a mutual understanding.

It appears that boundary spanning is a key function within organisations, and one could wonder what the key characteristics of efficient boundary spanners are likely to be. Hoe (2006) argues that boundary spanners may be selected based on their functional area, with a preference for individuals in sales, customer services and project management.

Balogun et al. (2005) asserted that the skills required to be a successful boundary spanner are the same as for a successful change agent. When reflecting upon organisational

boundary, one could suggest that success in boundary spanning activities could be related to a formal position within the organisation. However, Blau (1963) and Tushman and Scanlan (1981) gathered evidence that success in boundary spanning activities is not an attribute of formal positions. Tushman and Scanlan (1981) argue that the success of boundary spanners is not dependent on formal status but on individuals' perception of competency of the boundary spanner. One could therefore argue that executives involved in boundary spanning activities must realise that their success is dependent on their expectations and their understanding of their own role but also on the expectations of the individual's role set.

Adler et al. (2003: 115) stresses that boundary spanners must possess complex interpersonal social skills and process facilitation skills (O'Hara-Devereaux and Johansen, 1994). Alter et al. (2003) argue that strong interpersonal social skills are critical to acquire, evaluate, discard, retain and disseminate information within organisations. This specific skill seems to be particularly important considering that boundary spanners are often requested to influence and deal with individuals on whom they have no authority and who can be more senior than they are (Balogun et al., 2005). The importance of adapting to a variety of social cues is also highlighted by Cadwell and O'Reilly III (1981) who gathered evidence that individuals sensitive to social cues tend to perform better in boundary spanning activities irrespective of their job knowledge.

Balogun et al. (2005); Levina and Vaast (2005) and Wiesenfeld and Hewlin (2003) observed that very often boundary spanners tend to occupy managerial positions and therefore, these individuals may not be willing to part with some aspects of their role to focus essentially on boundary spanning activities (Wiesenfeld and Hewlin, 2003).

2.8.11 Role conflict and role ambiguity

Merton (1969) acknowledges that some situations create disturbance. Miles (1977: 22) suggests that role conflict occurs when individuals perceive that 'role demands or expectations which he or she receives are incompatible'.

House and Rizzio (1972: 475) make a point of distinguishing role conflict from role ambiguity. Despite the fact that both phenomena emanate from a degree of incongruity and incompatibility of expectations, they argue that role conflict or role strain (Secord and Backman, 1970) come from a discrepancy of expectation between an individual's expectations of his/ her role and the organisation's expectation of the individual's role. Role ambiguity on the other hand, emanates from a lack of clarity regarding the outcomes of an individual's behaviour (House and Rizzio, 1972). Kahn et al. (1964) argue that one must distinguish role expectation ambiguity which is directly related to job tension, dissatisfaction and futility (Miles, 1977) and performance evaluation role ambiguity which has been related to tension and self-confidence.

Research studies by Friedman and Podolny (1992), Levina and Vaast (2005) and Nygaard and Dahlstrom (2002) revealed that role conflict and role ambiguity are two of the most frequent problems faced by individuals involved in boundary spanning. Miles (1977) concluded that boundary spanners experience the greatest level of general and intersender role conflict. Miles (1977: 23) argues,

> *'A person occupying a liaison position linking two organisations or departments is subject to many potential conflicting role pressures coming from individuals who are likely to have inadequate conceptions of the focal role and who are located in separate units or organisations, each having its own goals, objectives and norms – some antithetical to those of the focal unit or organisation' (Miles, 1977: 23)*

There has been a real focus in the academic community on the effects of role conflict and role ambiguity on individuals. Kahn et al. (1964) and Rizzo et al. (1970) gathered evidence that there is a strong link between role conflict and dissatisfaction at work, likelihood to change job, level of work-related stress and anxiety, unfavourable attitudes towards individuals within the same role set and withdrawal from interactions with role senders (Van Sell et al., 1981). Kahn et al. (1964) also suggest that individuals in organisations in a role ambiguity situation develop their own coping behaviour and attempt to resolve the conflict themselves or a distortion of the reality of the situation. As

noted by Biddle (1986), the concept of role overload, a condition where individuals are faced with too many expectations has also appeared in the literature. Sieber's (1974) study concluded that despite all the evidence of the consequences of role ambiguity and role conflict, individuals will still sometimes prefer to take on multiple roles.

Bassett and Carr (1996) suggest that for organisations to achieve operational excellence and effectiveness, conflict management and conflict resolution skills are amongst the most critical skills that organisations ought to possess. Dalton (1959) demonstrated that strong executives have a higher tolerance for conflict.

2.8.12 Demands-Constraints-Choices

The Demands Constraints Choices (DCC) model developed by Stewart (1982) is perceived as a useful model 'for defining differences in managerial work and discretion across jobs' (Lowe, 2003: 193). Stewart (1976) argued that there has been too much emphasis over the years upon the similarities that exist between managerial roles and not enough upon the differences. The DCC model as noted by Stewart (1976) enables researchers to reflect upon managerial roles in terms of their constraints, demands and the choices that they offer.

Previous studies into the managerial role revealed that individuals are not merely the passive recipient of role expectations and that the latter are actively involved in shaping their own role (Biddle, 1979; Fondas and Stewart, 1994; Troyer et al., 2000; Willcocks, 1994). Willcocks (1994) posits that roles are not static and change as individuals interact together. Troyer et al. (2000: 413) argue that the 'role corresponding to a position always has the potential to be made by the occupant of the position'.

The DCC model introduces here the concept of role making which assumes that individuals are not simply reactive to other individuals' expectations but also enact their own roles; 'whilst role taking is about how the focal person perceives role expectations and act upon them, role making is about the focal person attempting to create and/ or

change role expectations and communicate those to the role senders' (Petrovis, 2006: 24). The process of role making and expectations enactment was further explored by Fondas and Stewart (1994).

Stewart (1982) believes that in order to understand managerial roles, one must understand the flexibility offered by the role and although there are some common elements of flexibility in managerial roles, there are significant differences in 'the opportunities that managerial jobs offer for one jobholder to behave differently from another' (Stewart, 1982: 11).

Figure 2.6: Demands-Constraints-Choices model
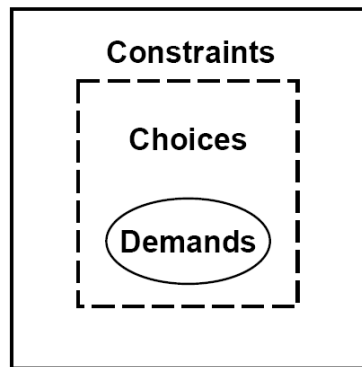
In Stewart's (1982) model, demands represents what 'anyone in the job has to do'. In other words, the activities (as part of the role remit or imposed by management) that a manager must do as part of their role. Constraints are the tangible or intangible factors (such as; finance and attitude) which limit what the manager can do (Stewart, 2003 in Lowe, 2003). Stewart (1982) argues that individuals in managerial positions are faced with activities that they can do, but do not have to if they are not willing to do so, , managers have choices and opportunities to 'do different work, from another and to do it in different ways' (Stewart, 1982: 9). Kroeck (2003) noted that managers have, for instance, the choice of determining how to perform their role, how much they can delegate and how much they are willing to observe organisational boundaries. As stressed

by Stewart (1982), choices are only limited by constraints and demands, but these can change over time and be influenced by the manager. Fondas and Stewart (1994) however, recognise that not every single manager engages in role making and not every role set would allow individuals to do so. According to Graen (1976), there are three conditions for which role making occurs within organisations; no set in stone role descriptions, a motivation and ability to perform a job beyond requirements, and possessing key resources (i.e. information, visibility, assignments) that can be exchanged with managers to motivate them to perform beyond expectations.

2.8.13 Managerial discretion and managerial power

Preston et al. (2008) applied the theory of managerial discretion to define CIO strategic decision-making authority. Cohen and Denis (2010) reinforce the usefulness of this concept and argue that future research should explore managerial discretion in the CIO role.

As discussed previously, the fulfilment of one's role within an organisation is dependent upon both the individual's perception of his/ her role and others perception of the individual's role and one cannot discuss role perception without acknowledging past research studies in the field of managerial discretion and managerial power. As pointed by Wahlgren (2003) in Lowe (2003) there is a clear link between the DCC model and managerial discretion, 'role discretion has been viewed as the focal person's opportunity to modify their role and make it more familiar and controllable rather than adapting their behaviour to the role' (Petrovic, 2006:27).

Hambrick and Finkelstein (1987: 371) introduced the concept of managerial discretion, which they define as the 'latitude of managerial action' or 'individual empowerment to act' (Thompson, 1981). Managerial discretion can potentially be a powerful tool (Key, 1997) however, as suggested by Hambrick and Finkelstein (1987) executives ought to be great readers of situations, and act according to their perception of the amount of discretion that they possess. Carpenter and Golden (1997: 187) assert that,

'Even before strategic choices can be made or strategic actions are taken, managers must first determine which organisational issues are within their domain, or discretionary set, and which issues are beyond their latitude'

Carpenter and Golden (1997: 192) concluded that 'managers who perceive themselves as having much discretion are more likely to affect change, or seek to otherwise influence critical organisational contingencies'.

Pfeffer (1981; 1992) asserted that perceived power is what allows executives to exercise a degree of influence over their peers and allow them to exert their will (Haleblian and Finkelstein, 1993). Given the role that perceived power plays in managerial discretion, Hambrick and Finkelstein (1987: 375) argue that discretion should be considered as a social and political phenomenon and suggest that it does not matter 'whether an action will or will not actually work, all that matters is what powerful stakeholders believe and value at the time the action is taken'. Research studies into perceived power conclude that an individual's power is a result of a perceived ability to alleviate organisational uncertainties (Hickson et al., 1971) and (Pfeffer and Salancik, 1978). Child (1972) suggested that perceived managerial power is a predicator of managerial efficacy.

It is interesting to note that the same principles apply to the concept of managerial discretion. Child (1972), Finkelstein and Hambrick (1996), Halebian and Finkelstein (1993), Hambrick and Finkelstein (1987), Pfeffer and Salancik (1978) and Thompson (1967) argue that managerial discretion is situation specific, and therefore highly variable, 'some circumstances provide managers with more discretion than do others' (Carpenter and Golden, 1997: 188). Managerial discretion was found to be a function of executives' individual characteristics, such as; age, education, job tenure (Key, 1997) and a function of the characteristics of the organisation. Troyer et al. (2000) pointed out that formalised systems have a tendency to limit the amount of discretion of job holders and to limit role making opportunities.

Hambrick and Finkelstein (1987: 371) suggest that a manager's discretion has, technically speaking, no rigid bounds and it is in fact limited in part 'by his or her own awareness and repertoire'. They concluded that an individual's discretion should be considered as a function of personal and cognitive characteristics. Kakabadse and Kakabadse (1999) argue that individuals in an organisation with a broader role remit can be expected to be in a situation where they can influence the demands and the constraints of their role. Bowman and Kakabadse (1997: 205) assert that 'a number of individuals are determining a way forward, making discretionary roles essentially leadership roles' and consequently, the personal views, perceptions of the challenges faced and the orientations of those with whom the individual interacts are important.

Kahn et al. (1964) note that since individuals differ in their reactions to role pressure and role expectations, they are bound to use different leadership styles despite working within the same organisational context. Shivers-Blackwell (2004) in her investigation of determinants of transformational and transactional leader behaviour concluded that low self monitoring managers (individuals for whom social cues from other people or the direct environment has little impact on their behaviour), are most likely to exhibit transactional leadership rather than transformational, due to an insensitivity to role expectations and role pressure and a lack of willingness 'to modify their behaviors according to role prescriptions due to inner feelings, attitudes, or emotions' (Shivers-Blackwell, 2004: 45)

2.8.14 Locus of control construct

The idea behind this concept is that individuals differ in their perception of the amount of control that they possess over their fate. Rotter (1966) suggests that individuals can either possess an external or an internal individual locus of control. Whereas, external individuals believe that the outcomes of their actions are determined by fate, chance or destiny, internal individuals are convinced that they are in total control of their environment. Rotter (1966: 618) argues,

'Internal control refers to individuals who believe that reinforcements are contingent upon their own behavior, capacities or attributes. External control refers to individuals who believe that reinforcements are not under their personal control but rather are under the control of powerful others, luck, chance, fate, etc'

Internal locus of control has been positively associated with superior performance (Anderson and Schneier, 1978), greater risk taking attitude (Miller et al., 1982), satisfaction with current job (Organ and Green, 1974; Pryer and Distefano, 1971), and stronger stress coping mechanisms (Anderson, 1977).

There have been many research studies pointing to the idea that there is a strong link between internal locus of control and high levels of perceived managerial discretion (Hambrick and Abrahamson, 1995; Rotter, 1966). Carpenter and Golden (1997: 187) support the view that there is a relationship between 'locus of control, a stable personality difference, and perceptions of managerial discretion'.

It was demonstrated in the literature review chapter that executive leadership and managerial discretion are both dependent on organisational context. Rotter (1966) on the other hand established that locus of control is a stable individual characteristic and therefore context independent (Boone and DeBander, 1993). According to Carpenter and Golden (1997:199) locus of contol is 'independent of one's organisational position and the objective qualities of a situation' (Carpenter and Golden, 1997:199). Key (1997) posits that whereas discretion involves proactive judgments, locus of control on the hand involves reactive judgments. Although locus of control has been shown to be stable throughout an individuals' lifetime (Rotter, 1966; Smith and Dechter, 1991), individuals in management or leadership positions can be trained to assess the various level of discretions within their respective organisations (Carpenter and Gold, 1996).

Table 2.4 presents a summary of the role theory literature.

Table.2.4: Introduction to the role theory: Literature review table

Researcher(s)	Study Type	Sample Size	Key Focus	Relevance to research study
Adler et al. (2003)	Exploratory	N/A	Boundary spanning	Strong interpersonal skills are critical to acquire, evaluate, discard, retain and disseminate information with organisations.
Ashkenas (2000)	Qualitative	4	Boundary spanning	Organisations in order to promote speed, flexibility, integration and innovation are now required to loosen boundaries between functional units and across geographies to implement changes
		4		Loosening organisational boundaries has been demonstrated to enable a 'healthy and brisk flow of ideas, energy and information' Ashkenas (2000: 11)
Balogun et al. (2005)	Qualitative	7	Boundary spanning	The skills required to be a successful boundary spanners are the same as for a successful change agents.
Biddle (1979)	Literature review	N/A	Role making	Individuals are not merely the passive recipient of role expectations and that the latter are actively involved in shaping their own role.
Blau (1963)	Qualitative	2	Boundary spanning	Success in boundary spanning activities is not an attribute of formal position within the organisation.
Bowman and Kakabadse (1997)	Qualitative	Unknown	Managerial discretion	'A number of individuals are determining a way forward, making discretionary roles essentially leadership roles' (Bowman and Kakabadse, 1997: 205)
Cadwell and O'Reilly, (1981)	Quantitative	93	Boundary spanning	Crossing boundaries implies interacting with groups of individuals who may have different norms and who differ in their willingness to communicate across boundaries.
Campbell (1999)	Literature Review	N/A	Role expectations	Role expectation is a combination of an individuals' own expectations of their role and the expectations of other individuals within the same role-set (Campbell, 1999: 5)
Carpenter and Golden (1997)	Quantitative	88	Managerial discretion	'managers who perceive themselves as having much discretion are more likely to affect change, or seek to otherwise influence critical organisational contingencies' Carpenter and Golden (1997: 192)
		88		Managerial discretion is situation specific, therefore highly variable.

Chun and Mooney (2009)	Literature Review	N/A	Role making	'The degree to which a firm's strategy and processes are IT enabled has a profound influence on the CIO's ability to change and evolve in his/ her roles and responsibilities'. Chun and Mooney (2009: 331)
Coghlan and Hurley (1996)	Secondary research quantitative	Unknown	Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Earl and Feeny (1994)	Qualitative	14	CIO expectations	CIOs have the challenging task of running a function that uses a lot of resources but 'offers little measurable evidence of its value' (Earl and Feeny, 1994: 11)
Feld and Marmol (1994)	Qualitative	Unknown	Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Fennelle and Alexander (1987)	Quantitative	901	Boundary spanning	Increasing competition led many organisations to merge, partner, or acquire other organisations or subsidiaries, which has increased the complexity in integrating, identifying and defining organisations' boundaries.
Fondas and Stewart (1994)	Literature review	N/A	Role Set	The role set of an individual consists of the different people with whom a manager interacts and 'who have a stake in and hold expectations about the manager's performance in the job' (Fondas and Stewart, 1994: 85)
			Role expectations	Expectations in managerial roles are influenced by four main factors, namely, the characteristics of the role set; the characteristics of the focal manager; the characteristics of the relationship between the role set and focal manager, and the organisational determinants of managerial impact on the role set's expectations
			Role making	Individuals are not merely the passive recipient of role expectations and that the latter are actively involved in shaping their own role.
Friedman and Podolny (1992)	Quantitative	1	Role conflict	Role conflict and role ambiguity are two of the most frequent problems faced by individuals involved in boundary spanning activities.
Grover et al. (1993)	Quantitative	71	CIO expectations	CIOs are often perceived by executives as outsiders
Hales (1986)	Exploratory	N/A	Role theory	The role theory is a useful and insightful framework when carrying researches into managerial roles.

Hambrick and Finkelstein (1987)	Exploratory	N/A	Managerial discretion	Hambrick and Finkelstein introduced the concept of managerial discretion, which is defined as 'latitude of managerial action' (Hambrick and Finkelstein,1987: 371)
				Executives ought to be great readers of situations, and act according to their perception of the amount of discretion they possess.
				Discretion should not be considered as a techno-economic but a socio-political phenomenon.
Haselkorn (2003)	Qualitative	Unknown	Boundary spanning	CIOs' toughest problems rarely occur when dealing with a functional manager, but when the level of involvement spans across functional and hierarchical boundaries.
Highbarger (1985)	Qualitative	Unknown	CIO expectations	CIOs are 'neither understood nor appreciated for their contributions' (Highbarger, 1988: 53)
House and Rizzio (1972)	Quantitative	Unknown	Role conflict	Role conflict comes from a discrepancy of expectation between an individual's expectations of his/ her role and the organisation's expectation of this individual's role
		Unknown	Role ambiguity	Role ambiguity on the other hand, emanates from a lack of clarity regarding the outcomes of an individual's behaviour
Grant and Hutson (2009	Literature review	N/A	Role Perception	Grant and Hutson (2009) whose study concluded that outstanding CIOs are more similar to outstanding CEOs than they are to other CIOs.
Hickson et al. (1971)	Exploratory	N/A	Managerial power	Individual's power is a result of a perceived ability to alleviate environmental and organisational uncertainties.
Kaarst-Brown and Robey (1999)	Qualitative	87	Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Kakabdase and Kakabadse (1999)	Qualitative	Unknown	Managerial discretion	Individuals in an organisation with a broader role remit can be expected to be in a situation where they can influence the demands and the constraints of their role.
Katz and Tushman (1979)	Qualitative	Unknown	Boundary spanning	Boundary spanners are individuals who operate at the boundary of an organisation performing activities relevant to running and developing the organisation
Kahn et al. (1964)	Qualitative	53	Role ambiguity	Individuals in organisations in a role ambiguity situation may result in individuals developing their own coping behaviour, attempting to resolve the conflict themselves or a distortion of the reality of the situation.
			Role conflicts	There is a strong link between role conflict and dissatisfaction at work, likelihood to change job, high level of work-related stress and anxiety, unfavourable attitudes towards individuals within the same role set and withdrawal from interactions with targeted or untargeted role senders.

Lawrence and Lorsch (1967)	Qualitative	Unknown	Boundary spanning	Lawrence and Lorsch differentiation and integration model demonstrates that differentiation arises between organisations' sub-units facing environments with different degrees of uncertainty.
Levina and Vaast (2005)	Qualitative	2	Boundary spanning	CIOs and IT professionals are prime examples of individuals who span inside and outside the organisation in order to perform their role.
				Boundary spanning may require promoting somebody who is less distinguished.
			Role conflict	Role conflict and role ambiguity are two of the most frequent problems faced by individuals involved in boundary spanning activities.
Merton (1957)	Conceptual	N/A	Role set	The organisation role set of an individual consists of the individual's immediate manager, his or her supervisors and key stakeholders with whom the individual works closely with.
Miles (1977)	Quantitative	202	Role conflict	Role conflict occurs when individuals perceive that 'role demands or expectations which he or she receives are incompatible', (Miles, 1977: 22)
Moghaddasi and Sheikhtaeri (2010)	Literature Review	N/A	Executive Power	Executive power is not automatically granted to CIOs, however given the increasing influence of technology, CIOs are potentially in a position to exploit a variety of organisational power sources.
Nolan Norton (2001)	Quantitative	Unknown	Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Nygaard and Dahlstrom (2002)	Quantitative	218	Role conflict	Role conflict and role ambiguity are two of the most frequent problems faced by individuals involved in boundary spanning activities.
Pawlowski and Robey (2004)	Qualitative	23	Boundary spanning	Given the current organisational settings, a wide range of IT professionals ought to develop their boundary spanning capabilities.
Pemberton (1992)	Qualitative	Unknown	Boundary spanning	The primary role of the CIO is to bridge the gap between IT and other business units
Peppard (2009)	Qualitative	42	Role expectations	Prior to hiring a CIO, the executive team ought to reflect upon the environment in which the CIO will operate as this can greatly influence the performance and effectiveness of the CIO.
Pfeffer and Salancik, (1978)	Qualitative	Unknown	Managerial power	An individual's power is a result of a perceived ability to alleviate environmental and organisational uncertainties.
Preston et al. (2008)	Quantitative	207	Role expectations	In some cases, executives' expectations act as self fulfilling prophecies and lead an organisation into a circle of IT failures.

Remenyi et al. (2005)	Literature review	N/A	Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Rizzio et al. (1970)	Quantitative	264	Role conflicts	There is a strong link between role conflict and dissatisfaction at work, likelihood to change job, high level of work-related stress and anxiety, unfavourable attitudes towards individuals within the same role set and withdrawal from interactions with targeted or untargeted role senders.
Rotter (1966)	Exploratory	N/A	Locus of control construct	Individuals differ in their perception of the amount of control that they possess over their fate. Individuals can either possess an external or an internal individual locus of control
				Locus of control is a stable individual characteristic and consequently context independent
Shivers-Blackwell (2004)	Exploratory	N/A	Role expectations	Low self monitoring managers are most likely to exhibit transactional leadership than transformational, due to an insensitivity to role expectations and role pressure and a lack of willingness 'to modify their behaviors according to role prescriptions due to inner feelings, attitudes, or emotions' Shivers-Blackwell (2004: 45)
			Role set	The role set of individuals in an organisation consists of the individual's immediate manager, his or her subordinates and key stakeholders with whom this individual works closely with.
Solomon et al. (1985)	Exploratory	N/A	Role expectations	Issues between individuals arise when there is a discrepancy of expectations regarding one's role within the organisation and a lack of clarity around the role that individuals are supposed to play.
			Role theory	The study of roles enables researchers to study defined positions within organisations rather than studying the characteristics of individuals who occupy the position.
Szilagyi (1997)	Qualitative	Unknown	Role expectations	Individuals in organisations are 'continually exposed to a variety of expectations from their work environment that may affect the perceptions of their organisational roles' Szilagyi (1997: 376)
Troyer et al. (2000)	Quantitative	5811	Role making	Individuals are not merely the passive recipient of role expectations and they are actively involved in shaping their own role.
Tushman and Scanlan (1981)	Quantitative	175	Boundary spanning	The success of the boundary spanners is not dependent of formal status but on individuals' perception of competency of the boundary spanner.
				Success in boundary spanning activities is not an attribute of formal position within the organisation.

Van Sell et al. (1981)	Literature Review	N/A	Role conflicts	There is a strong link between role conflict and dissatisfaction at work, likelihood to change job, high level of work-related stress and anxiety, unfavourable attitudes towards individuals within the same role set and withdrawal from interactions with targeted or untargeted role senders.
Weedman (1992)	Quantitative	180	Boundary spanning	Cross boundaries communication can be a source of new information and create an awareness of environmental changes.
Westerman and Weil (2005)	Quantitative	143	CIO expectations	Most of the disputes between IT and other parts of the organisation are due to unclear expectations, 'business executives are unclear on how they should interact with IT and CIOs have often been unable to help them understand' Westerman and Weil (2005: 1)
			Role expectations	A cultural gap and a lack of understanding between business and IT executives can lead to mutual feelings of frustration
Willcocks (1994)	Qualitative	Unknown	Role making	Individuals are not merely the passive recipient of role expectations and that the latter are actively involved in shaping their own role.

Source: compiled by the researcher

2.9 Summary Part III: An Introduction to the Role Theory Framework

The aim of this section of the literature review chapter was to introduce role theory, a useful framework when studying roles in organisations. It is believed that the concepts of role expectations, boundary spanning, role conflicts, role ambiguity, managerial discretion and locus of control are particularly relevant and will help to illustrate how CIOs perceive and adapt to the changes shaping their role.

2.10 Part IV: Chapter Summary and Identification of Research Gap

This chapter enabled an opportunity to review some of the more pertinent research studies that will help with the exploration of the CIO role. There is universal agreement that the role of the CIO has evolved from a support and operational function to one of playing a key role in providing a competitive edge.

It has been argued that CIOs quite often lack business acumen and a certain understanding of their organisations and the industry they work in. It is clear from this

literature review that possessing solid management skills is no longer sufficient to be successful in the CIO role. As IT executives grow in their role, they must acquire additional sets of capabilities that will enable them to be considered as irreplaceable members of the senior executive team.

This literature review presented some of the key characteristics of executive leaders. It was suggested that growing as an executive is a journey within oneself that starts with a thorough assessment of one's strengths and weaknesses. It was also argued that leadership is a matter of context, mindset and perception and that understanding followers' emotions and needs are two critical success factors in becoming a successful leader.

The role theory framework enabled the researcher to gain a deeper understanding of managerial roles and how the role expectations then impact individuals. Using various models borrowed from the organisational role theory framework, it was demonstrated that individuals have expectations for their role, but also that they hold expectations for the role that other individuals should play. As highlighted, this social phenomenon is particularly relevant for CIOs who are often required to interact, work and influence individuals often located outside of the IT function and whose understanding of the CIOs' role and responsibilities vary to a great degree.

The 2009 IBM CIO study "The New Voice of the CIO: Insights from the Global Chief Information Officer Study" concluded that, increasingly CIOs are engaged in the formulation of corporate strategy and solving business issues. This survey also suggests that CIOs are in the process of redefining their role. This phenomenon is particularly relevant since it was demonstrated that individuals are not always the passive recipients of role expectations and that some individuals will attempt to create and/ or change the expectations of their role.

2.10.1 Identification of research gap

A thorough review of the literature enabled the researcher to make two observations concerning previous research studies on the CIO role. Whilst many studies have focused on the demands and constraints existing within the CIO role, few empirical studies have focused on the role of the CIO from a CIO viewpoint and on the choices that CIOs have to make to become successful in this role. Edwards et al. (2009) argue there is still a great lack of clarity around the role of the CIO and this despite the attention that this role has received over the last few decades. La Paz et al. (2010), Edwards et al. (2009) and Peppard, 2009 concur that this field of research would benefit from more up-to-date and pertinent CIO role models.

The aim of this research study as presented in Figure 2.7 is to empirically assess how CIOs perceive their role and contribution with their organisation.

Figure 2.7: Research Gap Analysis
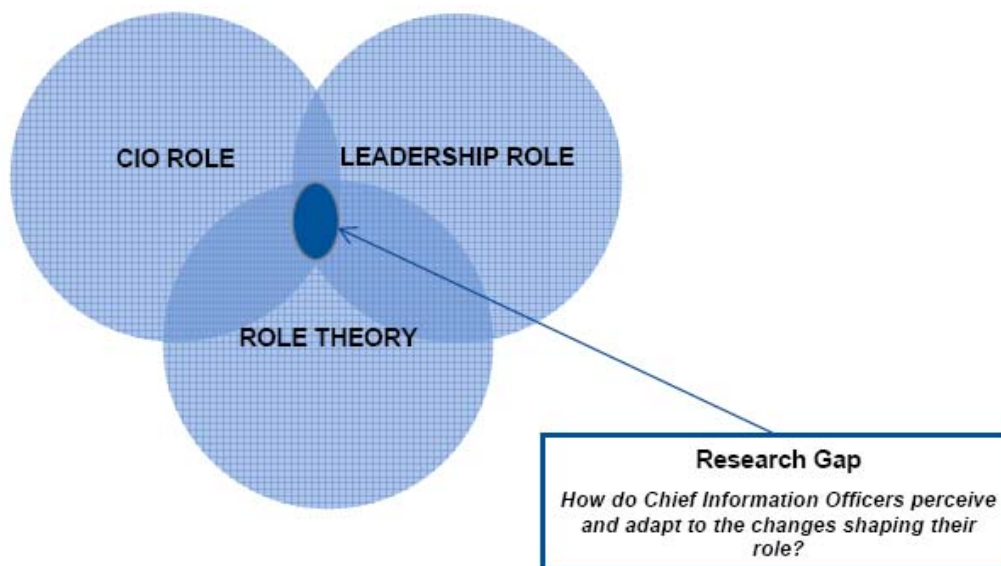
Source: Adapted from Kakabadse-Korac et al. *(2006: 436)*

The following chapter outlines the methodological and philosophical approach adopted throughout this PhD thesis. This chapter provides the researcher with the opportunity to discuss in detail the epistemological and ontological approach to this study and to highlight practical elements such as the research strategy and methods for data collection.

CHAPTER THREE- METHODOLOGY

3.1   Chapter Introduction

The methodology chapter examines the overall approach to this research study on the role and contribution of CIOs. This chapter presents some of the methodological and philosophical choices made over the course of this study. Kaplan (1973: 93) suggests that the aim of a methodology section is to 'describe and analyse methods, throwing light on their limitations and resources, clarifying their suppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge'. Clough and Nutbrown (2002: 22) note that there is general confusion between the concepts of research methods and research methodology. Using a simplistic metaphor, they suggest that whilst research methods can be compared to the ingredients of a recipe; research methodology gives indications as to the reasons behind using a particular recipe.

The chapter is composed of five sections. Firstly, this chapter highlights the approach taken in this study and discusses three components of social inquiry; epistemology, ontology and social theory. The second section presents the methodological choices made in addition to the overall research strategy. This section is the opportunity to discuss in great detail the design of the study and to provide information relating to the choice of research participants. The third section is entirely dedicated to the methods used to collect primary data, whilst the fourth section focuses on data analysis. To conclude this methodology chapter, the role of ethics in social inquiry is discussed.

3. 2   Research Approach

May (2001) notes that research methods are a central part of the social sciences, and there is general agreement in the social sciences that one cannot conduct research studies without a solid understanding of the various concepts and paradigms that compose this field. There are indeed many methodological and philosophical choices that inquirers have to make; each decision influencing the choice of research strategy and the overall

approach to the research study. Blaikie (2007) suggests that social inquiry is concerned with 'both the logics used to develop new knowledge and with philosophical and theoretical ideas and assumptions about what constitutes social reality and how knowledge of it can be produced' (Blaikie, 2007: 1).

An adaptation of Bryman's (2008) guiding framework (Figure 3.1) is utilised to structure this methodology chapter. The research approach section focuses on three critical components of social inquiry, namely; ontology, epistemology and social theory.

Figure 3.1: Study Research Approach
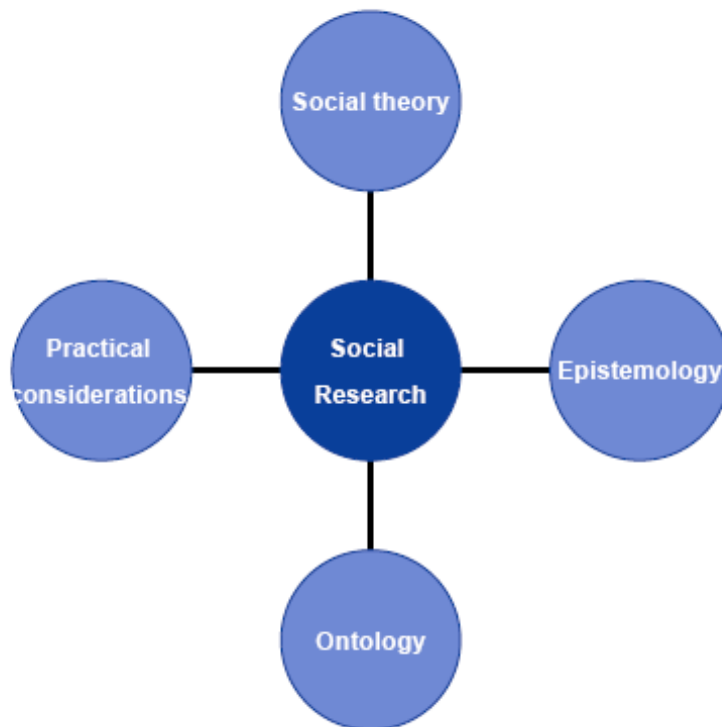
Source: Adapted from Bryman (2008)

3.2.1 Ontological positions

Bryman (2008) posits that ontological positions influence the way research questions are formulated and ultimately influence the way research studies are carried out. Ontology is the philosophical study of the nature of being, existence or reality. In the context of social sciences, ontology is concerned with the nature of social entities. This point is particularly well articulated by Bryman (2008:18) who notes,

> *'The central point here is the question of whether social entities have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors'.*

For the purpose of this methodology chapter, it is the researcher's intention to focus on the two most frequent ontological positions of objectivism (realism) and constructionism (idealist).

In the objectivism ontology, it is believed that social phenomena exist independently of social actors, in other words, 'social phenomena and the categories that we use in everyday discourse have an existence that is independent or separate from actors' (Bryman, 2008: 19). The constructionist position, on the other hand assumes that social phenomena and their meanings are accomplished by social actors and that these phenomena are the product of social interactions, and consequently in permanent change and revision. Social inquirers are therefore invited 'to consider the ways in which social reality is an ongoing accomplishment of social actors rather than something external to them and that totally constrains them' (Bryman, 2008: 20). In the constructionist ontology, the meaning of social phenomena is not discovered but constructed by social actors; 'it is the outcome of people having to make sense of their encounters with the physical world and with other people' (Blaikie, 2007: 22).

Blaikie (2007) argues that the choice of ontological position that social inquirers adopt is likely to influence the knowledge gained during the research study. A constructionist

ontology is regarded as producing relative knowledge, meaning that there is not a single truth but 'a plurality of truths associated with different constructions of reality' (Blaikie, 2007: 25).

3.2.3 Epistemological positions

Blaikie (2007) and May (2001) posit that the theoretical and methodological issues surrounding social research are complex. However, while these issues have changed over time, the fundamental philosophical questions have remained. When reflecting upon the focus of this PhD thesis and the researcher's intention to generate new research models, it appears that interpretivism is the most suited epistemological position to adopt.

There are different epistemological positions or research paradigms that social inquirers can choose from. Blaikie (2007) makes a distinction between classical and contemporary research paradigms and it is the inquirer's intention to present the following classical research paradigms; positivism, critical rationalism, classical hermeneutics and interpretivism. Bryman (2008: 13) notes that epistemology is concerned with the question 'what is (or should be) regarded as acceptable knowledge in a discipline'. Blaikie (2007) suggests that epistemology is a theory of knowledge, and aims at understanding how human beings 'come to have knowledge of the world around them' (Blaikie, 2007: 18).

Positivism has been used in a number of ways and in different circumstances, and consequently, as mentioned by Bryman (2008), it is difficult to outline this position in a social reality. Durkheim (1964: xiv) notes that in the positivist philosophy, social scientists must study social phenomena 'in the same state of mind as the physicist, chemist or psychologist when he probes into a still unexplored region of the scientific domain'.

Positivism has been subject to virulent criticisms from authors and inquirers associated with interpretivism, critical rationalism, critical theory, social realism and feminism (Blaikie, 2007). The main points of discord according to Blaikie (2007: 183):

- *'That experience is a sound basis for scientific knowledge.*
- *Science should deal only with observable phenomena, and not with abstract or hypothetical entities.*
- *Scientific laws are based on constant conjunctions between events in the world'.*

Bryman (2008) points out that positivism should not be solely associated with natural sciences and the scientific community. Critical rationalism (also known as critical realism) is another epistemological position worth exploring. Bryman (2008:14) articulated particularly well some of the key aspects of the critical rationalism position which appears not totally dissimilar to positivism,

> *'Realism shares two features with positivism: a belief that the natural and the social sciences can and should apply the same kinds of approach to the collection of data and to explanation, and a commitment to the view that there is an external reality to which scientists direct their attention (in other words, there is a reality that is separate from our descriptions of it)'*

Blaikie (2007) when reflecting upon critical rationalism acknowledges the fact that natural sciences and social sciences are different in their content, but the logic behind the methods are similar. The same author posits that the idea behind critical rationalism is 'a logic of explanation based on a critical method of trial and error, in which theories are tested against reality' (Blaikie, 2007: 113).

Hermeneutics and phenomenology are two epistemological positions that have provided the foundations for interpretivism (Blaikie, 2007). Whereas, positivism and critical realism call for a need to study social reality phenomena in the same ways as in the natural sciences, May (2001) and Von Wright (1971) point out that both these positions ignore the details of people's inner mental states.

Blaikie (2007) posits that hermeneutics is the most diverse and complex, but also the least well understood of the classic research paradigms. According to hermeneutics, the only way social inquirers understand elements of the social life is through an examination of individuals' own interpretation of their world and of their interactions with other

individuals (May, 2001). May (2001) stresses that the hermeneutics position provides an interpretive approach to social life but does not aim at explaining an individual's behaviour from a subconscious or environmental perspective.

The hermeneutics paradigm was drawn from theology (Blaikie, 2007; Bryman, 2008) and is concerned with the 'theory and method of the interpretation of human action' (Bryman, 2008: 15). Classic hermeneutics emerged in Germany in the Seventeenth century in the principles of interpretation of religious texts developed by protestant scholars. Blaikie (2007: 117) argues that the relevance of hermeneutics to contemporary social science 'lies in the possibility of regarding as texts the records made of social life, and in the application of these approaches to their interpretation'.

Many writers have contributed to the development of hermeneutics, amongst whom German theologian and philosopher Friedrich Schleiermacher (1768-1834), who was interested in grammatical and psychological interpretation (Blaikie, 2007). Husserl (1850-1938), founder of phenomenology is also believed to have played an instrumental role, especially in establishing a parallel between phenomenology and hermeneutics (Blaikie, 2007).

> *'Classical hermeneutics arose in order to overcome a lack of understanding of texts; the aim was to discover what a text means. Schiermacher shifted the emphasis away from texts to an understanding of how members of one culture or historical period grasp the experiences of members of another culture or historical period' (Blaikie, 2007: 123)*

Phenomenology is often referred to as anti-positivism. This tradition began in the field of psychology and in the social sciences as a reaction against the use of natural sciences methods in social sciences (Blaikie, 2007). Bogdan and Taylor (1975: 13) note that phenomenology 'views human behavior as a product of how people interpret the world'. Bogdan and Taylor (1975) suggest that if social inquirers aim at understanding the meaning of an individual's behaviour, they must attempt to see the world from the focal person's viewpoint.

Interpretivism is a term used to denote an alternative to the positivist paradigm and found its roots in Weber's notion of *verstehen*[2], hermeneutics, phenomenology and symbolic interactionism (Bryman, 2008). The interpretivist position argues that to understand the subjective meaning of social life, a research methodology that appreciates the difference between human beings and objects is required. Blaikie (2007) and May (2001) note that considering the fact that individuals are constantly interpreting and reinterpreting their world, social science research methods must be fundamentally different to the ones proposed by natural scientists. Saunders et al. (2003) posit that the role of interpretivist inquirers is to 'understand the subjective reality of those that they study in order to be able to make sense of and understand their motives, actions and intentions in a way that is meaningful for these research participants' (Saunders et al., 2003: 84).

According to Blaikie (2007), Weber (1864-1920) along with Schütz (1899-1959) and Winch (1926-1997) are key contributors to the interpretivist philosophy. Schütz (1963) argues that one of the most important questions that social inquirers have to ask themselves is 'how is it possible to form objective concepts and objectively verifiable theory of subjective meaning structure?' (Schütz, 1963: 246)

After having highlighted the key characteristics of the most poignant epistemological positions available to social researchers, it is firmly believed that an interpretivist position must be adopted in order to explore the research question addressed in the introduction chapter of this PhD thesis; "How do Chief Information Officers perceive and adapt to the changes shaping their role?"

3.2.3   Approach to social theory

Bryman (2008) and May (2001) argue that social theory plays a central role in the social sciences, in so far as, social theory enables inquirers to interpret and reflect upon the data

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[2] Associated with the writing of Max Weber (1864-1920), verstehen is now seen as a concept and a method central to a rejection of positivistic social science (although Weber appeared to think that the two could be united). Verstehen refers to understanding the meaning of action from the actor's point of view.

Source: Online Dictionary of the Social Sciences, http://bitbucket.icaap.org/dict.pl?term=VERSTEHEN
[Accessed : 07/12/09]

produced by social actors. According to May (2001: 32), 'in the process of research, we embark upon empirical work and collect data that either, initiates, refutes or organises our theories and then enables us to understand or to explain our observations'. While reflecting upon the critical role of social theory in the research process, Bryman (2008) notes that data can be collected either to build theory or to test theory, Bryman (2008) introduces here the concept of logic of inquiry.

Blaikie (2007:56) notes that 'in order to generate new knowledge about social phenomena, researchers need to adopt 'a logic of inquiry', a research strategy to answer research questions'. Blaikie (2007) suggests that there are four research strategies to the development of social theory (deductive, inductive, retroductive, abductive), each differing in their ontological assumptions, logic, use of concepts and theory, and styles of explanations. May (2001) notes that the two most common approaches in social sciences are the deductive and the inductive logic of enquiry. Blaikie (2007) supports this view and suggests that both these logics of enquiry are the most widely known and have dominated social theory.

Deductive theory represents the most common logic of inquiry (Bryman, 2008). In this approach, inquirers, from what is already known in the literature, deduce a series of hypotheses, which are then subjected to empirical scrutinity. This logic of inquiry has been particularly popular within quantitative research strategies (Bryman, 2008). In the case of this PhD thesis, given the context of the research study and the interpretivist position taken, it was felt that an inductive approach would be the most appropriate. Indeed, several aspects of the CIO role have been discussed with CIOs and these discussions have enabled the researcher to present new research models helping to understand how CIOs perceive their role and adapt to the changes shaping it. Saunders et al. (2003) suggests that a study can be qualified as inductive when inquirers collect data and develop a theory as a result of the data analysis process.

Blaikie (2007) posits that an inductive logic of inquiry enables inquirers to begin their research study with a number of statements that are then transformed into a universal

statement. Blaikie (2007) establishes a parallel between the inductive logic of inquiry and the work of research scientists, this can be summarised as 'making careful observations, conducting experiments, rigorously analyzing the data obtained, and hence producing new discoveries or new theories' (Blaikie, 2007: 59).

Whilst deductive and inductive logic of enquiries are the most commonly used, the latter are based on a linear type of reasoning (Blaikie, 2007). Berg (2007) proposes a different approach (Figure 3.2) based on a spiralling type of reasoning which encompasses both the inductive and the deductive logic of inquiry. Berg (2007: 24) suggests,

> *'In the proposed approach, you begin with an idea, gather theoretical information, reconsider and refine your idea, begin to examine possible designs, reexamine theoretical assumptions and perhaps even your own original or refined idea. Thus, with every two steps forward, you take a step or two backward before proceeding any further'*

Figure 3.2: The spiralling research approach

Ideas → Theory → Design → Data Collection → Analysis → Dissemination
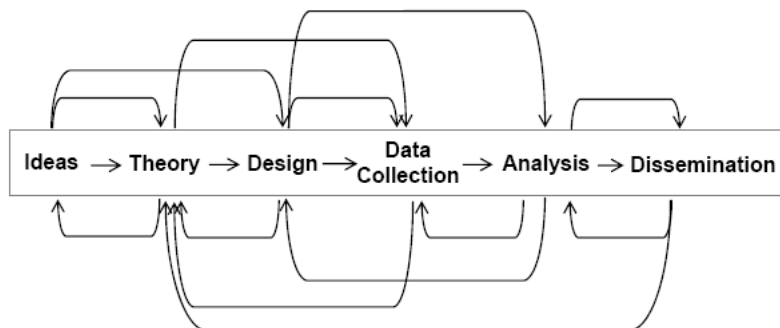
Blaikie (2007) suggests that the choice of alternative approaches (such as the retroductive or abductive logics of inquiry) depends a great deal on the research topic. The abductive approach was originally used in the natural sciences to generate hypotheses and is now advocated as an appropriate method to construct theory in the social sciences. Blaikie (2007) posits that this approach offers inquirers the opportunity to incorporate elements that were ignored by both the deductive and inductive logics; the opportunity to 'discover why people do what they do by uncovering the largely tacit, mutual knowledge, the

symbolic meanings, intentions and rules, which provide the orientations for their actions' (Blaikie, 2007: 90).

3.2.4   Research approach summary

As highlighted in the introduction chapter, the key objective of this research study is to understand how CIOs perceive and adapt to the changes shaping their role. Given the research objectives set in the introduction chapter, the researcher demonstrated previously that constructionist ontology and interpretivist position in addition to an inductive logic of inquiry had to be adopted.

3. 3   Methodological Choices and Research Strategy

3.3.1   Research strategies

The epistemological and ontological positions of a research study play a role in the selection of a research strategy. Creswell (1994) posits that social inquirers have the choice between two research strategies; quantitative and qualitative research.

The quantitative approach has been associated with the traditional, the positivist, the experimental and the empirical paradigms (Creswell, 1994). From an ontological standpoint, quantitative inquirers view reality as independent of the inquirer, reality can therefore be measured objectively by using instruments or questionnaires. Creswell (1994) argues that in quantitative research, inquirers are requested to remain distant and independent from those they study; it is believed that by doing so, inquirers control potential bias, and consequently increase the objectivity of the study. While quantitative and qualitative research strategies are different, these are not antinomical in principles, and in some cases as suggested by Bryman (2008) and Creswell (1994) can be combined. However, using both paradigms in a single study has proven to be highly time consuming, expensive and can create a dissertation and thesis which extend well beyond size limits and research scope (Creswell, 1994: 7).

Creswell (1994) argues that quantitative-based research studies are static, in so far as 'concepts, variables, and hypotheses are chosen before the study begins and remain fixed throughout the study' (Creswell, 1994: 7).

3.3.2   A qualitative approach

Bryman (2008) and Creswell (1994) argue that there are a variety of criteria to take into consideration in the choice of research strategies. Bryman (2008) goes as far as suggesting that inquirers' personal values as well as elements of practicality must be taken into consideration while evaluating the suitability of a research strategy.

It is impossible for inquirers not to be influenced by their personal values during the course of a research project. Bryman (2008) asserts that a link exists between inquirers' values, the formulation of their research questions, their choice of research methods, the study design and the data analysis techniques used. Creswell (1994) also suggests that elements, such as; writing styles and attitudes to following rules and procedures are equally important; 'the qualitative design is one in which the "rules" and procedures are not fixed, but rather are open and emerging. The design calls for an individual who is willing to take the risks inherent in an ambiguous procedure' (Creswell, 1994: 10).

Given the epistemological and ontological positions of this PhD research study and its research objectives, it appeared that a qualitative research strategy was more appropriate than a quantitative one. This methodological choice was justified by the interpretative nature of this research study and a desire to present research models that would enhance the understanding of the CIO role.

This choice of research strategy is in line with Bryman (2008) who asserts in Table 3.1 that, qualitative research strategies are associated with interpretivist epistemology, constructionist ontology and an inductive logic of inquiry. Lincoln and Gruba (1985) and

Smith (1983) notes that a qualitative research approach is associated with constructionism ontology and interpretivism epistemology

Table 3.1: Fundamental differences between quantitative and qualitative research strategies

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing and theory	**Inductive; generation of theory**
Epistemological orientation	Natural science model in particular positivism	**Interpretivism**
Ontological orientation	Objectivism	**Constructionism**

Source: Bryman (2008:22)

Smith (1983) posits that the qualitative movement started in the late 19th century as a counter-movement to the positivist tradition and gained popularity through the writings of Dilthey (1833 – 1911), Weber (1864 – 1920) and Kant (1724 – 1804). There are many definitions of qualitative research. Strauss and Corbin (1990) adopt a very pragmatic approach and consider that qualitative research is 'any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification' (Strauss and Corbin, 1990: 17). Kirk and Miller (1986) support this view and suggest that a key differentiator of qualitative research is the absence of counting. Hakim (1987: 28) suggests that a qualitative research approach enables the researcher to collect rich descriptions of individual's perception, beliefs, attitudes, motivations, and gain an insightful view into participants' meanings and interpretations of social reality.

> *'If one is looking at the way people respond to these external social realities at the micro-level, accommodating themselves to the inevitable, re-defining the situation until it's acceptable or comfortable, kicking against constraints, or fighting to break out of them, or even to change them, qualitative research is necessary'*

Parker (1994) highlights the crucial role played by social inquirers. Kirk and Miller (1986: 12) point out that the qualitative inquirer must sustain interactions with participants in their own languages, 'on their own turf'. The researcher's full-time role as an Executive Client Manager within Gartner's Executive Programs has enabled him, for the last five years, to work closely with CIOs from various regions and various industries, providing therefore a unique perspective into the CIO role. It is believed that the researcher's understanding of the CIO role has proved useful during in-depth discussions with CIOs.

McQueen and Knussen (2002) posit that there are crucial differences in terms of the skill set required between qualitative and quantitative inquirers. This is confirmed by Clough and Nutbrown (2002) who argue that qualitative inquirers in order to avoid bias and collect valid and reliable data, must be able to step back, critically analyse situations, and think abstractly. Clough and Nutbrown (2002: 18) hold that,

 '*A qualitative inquirer requires theoretical and social sensitivity, the ability to maintain analytical distance while at the same time drawing upon past experience and theoretical knowledge to interpret what is seen, astute powers of observation, and good interaction skills*'

Within the context of this PhD research study, the researcher's unique understanding of the CIO role, solid interpersonal skills, high level of integrity and methodological awareness have allowed for interesting and challenging interactions with CIOs whilst remaining impartial and emotionally distant from the conversation.

Given that the primary aim of this PhD thesis is to assess how CIOs perceive and adapt to the changes shaping their role and propose new CIO role models, it becomes apparent that a qualitative research strategy is the most appropriate approach to such a research study.

3.4   Methods for Data Collection

3.4.1   Data collection method

McQueen and Knussen (2002) note that several data collection methods are associated with qualitative studies and the aim of this section is to evaluate some of the methods offered to social inquirers. A focus group is recognised as producing a high level of data accuracy, however, this method was dismissed for practical reasons as it would prove very difficult to secure a reasonable number of CIOs in the same place and at the same time. As noted by McCracken (1988: 10), 'respondents lead hectic, deeply segmented, and privacy-centered lives. Even the most willing of them have only limited time and attention to give to the investigator'. In addition, since CIOs were requested to reflect upon their own role and contribution, it was anticipated that CIOs would be more willing to discuss some of the issues on a one-on-one basis rather than amongst their peers.

Participant observation is another qualitative data collection method. This method gained much popularity in the 1970s but was dismissed on the basis that finding CIOs willing to participate would have been challenging and this would have involved travelling to the participants' site, which is inconvenient for a part-time researcher.

Taking into account practical and theoretical elements, the researcher opted for the interview process as the method for data collection. McCracken (1988:9) suggests that interviewing participants is 'one of the most powerful methods in the qualitative armory'. Acquiring access to a community of professionals can be a challenging task, however, one must not underestimate the therapeutic character of this research study. As pointed out by Ackroyd and Hughes (1981: 80), 'the interviewer is giving the respondent a chance to talk anonymously without fear of contradiction, signs of boredom, disagreement, disapproval, and so on, often about deeply personal matters; a temptation that few of us would not be able to resist'. The researcher's experience of working with CIOs enabled a unique understanding of the CIO role and proved particularly useful when establishing a trusted relationship with research participants.

Berg (2007) also acknowledges the therapeutic value offered to interviewees and argues that participants agree to participate for various reasons; curiosity, potential therapeutic benefits or desire to share experiences that they have not felt comfortable sharing with anyone else before. Stewart (2003) while discussing her experience with qualitative research methods also notes that often in qualitative research, participants find it useful to be questioned about their role.

According to McCracken (1988: 9), interviewing is the only data collection method that takes inquirers 'into the mental world of the individual' and shows to the inquirer how individuals experience and perceive the social world. On a more practical level, Hakim (1987) posits that in-depth interviews can be done with relatively small budgets, and consequently it is the ideal method for self-funded research studies.

McQueen and Knussen (2002) point out that are many types of interviews, the most common ones being structured and unstructured interviews (or open interviews). Open-interviews are very powerful, but require inquirers to have a strong understanding of their research topic and to be comfortable having this kind of interaction. Ackroyd and Hughes (1981) assert that semi-structured interviews allow for more flexibility and enable the interviewer to probe beyond specific questions. Rodham (2000) suggests that semi-structured interviews allow for a certain level of structure whilst still being sufficiently flexible to allow spontaneous contributions.

Berg (2007) and McQueen and Knussen (2002) note that despite having to follow a structured set of questions, participants in semi-structured interviews are given the freedom to digress to use real-life examples illustrating some of the points that are being made. As noted by Berg (2007), probing questions are particularly useful to draw out a complete story from participants. In the context of this PhD research study, the researcher has used probing questions to encourage participants to elaborate on their responses. The researcher found probing questions particularly useful to draw a complete picture of a

specific situation narrated by the research participants. The probing questions used by the researcher are illustrated in the interview sample presented in Appendix C.

According to McCracken (1988), interview questionnaires are particularly helpful to inquirers and serve different purposes, most importantly they allow researchers to fully concentrate and 'take part in the conversation in a natural way' (Burns, 2000: 429). Interview questionnaires also ensure that inquirers conduct each interview in the same way and that each question is posed in the same order. In the context of this PhD research study, semi-structured questionnaires were used as interviewing guidelines (Appendix B).

Out of the 25 in-depth interviews, 22 were conducted over the phone, a method that given the role, level of responsibilities and geographic locations of participants was the only viable option. As noted by Hagan (2006) telephone interviews can have a certain number of advantages, such as being low costs, a non-negligible aspect in partly self-funded studies.

In conclusion, the choice of in-depth interviews has proven to be a highly rewarding method (for both the researcher and the participants). However, it is important to recognise the effort required when conducting in-depth interviews. As noted by McCracken (1988), the inquirers' level of attention being at its peak means that this process is extraordinarily draining. Berg (2007) asserts that during the interviewing process, inquirers have to simultaneously play the role of actor, director and choreographer.

3.4.2   Participant selection

Strauss and Corbin (1990) suggest that the number of respondents to a research study depends upon a number of factors, such as; access to participants, availability of resources, time and energy. Kakabadse and Louchart (2012) argue that before deciding to conduct a study requiring elite participation (or senior executives) one needs to

objectively gauge accessibility to study participants. Granovetter (1992) suggests that 'trust' is a major feature of social capital and enables actors to pursue their goals within a network. The "mode of entry" into the elite network has a direct impact on the level of openness during conversations.

Since the primary objective of this research study is to empirically assess how CIOs perceive their role and contribution and to propose a new model to understand the CIO role, it was decided that the participant sample had to be wide and varied. Consequently, CIOs from commercial, non-commercial and not-for-profit organisations were interviewed. In contrast, the industrial sector was not considered as a key criteria in the participant's selection process. The researcher paid careful attention to the size and turnover of the organisation. Typically, all of the participants of the study were CIOs of large public sector or non-for-profit organisations or private organisations for which turnover exceeded several hundreds of million. The decision not to include IT executives of smaller organisations remained justified by the size of the IT department (often fewer headcounts); the role of information within smaller organisations; and the typical role remit and profile of IT executives in smaller organisations.

Table 3.2 Presents key participant information.

Table 3.2: Participants' demographics table

	Industry	Years of experience working as IT executive	Sex	Data collection method
Participant A	Government	± 5 years	M	Face-to-face
Participant B	Logistics Services	± 4 years	M	Phone
Participant C	Banking	± 12 years	M	Phone
Participant D	Government	> 5 years	M	Phone
Participant E	Higher Education	± 8 years	M	Phone
Participant F	Government	± 5 years	M	Phone
Participant G	Automotive	± 4 years	M	Phone
Participant H	Retail	± 7 years	M	Phone
Participant I	Non-for-Profit	> 3 years	M	Phone
Participant J	Non-for-Profit	> 3 years	F	Phone
Participant K	Insurance	> 5 years	M	Phone
Participant L	Local Government	± 7 years	M	Phone
Participant M	Government	± 8 years	M	Phone
Participant N	Facility Management	± 5 years	M	Phone
Participant O	Media	± 12 years	M	Phone
Participant P	Government	± 4 years	M	Phone
Participant Q	Manufacturing	± 13 years	M	Phone
Participant R	Consulting	± 5 years	M	Face-to-face
Participant S	Higher Education	± 5 years	F	Phone
Participant T	Research and Conservation	± 5 years	F	Phone
Participant U	Government	± 7 years	M	Phone
Participant V	Government	± 5 years	M	Phone
Participant W	Higher Education	± 5 years	M	Phone
Participant X	Government	± 4 years	M	Phone
Participant Y	Logistics Services	> 5 years	M	Face-to-face

Source: Compiled by the researcher

3.4.3   Specific consideration: Elite interviewing

Similar to any other c-level executives, CIOs are busy and powerful individuals, and therefore should be considered by inquirers as 'elite'.

Welch et al. (2002) in their definition of elite posit that the status of individuals in organisations is a combination of several factors, such as; the individual's hierarchy, personal assets and degree of international exposure. Welch et al (2002: 5) define elite as,

> *'A respondent who occupies a senior or middle management position; has functional responsibility in an area where he enjoys high status in accordance with corporate values, has considerable industry experience and frequently also long tenure with the company, possesses a broad network of relationships and has considerable international exposure'.*

As highlighted in Table 3.3 (Kakabadse and Louchart, 2012), there are a number of differences between elite interviewing and non-elite interviewing for which researchers should be aware.

Hunter (1995: 167) argues that elites are 'relatively unstudied, not because they do not have or are not part of existing social problems, but precisely because they are powerful and can more readily resist the intrusive inquisition of social research'.

Table 3.3: Non-elite and Elite Interview Characteristics

Characteristics	Non-elite interviews	Elite Interview
Access	• Relatively easy • Negotiated through formal channels	• Difficult • Negotiated through networks
Common interview style	• Structured or standardised open-ended questions • Semi-structured or guided interview • In-depth informal conversation and/ or life histories	• Open or unstructured conversation • Semi-structure or guided interview
Sampling method	• Convenience, quota, theoretical, non-probability	• Opportunistic, snowballing, non-probability
Ethical safeguards	• Explicit responsibility of inquirer	• Implicit process based on inquirer's credibility
Interview protocol	• Important – Use of interviewing guides	• Less important – may or may not be used, but useful for inexperienced inquirers
Interviewer's initial knowledge about interviewee	• Minimal	• Considerable, including professional and personal information
Interviewee's initial knowledge of interviewer	• Minimal	• Considerable, including professional and personal information
Expert Knowledge (i.e. balance of power) with;	• Interviewer	• Interviewee
Scrutiny/ selection of participation rests with;	• Interviewer	• Interviewee

Source:Kakabadse and Louchart (2012)

Welch et al. (2002) suggest that, in the context of elite interviewing, professional values, seniority, gender and culture have a strong impact on the interactions between researchers

and elite participants. In particular, the seniority gap between the elder elite and the inquirer can result in the elite behaving ambivalently. Gaining access to elites is not purely a matter of luck, personality, class, gender or nationality, but very much depends on the level of interaction that inquirers and participants have had over a period of time (Ward, and Jones, 1999).

The author's current position within Gartner Executive Programs (EXP) enables close working relationships with CIOs. This position has assisted the researcher in establishing a solid network of contacts within the CIO community over a number of years. Participants were selected according to their past and current IT leadership role within large public, private or not-for-profit organisations. The researcher also used snowballing techniques as noted by Kakabadse and Louchart (2012) and Berg (2007). Upon completion of the interview, the CIOs were asked whether they were aware of peers in the same or in a different industry who might be willing to participate in this research study.

Kakabadse and Louchart (2012) and Goldstein (2002) recommend that inquirers write a short and concise summary of their research when approaching participants. In the context of this study, Kakabadse and Louchart's (2012) guidelines were followed and the introductory e-mail (Appendix A) addressed the following six key points:

- *Aim of the research study*
- *Reason for asking for participation*
- *Interview format*
- *Length of interview*
- *Assurance of confidentiality and anonymity*
- *Benefits to participants*

Political scientists such as Aberbach and Rockman (2002) recommend that when conducting elite interviews, inquirers should opt for semi-structured interviews with

open-ended questions. Aberbach and Rockman (2002) point out that interviewees should have the latitude to fully articulate their responses. Aberbach and Rockman (2002: 674) note that, 'elites especially, but also other highly educated people, do not like being put in the straightjacket of close-ended questions. They prefer to articulate their views, explaining why they think what they think'.

3.5   Pilot Study

The pilot study consisted of four in-depth interviews with CIOs during which the researcher was able to test the research protocol. Throughout the pilot study stage, a number of amendments were made to the original study design, including the addition and deletion of a number of questions and the changing of the order and sequence of questions. The pilot study also provided the opportunity for the researcher to reflect upon the interviewing experience, a critical part of the process of the elite interview as noted by Kakabadse and Louchart (2012).

3.6   Methods for Data Analysis

The data analysis process is considered to be the most difficult part of qualitative studies (Sapsford and Jupp, 1996). Berg (2007) suggests that qualitative studies distinguish themselves by the enormous amount of data that is generated.

3.6.1   Interview transcripts

With the participants' authorisation, the 25 interviews were recorded. This method proved to be particularly useful for two reasons. Recording the interviews enabled the use of direct quotations throughout the research findings chapter (Hakim, 1987) but also made for a more dynamic discussion.

There are different schools of thought regarding the task of transcribing interviews. Becker (1970: 26) suggests that this process should be carried out by the researcher

whilst still being in the data gathering stage. McCracken (1988) remains adamant that this process should not be carried out by the researcher. McCracken (1988: 42) notes, 'investigators who transcribe their own data interviews invite not only frustration but also a familiarity with the data that does not serve the later process of analysis'. Past academic experience has taught the author that transcribing in-depth interviews is a lengthy and laborious process. When considering that the researcher has benefited from some funding from the employer Gartner Ltd, it was decided to outsource the transcription of interviews to a specialist agency. The agency staff were appointed to transcribe verbatim versions of the interviews (Appendix C).

3.6.2   Categorisation process and the use of coding frames

McCracken (1988) and McQueen and Knussen (2002) argue that in qualitative studies, inquirers are advised to start isolating and categorising the data during the research process. Miles and Huberman (1984) posit that the analysis of qualitative data consists of three main activities; data reduction, data display and conclusion drawing / verification (Figure 3.3). The data reduction stage is a particularly useful exercise, especially when transcripts of in-depth interviews are being used as a primary source of data (Berg, 2007).

Burman (1994) argues that inquirers must make a choice as to what the precise source of raw data should be: 'is the analysis to be conducted on the transcript (such that the transcript becomes the source) or on the interview, including the social context in which the interview was conducted?' (McQueen and Knussen, 2002: 211). In the context of this research study, as 22 of the interviews were conducted by telephone, the raw data that was utilised as the basis for the analysis became the actual transcript of the interview.

There are a number of significant drawbacks to conducting interviews over the phone. The most obvious one being the lack of physical presence which can limit the interviewer's ability to probe or clarify certain issues and create difficulties in establishing a good interviewee/ interviewer rapport quickly (Frey and Mertens Oishi, 1995). However, given the busy lifestyle and heavy workload of CIOs, telephone

interviews have proven to be the most efficient way of conducting in-depth interviews. This method of data collection enabled the researcher and the participants to have a more informal and relaxed conversation, outside of typical office settings.

Figure 3.3: Components of Data Analysis: Interactive Model
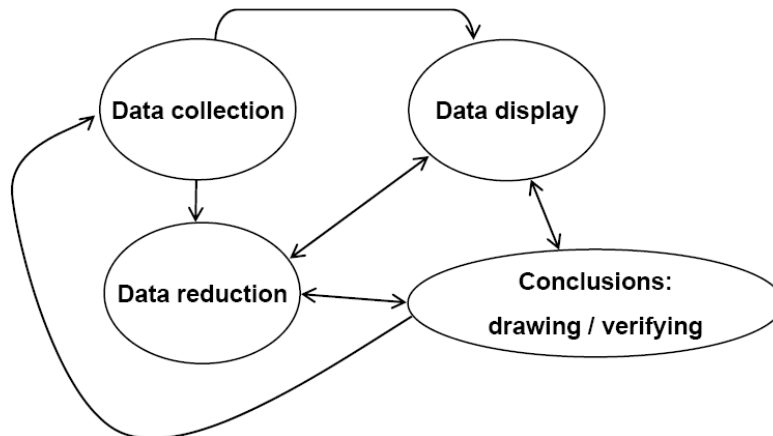
Data reduction refers to the process of 'selecting, focusing, abstracting, and transforming the raw data' (Miles and Huberman, 1984: 21). There is general agreement that this process is achieved by the use of coding frames (Rubin and Rubin, 1995). As noted previously, qualitative studies generate a huge volume of data, which makes it hard for inquirers to move around and work with (Miles and Huberman, 1984).

Miles and Huberman (1984) recommend that codes (abbreviations or symbols applied to a segment of words) are used to facilitate the research process. The researcher has made great use of coding frames and has focused on marginal remarks and reflective remarks as suggested by Miles and Huberman (1984). As highlighted in the data analysis chapter, the researcher decided to present the data in relation to the demands, constraints and choices offered in the CIO role, and consequently Stewart's (1982) DCC model has been used as an overall coding frame. An example of the categorisation process is presented in Figure 3.4, whilst an example of data analysis is presented in Appendix D.

From a practical point of view, the process ellaborated by the researcher was as follows:

1. *Analysis of interview transcripts, where keywords were applied to a segment of words (i.e. role of the CIO, future of the CIO role, role expectations, role ambiguity, critical success factors...)*
2. *Data reduction*
3. *Identification of patterns of experiences and emerging themes (Aronson, 1994)*

Figure 3.4: PhD thesis categorisation process

Theme	Category
Role Demands	Contribution Role of the CIO Critical success factors
Role Constraints	Capability gap Maturity / industry sector of the organisation Consumerisation Cultural misalignment Expectations and perceptions Misunderstanding Reporting structure Role fluctuation
Role choices	Team work Career choice Discretion and control Role transition (from IT leader to business leader) Power and influence Role perception Role potential Behaviour

Source: Compiled by the researcher

3.6.3   Research validity

One cannot conduct a qualitative research study without acknowledging the potential research limitations and bias (Kakabadse et al., 2006). Since this research study required CIOs to adopt a reflective approach, the researcher cannot guarantee that some participants did not seize the opportunity to amplify their personal contribution to the success of their organisation. As noted by Ackroyd and Hughes (1981: 81), participants can sometimes say things that are intended to 'maximise their self-esteem'. Better (2002: 680) supports this view and argues that,

> *'Interviewers must always keep in mind that it is not the obligation of a subject to be objective and to tell the truth. We have a purpose in requesting an interview, but ignore the reality that subjects have a purpose in the interview too: they have something they want to say.'*

It is necessary to acknowledge that the inquirers' potential prejudices and attitudes can also bias the data. As noted by Burns (2000: 414), 'when the data must go through the inquirer's mind before it is put on paper, the worry about subjectivity arises'. Sapsford and Jupp (1996) also suggest that the questions asked during the interview process have the potential to exercise some level of influence on participants' answers. Hakim (1987) on the other hand notes that, even if inquirers do their best in the participant selection process, the relatively small number of respondents makes it sometimes hard to generalise.

The author's affiliation with Gartner Ltd was also taken into consideration when approaching CIOs. In order to set the appropriate expectations, the inquirer reinforced to the participants that this study was carried out in conjunction with the University of Northampton. Additional information on research limitations are presented in Chapter 7 of this PhD thesis.

3.7   Ethical Considerations

Efforts have been made in the area of social sciences over the last two decades to ensure that participants to studies are informed of all potential risks at the time of agreeing to take part in the research study (Berg, 2007).

Kallman and Grillo (1996: 3) provide a very pragmatic and insightful definition of ethics. They postulate that, 'ethics has to do with making a principle-based choice between competing alternatives. In the simplest of ethical dilemmas, this choice is between right and wrong'. Burns (2000) argues that social inquirers and participants are tied together by several implicit contracts. McQueen and Knussen (2002) go as far as to suggest that the relationship existing between ethics and trust has a direct impact on the quality of the research.

Burns (2000) posits that informed consent is the most fundamental ethical principle involved in qualitative studies. It is crucial that participants understand the nature and purpose of the research project, but also the consequences of taking part in a research study. As noted by May (2001), this aspect is critical, especially if data are published in the public domain.

This research study was conducted in line with Section 3.2 of The University of Northampton's Ethical Code of Conduct[3] and following the guidelines from Berg (2007); May (2001) and McQueen and Knussen (2002). The participants were therefore made aware of their "rights" prior to the start of the interview as recommended in Berg (2007). The fact that CIOs were being studied and giving consideration to the pressure on their agendas, it was decided that the use of signed consent slips was not required. The recording of the interview was used as the proof of acceptance of the conditions of taking part in this research study, a practice judged perfectly acceptable by Berg (2007).

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[3] http://www2.northampton.ac.uk/knowledgeexchange/homepage/newprojectsoffice/ethicscode

The participants were made aware that they could terminate the interview at any point (McQueen and Knussen, 2002).

Table 3.4 presents the various measures taken by the inquirer to assure the confidentiality of the data and the anonymity of the participants.

Table 3.4: Ethical considerations and proposed solutions

Ethical consideration	Proposed solution
Confidentiality	In an effort to preserve the participants' anonymity and in line with Hakim (1987), a series of codes have been used when referring to the various participants. The name of the participants' organisation, as well as any details about information that may lead to a breach of anonymity have not be mentioned in any of the documents.
Informed consent	The nature and the purpose of this research study as well as its research aims and objectives were explained to participants when they were approached by the inquirer. The likely duration of the interview and how the results would be disseminated were also clearly stated
Data collection	None of the information gathered during the interviews was used for commercial purposes or shared with other Gartner associates.
Participant's comfort zone	Participants were made aware of their right to refuse to give an interview or to break off the interview at any moment. Participants were also given the choice to refuse the use of recording devices during the interview. For the participants willing to be recorded, a copy of the transcript was provided and the data were only to be exploited upon the participants' confirmation that the transcript accurately reflected the discussion that took place.
Data access and storage	Interview transcripts were stored on the inquirer's own personal computer. For confidentiality reasons, the actual name of the participants and their organisations did not appear on the interview transcripts.
Conflict of interest	One must be aware that the inquirer's affiliation with Gartner may have led to a conflict of interest. Whilst current Gartner EXP members may have remained worried that specific information would be shared with other Gartner associates, non Gartner EXP members, on the other hand, in return for their participation, may have been tempted to ask for 'personal favours' that would normally require a contractual agreement with Gartner Ltd. In both situations, the inquirer set the appropriate expectations and dealt with these conflicts of interest in line with both Section 3.2 of The University of Northampton's Ethical Code of Conduct and the Gartner Ltd Code of Conduct.

Source: Compiled by the researcher

3.8   Chapter Conclusion

This methodology chapter enabled the opportunity for the researcher to present some of the methodological choices and philosophical approaches to this inquiry into the perceived role and contribution of the CIO.

As highlighted in the methodology summary table below (Table 3.5), the researcher adopted an interpretivist philosophical position, an inductive logic of inquiry and a qualitative research strategy.

Table 3.5: Methodology Summary

Philosophical Position	Interpretivism
Logic of Inquiry	Inductive (generation of theory)
Research Strategy	Qualitative
Method for Data Collection	In-depth telephone and face to face semi-structured interviews
Method of Data Analysis	Categorisation and the use of coding frames

Source: Compiled by the researcher

The researcher conducted a total of 25 in-depth semi-structured interviews with CIOs, a data collection method that the researcher is familiar and comfortable using. The qualitative data collated was then subjected to a thematic analysis and categorisation process (Appendix D).

This methodology chapter has presented a series of considerations specific to this research study, such as; elite interviewing and discussions surrounding ethical considerations.

The following chapter presents an analysis of the qualitative data that was gathered via semi-structured interviews. Given the interpretative approach to this study, the researcher presented the CIO role in light of its demands, constraints, choices and consequently adopted Stewart's (1982) DCC model.

CHAPTER FOUR: ANALYSIS

4.1 Chapter Introduction

The aim of this chapter is to present the data collected via face-to-face and telephone interviews. As noted in previous chapters, the researcher conducted 25 in-depth interviews with CIOs and Senior IT leaders to assess how CIOs perceive and adapt to the changes shaping their role. In order to highlight the richness and depth of the data collected, the researcher decided to make extensive use of quotes throughout this chapter.

4.2 Emerging Themes

As noted in the literature review chapter, Stewart's Demands, Constraints, Choices (DCC) model (1982) is considered a useful and relevant model when reflecting upon managerial roles. Wahlgren (2003: 231) highlights the relevance of Stewart's (1982) model in studies aimed at increasing one's understanding of managerial work;

> *'This model is best used in qualitative, emic approaches which aim to increase our understanding of managerial work, since the flexibility inherent in managerial work speaks against over-generalising. In studying how managers see their work, the research deals with subjective realities, perceptions, and sensemaking. Moreover, if a subjectivist paradigm is adopted, the researcher and the subject studied create understandings interactively as the investigation proceeds'.*

The researcher believes that it would be particularly beneficial to present the data in relation to the demands, constraints and choices offered in the CIO role (Figure 4.1). As it will be demonstrated further on, it appears that whereas the demands of the CIO role have been covered quite extensively in the CIO literature, role constraints and role choices have been subjected to significantly less investigation.

Figure 4.1: Chapter Four Overview
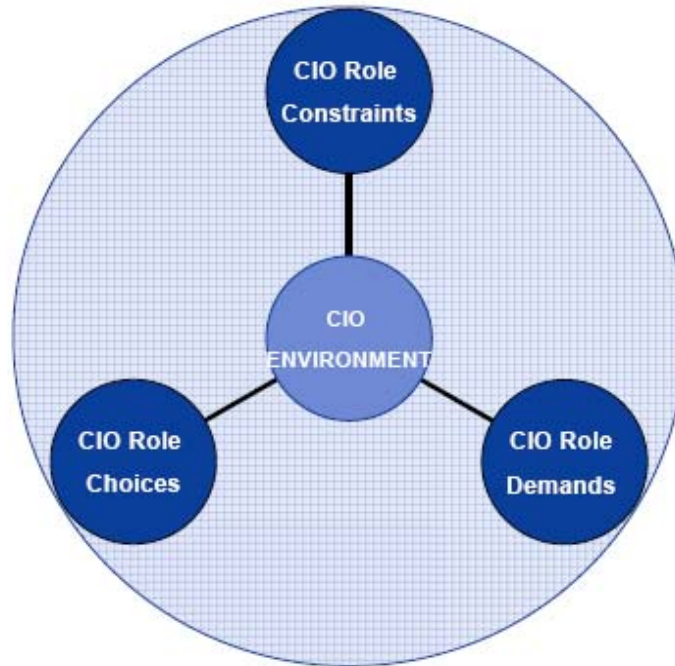
Source: Compiled by the researcher

4.3   CIO Role Demands

As highlighted in Figure 4.2, this section on CIO role demands is composed of three main sub-sections.

Figure 4.2: CIO role demands overview
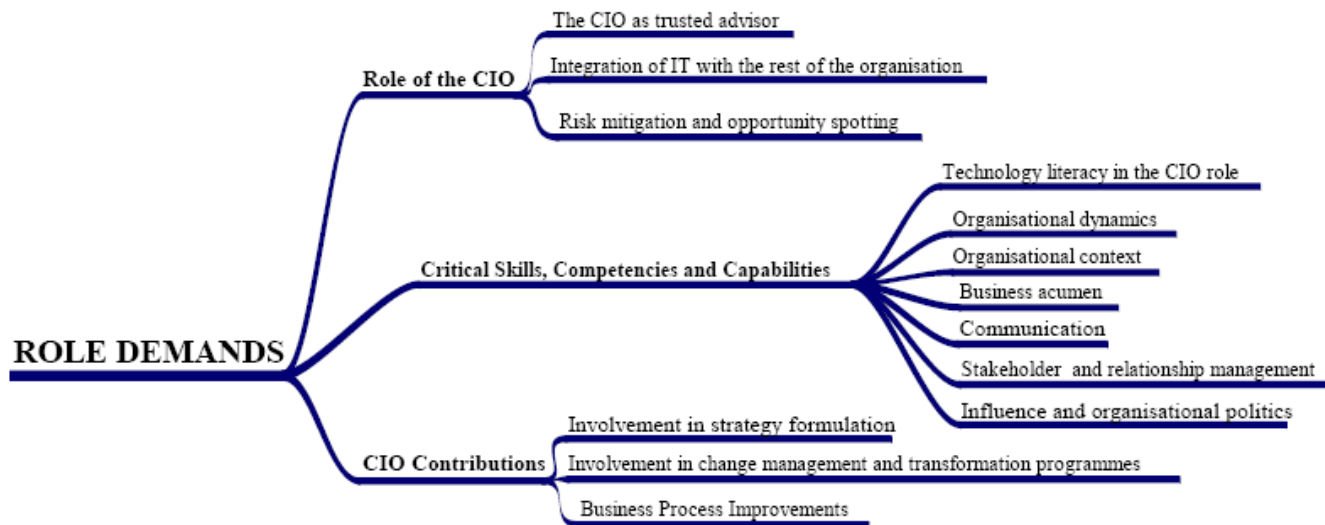
Source: Compiled by the researcher

4.3.1   The role of the CIO from the CIO perspective

Throughout this study, it has been suggested on several occasions that the role of the CIO combines both a strategic element and a tactical, operational element. It appears that conversations with participants corroborate this statement. As noted by interviewee R, the CIO role despite being in essence a strategic role still contains a strong element of operations management which the CIO ought not to neglect.

It appears that operational excellence is considered by CIOs as a key requirement to establishing trust and gaining the credibility required to play a more holistic role within their organisation.

Interviewee N suggests that to gain credibility and to establish a certain amount of trust, the CIO ought to find the business priorities that are the most pressing on the key individuals' agenda and deliver a series of 'quick wins'. The involvement of the CIO in strategy related activities depends on a combination of various external and internal factors. Interviewee W remarks that the CIO will not be invited to take part in strategy

discussions if they are failing to provide reliable IT operations. Interviewee C goes as far as to say that when CIOs are involved in activities outside of IT, a failure to provide reliable IT operations can result in the CIO no longer being invited to take part in more strategic activities.

> *When your core business systems go down, people stop discussing strategy with you. While you're not delivering to your service levels, people will stop discussing strategy with you.*
>
> *Interviewee C*

This point is particularly well articulated by Interviewee F who highlights the importance of providing a number of basic technology services in order to be invited to participate into these broader discussions. Interviewee B refers to earning a license to operate when discussing the importance of providing reliable IT operations.

> *I would say that the role of the CIO is to orchestrate a number of technology services to provide some basic commodity based services, and then earns the right to have broader business change and business enabling conversations about what role technology can play in that particular organisation moving forward.*
>
> *Interviewee F*

As discussed later in this chapter, it appears that there is still an expectation gap between IT and other parts of the organisation. Interviewee N points out that failing IT operations will not only fail to provide the required credibility to the CIO, but will also provide a platform for further discords.

Interviewee U highlights the dual aspects of the CIO role, and argues here that CIOs ought to perform their role in the best interest of their organisation.

> *If the organisation has a number of old systems which are in dire need of technical refresh, I cannot just say, 'Okay, let me draw up a strategic plan, let me understand what the business objectives for the next five years are and let us work that way to come up with new systems and then leave the operation suffering from the poor quality of the information systems that the organisation might have.*
>
> *Interviewee U*

Interviewee K points out that it seems only a few years ago that IT and the CIO have started to be considered as key contributors and to be perceived as having the potential to give a competitive edge to organisations. Interviewee K notes;

> *It's an interesting up and down maturity evolution that we're seeing. Initially, 20 years ago, for a period of ten or 15 years IT was, I think, pigeonholed into more of a purely operational, functional role. And ten years ago, people started to become much more sensitised to the strategic role of IT enabling business capability.*
>
> *Interviewee K*

Interviewee X argues that the CIO role is somehow a newly created position that should be considered as an indication of a major shift in the perceptions of the role of IT today. Interviewee N when reflecting upon the role of the CIO makes a point to distinguish the CIO role to the role of an IT director. According to Interviewee N, both positions require a different set of capabilities.

> *The thing that typifies the CIO of today is they've got this capacious desire to know what's going on and have this ability to maybe juggle lots and lots of plates, but they've got to be able to know which ones to let drop. That, to me, differs from the role of an IT director, because the IT directors usually are doing a portfolio role where there is a plan to the year and it's relatively fixed, and things get executed in a reasonably sequential fashion*
>
> *Interviewee N*

The CIO as trusted advisor

Interviewees A and V both perceive their role in terms of being senior advisors or trusted brokers with the ultimate goal on delivering whatever the business objectives of the organisations may be.

This notion of trusted advisor can be translated into different specific roles depending on the needs of the organisation. Interviewee N suggests that in his experience CIOs are often used as sounding boards when the viability of a project is being assessed.

According to Interviewee N, CIOs are recognised as having relevant experience in running and managing large and complex programmes.

> *I think what they're doing frequently is acting as, I use this expression of the "fly or die" business case sounding point for certain initiatives, because I think what I'm increasingly getting involved in is these short but focused discussions about whether or not a project or a programme is viable. I think they look at the CIOs because of their background and experience of running complex programmes*
>
> *Interviewee N*

Interviewee H argues that the role of the CIO should be about helping and advising on how to position the organisation to be the most effective in a particular market. Interviewee U agrees with this view and argues that ultimately, the CIO role is about identifying what the organisation needs, what the organisation would benefit from and how technology can help to deliver the strategic objectives.

As noted by Interviewee I, playing the role of trusted advisor can also help CIOs to develop strong relationships with potent stakeholders, a critical success factor in the CIO role.

> *Our role is more of a negotiator or a go between the different units to make sure they get what they need out of it, if it's a valid need. And I think that goes a long way to creating links or bonds in the business so that you get support when you need it.*
>
> *Interviewee I*

Mitigating risks and identifying opportunities

A close link to the notion of trusted advisor is the notion of risks mitigation and that of opportunity spotting. Interviewee I believes that CIOs have a role in preventing risks associated with using certain technologies.

The CIO definitely has a role to play in the sense that the CIO's role is going to be to advise and to warn people of some of the possible issues that could come out of using these new technologies because our users are not very technical.

<div align="right">*Interviewee I*</div>

Other participants identify that CIOs play a key role in pinpointing new technological opportunities which will improve the overall performance of the organisation. Interviewee Q suggests that technologies provide a wealth of opportunities, and it is the responsibility of the CIO to identify and select the most appropriate technologies and make these available to key individuals within the organisation.

It's definitely the role of the CIO to ensure that, as far as technology is concerned and the opportunities that technology brings along, these are identified or made available to those individuals within the organisation who could benefit the most from them.

<div align="right">*Interviewee Q*</div>

Interviewee L argues that CIOs more than anyone else in the organisation are positioned in a way that they get both a strategic and detailed view of the various parts of the organisation, which translates into the ability to spot opportunities for potential business improvements.

I think the CIO probably more than anyone else has an insight at both a strategic level, but very often also, at a detailed level as to where the opportunities are, where the obstacles that we need to overcome are, and where the things that are not working are that we need to fix.

<div align="right">*Interviewee L*</div>

Interviewee D articulates this point particularly well and suggests that spotting opportunities is an area where CIOs can bring a significant amount of value to their organisation, whether this is through identifying potential risks or efficiency opportunities.

What the role becomes is very much spotting opportunities, learning lessons, transferring lessons across the business, opportunities not just for efficiency but also for effectiveness, are you doing the business better?

Interviewee D

Integration of IT with the rest of the organisation

Finally, CIOs see their role as a bridge between the IT and the business world. CIOs emphasised that one of their key responsibilities is around leveraging information technology to fit with the purpose and strategic goal of the organisation. In essence, CIOs perceive their role as bringing IT into the business.

As pointed out by Interviewee B, this requires a change of mindset not only from individuals outside the IT organisation, but also inside the IT organisation.

It's about managing and leading people and getting the experts who are technologists to understand and integrate with what the business is trying to drive to.

Interviewee B

This notion of IT/ business alignment is particularly well articulated by Interviewee U who notes that CIOs must have a deep understanding of the business issues if they are to be successful in bridging this gap.

I see the role of the CIO focussing on understanding the business, the business objectives, the benefits to be achieved and coming up with solutions at a high level, technological solutions, how technology can be applied to address those business needs.

Interviewee U

4.3.2 Critical skills, competencies and capabilities

As previously noted by Interviewee U, possessing a strong understanding of the industry in which one works is believed to be a critical success factor in the CIO role. For the purpose of this analysis chapter, it is beneficial to explore some of the skills, competencies and capabilities that CIO views as the most critical.

Technology literacy in the CIO role

As noted in previous sections of this study, CIOs are expected to play both a strategic and a tactical role. One could foresee what the implications of this dual role could be on the skill set of the CIO. As highlighted in the literature review chapter, several studies have addressed the question of the skills and competences to be a successful CIO (Earl and Feeny, 1994; Feeny et al. 1992; Stephens et al. 1992). However, one question remains; should the CIOs possess a deep understanding of technology to be successful in their role?

Interviewee X does not think that the traditional IT route is necessarily the best route for the CIO to expand from. Interviewee X argues that the CIO should surround themself with technologically competent individuals who will take charge of the operational and technological aspects of the role, thus freeing some time for the CIO to deal with broader business initiatives.

> *I don't think that the CIO himself necessarily needs to be a pure technologist. In fact I don't think that's the right background if I'm being honest. I think occasionally that understanding the technology too much may actually be a hindrance by the fact that one needs to sort of be able to manage the role from a more holistic perspective.*
>
> *Interviewee X*

There are obviously different schools of thought and opinions regarding this, but apart from Interviewee X, the vast majority of the CIOs who participated in this study firmly believe that being technically competent is critical. Interviewee R supports the view that CIOs need to have a deep understanding of the technology and uses an interesting analogy to substantiate these views.

> *I think that a CIO does have to have an understanding of technology. I sort of put it into an analogy that maybe some people think is unfair, but I actually think it's right on, which is that if you go to a restaurant and the chief cook doesn't know how to cook and has never cooked, how good a restaurant do you think that would have been.*
>
> *Interviewee R*

Interviewee S shares similar views and posits that it would be very difficult to lead the IT function without a strong grasp of the fundamentals of corporate IT. Interviewee S argues that without the minimum degree of technological knowledge, it would be impossible to challenge the team. Interviewee S, on the other hand argues that if they didn't possess the technical knowledge, they would have to change the structure of their current team and make sure that they could rely on individuals to translate technical language into a language that they would understand.

Interviewee A argues that if a CIO is not technically savvy, they run the risk of making mistakes in terms of technological choices which can be extremely costly for the organisation. This statement is echoed by Interviewee K who suggests that having a certain amount of commercial and negotiation skills is critical.

> *You need business skills around purchasing and negotiation as well as technical skills or at least an understanding of the technologies at some level to help shape and form strategy. You're still running a large business at the end of the day. The IT itself is a large business. It's a technology oriented business but you're running a business nevertheless.*
>
> *Interviewee K*

Whether the CIO believes that they need to possess technical skills or not, there is unanimity that being technically astute is no longer sufficient. As pointed out by Interviewee K, the CIO must possess strong commercial skills. Interviewee T suggests that the CIO should be perceived as a business executive not only a technology executive, but nevertheless, chief executives need someone who knows the technology and understands how information technology can be leveraged within the organisation. Interviewee V encapsulates this point and suggests that the CIO ought to have the ability to assimilate new technologies quickly and assess whether they are relevant for the organisation.

I think that increasingly as you go up the hierarchy it's less important to really have your finger on the pulse of the latest technology, because I think that there are plenty of sources of getting that information. But that ability to quickly assimilate new technologies and to think about and understand whether or not they're relevant to your particular business, and if they are relevant, how you forego it, how the business will go about exploiting them. I think that's where the real skill is.

Interviewee V

Interviewee F supports this view and suggests that successful CIOs are hybrids and are able to straddle the technology and business world.

If I look at the good CIOs of the past and good CIOs going forward, it is the people who can straddle the technology, what it means and how it can be applied in a business world. And it's about people who are good hybrids, they're business people and they're IT people and change people.

Interviewee F

Organisational dynamics

When discussing some of the core competencies to be successful in the CIO position, the participants suggested that having an inquisitive mind, a strong desire to learn and an ability to quickly assess organisation dynamics predetermine the success of a CIO.

As mentioned previously, the CIOs believe that developing trust and establishing credibility is a critical element to becoming a successful CIO. Interviewee N suggests that one way to establish trust is through reactivity, agility and the understanding of organisational dynamics. Interviewee N argues that CIOs should always be aware of the topic of the month, ready to respond quickly to potential demands and able to understand the mood of the organisation.

If you don't understand the dynamics, the mood of the organisation you work in then you won't be able to engage effectively....

Interviewee C

Organisational context

Interviewee G believes that the CIO must understand what the issues faced by board members are. Several CIO participants highlighted the importance when working as a CIO to sense and appreciate the dynamics of the organisation, which often helps them to engage with senior executives more effectively. Interviewee N for instance, stresses the importance of being aware of what he referred to as the 'topic of the month'.

> *You've got to have your radar screen on and you mustn't turn it off, ever. Because my experience again would be that the CIO has to be very, very agile in responding quickly to what the topic of the month is. The politics come in to play if it's a company that has got a higher than normal politics ratio, they've got to be very diplomatic, but fairly clear.*
>
> *Interviewee N*

Business acumen

The CIOs unanimously recognised the importance of having a sound understanding of business, whether this is industry-specific or basic business acumen. Interviewee G argues that, in order to be able to gain credibility and ultimately exert influence, CIOs must possess a certain level of understanding of the issues faced by board members. Interviewee G posits,

> *For me, the key influencing skill is to understand your audience and play on their ground. And to do this, the thing you need to do is to be able to have a deep understanding of their business, and that's the way you can be one of them....*
>
> *Interviewee G*

Interviewees R and X firmly believe that possessing a deep understanding of business in general is a critical component of making the right decisions. Both participants argue that it is crucial that the CIO has solid financial and accounting skills.

I think that any board member in my view needs to have good financial acumen... both in terms of their own personal role as a director, but as a corporate member one needs to have a reasonably good financial background and understand how the business is being financially run.

<div align="right">*Interviewee X*</div>

When discussing some of the critical success factors in the CIO role, Interviewee A suggests that being a CIO first and foremost requires an enquiring mind, a desire to learn how organisations work. Interviewee A argues that possessing this enquiring mind should not in fact be considered as a skill per say, but as an attribute. Interviewee A introduces here the notion of mindset, which has been previously discussed in the literature review chapter and will be explored further later on.

Communication

In addition to business skills, the CIOs believe that they ought to possess superior communication and stakeholder management skills. This point is particularly relevant as CIOs are often required to deal with non IT specialists.

There is an apparent risk of creating a certain amount of frustration amongst the c-level suite if the CIOs do not pay particular attention to the language that they use when discussing issues or sharing ideas with their executive peers. Interviewee X suggests that CIOs who have a non-technical background have a big advantage in this respect.

As noted by Interviewee X, if CIOs do not pay attention to the vocabulary that they employ, they run the risk of talking in a technical language which ultimately will discredit them within their peer group. Interviewee C argues that effective CIOs are able to explain technology, make it simple to understand and they can explain the outcome of technology driven initiatives in a concise and unthreatening manner.

Interviewees M and V recognise the importance of being able to address an audience of non-specialists. Interviewee M argues that one skill that is crucial for the CIO to have is the ability to switch off the "geek speak" when dealing with individuals who have limited

technical knowledge. Interviewee V stresses that the CIOs ability to speak the same language as the executive peers, will result in stronger relationships with the CIO's counterparts in the business and consequently helps in creating the trust that is required to succeed in this role.

Interviewee L provides an example of how they have had to adapt their communication style to a non-specialist audience in order to gain trust and credibility.

> *When I first started the role, the way in which we reported our performance to the business was things like network availability, server up time, statistics that meant very, very little to users, meant very little to senior managers and meant nothing to the board really. It didn't translate into the objectives that were important for them. We now report our performance on a whole range of much more frequently changing business objectives.*
>
> *Interviewee L*

Stakeholder and relationship management

Closely linked to the notion of effective communication is the notion of stakeholder management. This concept appeared extremely relevant to the CIO and is seen as a pivotal part in their success or failure. Interviewee B argues that when working as a CIO and being a board member, it is equally important not only to manage the relationship with the CEO, but also to manage relationships across the board.

> *It's not just about managing the relationship with the CEO, it's also about managing the relationship with his peers. And his peers are finance, HR, commercial, business development.*
>
> *Interviewee B*

Interviewee R is convinced that the success of a CIO is purely based on their ability to work with different individuals and manage these relationships. Interviewee N has an interesting perspective on how to build powerful alliances and trust with their peer group. Whilst being questioned on this particular aspect of the CIO role, Interviewee N argues

that CIOs ought to make a point of spending as much time as possible interacting with key stakeholders in order to foster collaboration.

> *I think the most successful CIOs will spend very little time sitting at their desk and a lot of time out in the business. If I look at my business, I spend three days a week not at my office, and I try and spend as much time as possible with what I would call my senior community, and it soon gets around that you want to do things in a more collaborative way.*
>
> *Interviewee N*

The importance of establishing trust within the executive community is reiterated by Interviewee W who admits that when reaching senior manager level, one needs support from the most unlikely of sources to get certain projects approved. Interviewee W argues that informal relationships can bring a wealth of support. Interviewee W provides an example of how he used to go about developing his relationship with peers.

> *In xxxx, because people often travelled, the people I was trying to build relationships with were travelling internationally all the time. One of the few times we could sit down and talk was in the canteen. Everyone went to the canteen. If they were in the office in London, they went to the canteen. So you would sit with your peers in the canteen to try and understand and start talking business but in an informal way. And that's how you build relationships. So it was not through formal meetings.*
>
> *Interviewee W*

Interviewee E and O expressed particularly interesting views on the skills that are required to build effective relationships. According to their experience, building a successful relationship requires a change in behaviour. Interviewee O recognises the importance of being emotionally aware to build successful relationships, and put forth the concept of emotional intelligence, a concept introduced in the literature review chapter.

> *That's all around emotional intelligence in there. This is something that unfortunately IT has never been blessed with a high amount of. If you can't sell ideas, if you can't build trust, you're not really going to get too far forward.*
>
> *Interviewee O*

Influence and organisational politics

Although some key aspects of this section are addressed later on, when talking about the CIO mindset several participants suggested that the CIO, as a leader of the IT function, ought to exercise influence and understand the organisation's politics.

As noted in the literature review chapter, one of the key differentiators between managing and leading remains in the individual's attitude towards control and influence. This distinction is highlighted by Interviewee D when reflecting upon their role and they note that their role as a CIO is about leadership and influencing rather than managing. Interviewee V agrees with this view and suggests,

> *I suppose one of the things that I'm finding quite different in this role from anything that I've done before is the need to exert influence and persuade the organisation to move in a particular direction rather than having a sort of command and control kind of environment where we could tell the business what to do.*
>
> *Interviewee V*

When discussing the importance of influencing and understanding the politics of any organisation, Interviewee G argues that this is not only a core element of the CIO role but of any c-level position. Interviewee G suggests that this is a role that CIOs ought to be comfortable playing.

> *How can you not be comfortable with organisational politics and exercising influence? It's closely linked, and if you cannot do this you cannot be influential, because that's part of it. So, at the same time, if you can't do this then probably you should not do the job, because it's part of the job.*
>
> *Interviewee G*

4.3.3   CIO contributions

It appears that the CIO's *raison d'être* is about improving overall efficiency through the use of technology. Improving the efficiency of an organisation can be achieved in a

variety of ways, but conversations with the CIOs suggest that there are three key areas for which they have the skills and capabilities to make a significant impact, namely; strategy, change and transformation, and business efficiency.

Involvement in strategy formulation

There have been many studies surrounding whether the CIO should or should not be involved in the development of corporate strategy. For the purpose of this study, CIOs have been asked to share their view as to whether they should be involved in strategy discussions. As it was highlighted previously, the involvement of the CIO in strategy related activities depends a great deal on the CIO's personal credibility and ability to deliver reliable operational services. It is demonstrated in the second section of this data analysis chapter that the CIO's involvement very much depends on the overall maturity of the organisation and the composition and characteristics of the board of directors.

The study participants firmly believe that generally speaking the CIO, due to his/ her role and position within the organisation, should be systematically involved in the development of strategy. One must however clarify this notion of involvement. Interviewee Q notes that the CIO responsibility is to support and help realise the strategic direction of the organisation, but the responsibility for determining the strategic course of the organisation ultimately remains with the CEO. The notion of support and input into the formulation of the strategy is discussed throughout this section.

> *I think CIOs need to be systematically involved in the development of the road map, which is basically the strategy of how to achieve something. Now, a strategy is only there to deliver on the objectives set by the organisation. So, from that perspective, the CIO does not necessarily have to be involved in the setting of the organisational objectives.*
> *Interviewee M*

Interviewee B posits that CIOs with a global function often have a good grasp of corporate strategy and would be perfectly capable of making a significant contribution in this area. Interviewee B notes that participating in strategy related activities is part of the

evolution of the CIO role. This view is shared with Interviewee X who notes that the level of participation and involvement in corporate strategy is a key differentiator between IT directors and CIOs. Interviewee X notes,

In the past, I think IT directors have been seen more as being sort of more reactive than proactive and therefore are delivering what the business has asked them to do. And I see the Chief Information Officer role as being a lot more strategic really in terms of being a key catalyst to help drive business transformation

Interviewee X

When discussing the issue of the involvement of the CIO in strategy activities, Interviewee I suggests that given the predominant role that IT plays in organisations today, the CIO ought to be involved in strategic discussions if one is to leverage technology to the best interest of the organisation. Interviewee L perceives their role in terms of being a strategic evangelist who identifies synergies across the organisation. Interviewee A reinforces this point and highlights the importance for CIOs to have some input into the strategic vision of the organisation.

You have a role to influence the strategy, because you should have a perspective on what's coming down the road and what technology could do, and therefore you should be up there with the business opening their eyes to the potential of what the technology can do because it might radically alter the business model.

Interviewee A

Interviewee C argues that strategy is such an important part of the CIO role that, in case the CIO is not being invited to the formulation process, this one has a responsibility to understand the strategy that has been formulated. This understanding of where the organisation is heading as noted by Interviewee G helps the CIO to position the IT function as a value driven function.

Involvement in change management and transformation programmes

Organisational change and the running of large transformation programmes are two areas where CIOs believe they have the skills and knowledge to make a significant contribution. Interviewee E reflects upon their role as a CIO and notes that CIOs' issues today have more to do with organisational change than technology management. Interviewee T suggests that conducting large change management initiatives is so embedded within the role of the CIO, that often the CIO will conduct large transformational and change management initiatives without being aware that they have embarked on a major transformational programme.

Interviewee F considers change management as a silent competence.

> *One of the things I think most people who have worked in IT have built up as a silent competence because it's always there is about how you take people on a journey through change. Even though you're talking about technology, it's always involving, normally, people doing stuff differently.*
> *Interviewee F*

Interviewees E, F and T reinforce the point made by several CIOs. The CIOs believe that as their role evolves, the more leadership capabilities are required. Interviewee G argues that the role of the CIO today goes beyond the management of IT operations; it is about transforming the organisation. This aspect is discussed later on when introducing the notion of the CIO mindset.

Interviewee H argues that depending on the scope of the project, CIOs can play a facilitation role rather than a leading role. The rationale behind this is that large change management programmes require the support and sponsor from many heads of business units to be successful. Interviewee H suggests that this level of commitment would usually only be given if the CEO was to be personally involved in this process. Interviewee H notes,

I think the role of a CIO is to act as the leader for catalysing change within an organisation up at the senior level. I use the word catalyse change rather than leading change because I think the job is to facilitate it… you can't change areas of the business unless the leaders in those areas are sponsoring it and participating in it.

<div align="right">

Interviewee H

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Business Process Improvements

The last area of contribution most often highlighted by CIOs is business process improvement, which comes from the privileged position that the CIOs possess. It appears that CIOs, given the very nature of their role and the impact of IT within their organisation, are required to get a strong understanding of the various processes that exist within the business units. It also appears that this access puts the CIO in a privileged position for improving the efficiency of processes across the organisation. Interviewee L notes that very often board level discussions focus on areas that affect not one or two business areas, but the organisation as a whole. Interviewee L consequently believes that CIOs, with their understanding of key business processes, have a critical role to play in these discussions.

Interviewee I notes that the position of the CIO within an organisation also allows for a great level of intelligence and information to be collected. As noted by Interviewee G, the IT function is the only area which possesses a view of all the different functions and consequently their processes across the entire organisation. Interviewee I suggests,

...And the other advantage that both of these people have is that they see how the different roles fit together, simply because we hear it from the users … I don't know what we should call them, but from our colleagues. We actually get a lot of information coming from them and we hear what they say about other different divisions within the organisation. So you eventually get to see how these pieces fit together, where there's a weak link, where things need to be improved.

<div align="right">

Interviewee I

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4.4   CIO Role Constraints

The CIO role is not unlike other executive roles in that it is composed of opportunities, such as; the involvement in strategy and transformation, in addition to constraints. The following section examines some of the constraints influencing the CIO role.

It appears that factors, such as; the composition of the board, the commoditisation and consumerisation of IT and the role set expectations shape the role of the CIO. Stewart (2003) in the theory on demand, constraints and choices, refers to constraints as tangible or intangible factors limiting what managers can do. For the purpose of this chapter, it was decided to split the various constraints of the CIO role between macro and micro constraints. Although, this slight amendment does not alter the theoretical underpinning of Stewart's (1982) work, it was believed that a slight terminological re-adjustment was required.

Figure 4.3: CIO role constraints overview
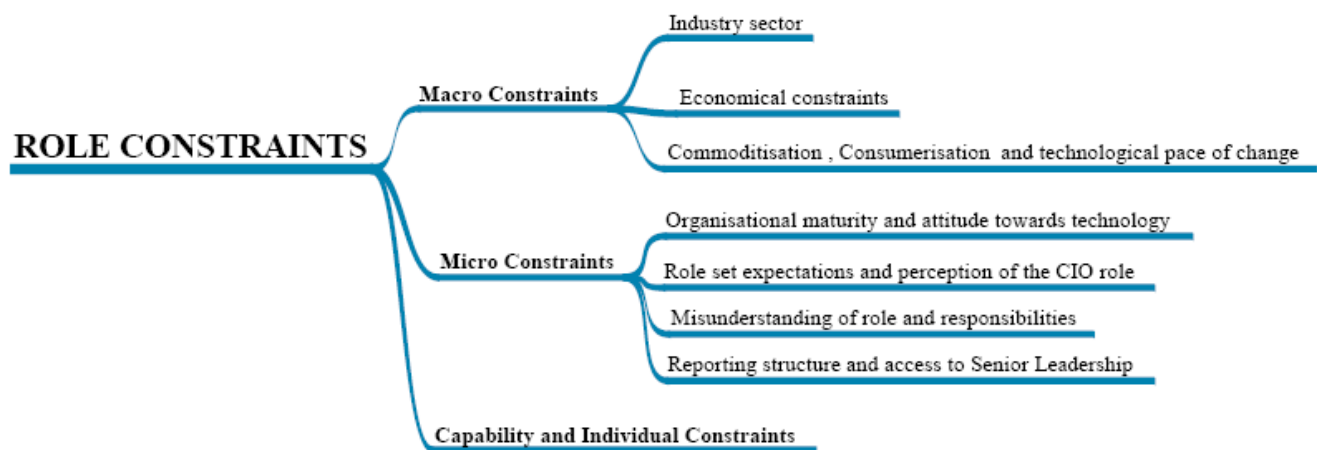
Source: Compiled by the researcher

4.4.1 Macro-constraints

Industry sector

The conversations with the CIOs suggest that the industry in which they work influences the way the CIO role is being performed. This point was highlighted both by respondents working in public and private sectors. For instance, Interviewee B suggests that the way the CIO role is performed depends not only on how IT is perceived within a given organisation, but also on how IT is perceived within a given industry. Interviewee B argues that there are a number of industries where technology is a small component, and consequently the role of the CIO within these industries will be significantly different to the role of the CIO working in a more information intense environment. Interviewee D, a CIO with several years of experience working in the public sector emphasises that there is a clear difference between organisations within the public and private sectors, he argues,

> *I can think of examples of CIOs who come into government from outside, who possibly will not be able to get over the shock frankly, it's not just the culture of the organisation, it's where some sectors are pretty basic in the use of IT to be honest.*
>
> *Interviewee D*

Economic constraints

One constraint that must be taken into consideration is the unprecedented global economic situation, which has led several countries worldwide to enter a recession. Throughout the data collection stage, several countries in Europe have seen their rate of growth in GDP decrease, experienced price inflation and workforce redundancy. As noted by several CIOs, these extreme economic circumstances have had drastic repercussions on the role of the CIO. Interviewee Q argues that given the current financial situation the CIO role is different from the role a CIO would play in a stable climate. Interviewee Q notes that their ability to innovate has been significantly reduced,

and consequently their role has moved from a strategic one to a tactical role. Interviewee Q suggests,

> *Our innovation is going through some tough times, as are many, and part of the necessity that comes about as a consequence of that is that part of my responsibility now focuses or moves away from the focus of long-term strategic direction to short-term tactical as a consequence of where we are.*
>
> *Interviewee Q*

Interviewee Q argues that as a consequence of the current financial situation, the reporting structure of several CIOs has changed. Interviewee Q has experienced a major change. The CEO of Interviewee Q's organisation has almost completely aligned their role to the sales arm of the organisation, whilst the functions traditionally perceived as back office have been aligned to the CFO. The issues and consequences of reporting structures are addressed later on.

The current financial situation has also had an impact on the CIO from a budget scrutiny perspective. Although this phenomenon is applicable across the board and not specific to the CIO, Interviewee J suggests that it is not rare for organisations to identify IT as the first function where costs ought to be slashed. Interviewee J recalled a situation where external consultants were hired to identify potential cost efficiency opportunities, but appeared to focus much of their efforts on the way the IT function was run. Interviewee L, a CIO in the public sector confirms that the current financial climate has had an impact on the role of the CIO. The latter suggests that this has reinforced the importance for the CIO to engage with the organisation on a broader level.

> *I think there are things that happen in the wider world that change the role as well. So, I think an example, in the public sector at the moment, the financial position, and the financial climate, is very much influencing the role of a CIO and is requiring that the CIO really engages in the business.*
>
> *Interviewee L*

Commoditisation, consumerisation and technological pace of change

When discussing some of the constraints in the CIO role, several participants suggested that a change in the expectations of users has had a profound impact on the role. As noted by several participants, the commoditisation and consumerisation of key technologies has inflated users' expectations of the technologies that should be available to them within their organisations.

As pointed out by Interviewee L, corporate IT was previously perceived as a dark art, but in recent years, a consumerisation of IT phenomenon has occurred. As a result, the expectations of IT users have changed, and the CIO has had to adapt to a new environmental and societal context. Interviewee E argues that most users now have a better understanding of technology and consequently have a view on how IT should be run within their organisation. Interviewee L suggests,

> *When it comes to IT, because everybody is now using it at home or wherever, everybody thinks they're an expert. Everybody thinks the answers are simple and straightforward and can't understand why Project One isn't delivering, and this sort of thing.*
>
> *Interviewee E*

Interviewee O corroborates this view and posits that being a CIO today is a much scarier place than 20 years ago. He argues that in the past IT was perceived as being complex, but the consumerisation and commoditisation of IT and technology services has masked the complexity of IT. Interviewee O notes that corporate IT today is much more complicated than before and appears to be a lot easier to the untrained and enthusiastic eye.

Interviewee P posits that it is crucial to set the users' expectations properly and to ensure that they understand that corporate IT delivery is significantly different to home IT. Interviewee P adds that it is incredibly easy to create a feeling of frustration amongst users if expectations are not set properly.

You have to get people to understand that corporate IT delivery is so different to home IT delivery. I mean they're just poles apart but that's not easily understood …So that's always the challenge as well because even your enthusiasts become very frustrated in what is perceived to be, I suppose, lethargy from the IT providers internally.

<div align="right">

Interviewee P

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Interviewee J reflects upon the consumerisation of IT and posits that this can be equally frustrating for CIOs as it can be for users. It appears that quite often, individuals in organisations do not appreciate what Interviewee J's team accomplishes. Interviewee E on the other hand finds that increasingly CIOs are expected to have a view on anything to do with technology. Interviewee J has found, on countless occasions, that they are in situations where they are being expected to share their views on specific technologies. Interviewee E articulates this phenomenon particularly well,

If you're dealing with people that read the Sunday papers, somebody will come in, get you at the next board meeting and you're expected to be the expert on something they've just read at the weekend.

<div align="right">

Interviewee E

</div>

Interviewee S provides a real example of the sort of situation that may arise due to the consumerisation and commoditisation of technology. According to their perspective, it is not rare for business users (especially the strongest willed ones) to bypass the CIO and ignore his/ her recommendations to procure themselves a piece of technology to be deployed in a specific business unit. Interviewee S articulates the consequence of working with an environment where complexity is not necessarily fully appreciated, they note,

Because it looks like it will be really easy for them to purchase and implement something, they don't involve IT and then it causes all sorts of tensions because it needs to interface with other systems and it's in conflict, and suddenly we're trying to support something else that we hadn't planned to take on board.

<div align="right">

Interviewee S

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4.4.2   Micro-constraints

Micro-constraints refer to constraints that appear at an organisation-wide level. As highlighted in the following section, the CIO faces a variety of constraints and it appears that the perception and understanding of their role varies a great deal throughout the role set. It is interesting to note that generally speaking, the CIO perceives that their role is not fully understood or clearly perceived by their peers.

Organisational maturity and attitudes towards technology

When probed about the constraints existing in the CIO role, participants suggested that in addition to macro-economic and socio-demographic constraints, the overall maturity of the organisation and its attitude towards technology is a key determinant in the role that the CIO will play.

Interviewee E indicates that the conservatism and the culture of an organisation in relation to how it perceives IT has a profound impact on the role that the CIO will play and on the level of influence that they will be able to exert. Interviewee E notes,

> *If you're in a company that's pretty laggard in terms of its use of technology and it's almost seen as a grudge spending, then your influence isn't going to be very high.*
>
> <div align="right">*Interviewee E*</div>

Interviewee T argues that there is a direct relationship between the level of maturity of an organisation in respect to their understanding of the capabilities and opportunities brought by technology and the level of empowerment of the CIO role. Interviewee T posits that the more mature an organisation is, with regards to its perception of technology, the most likely it is to see a CIO sitting at board level. Interviewee Y suggests that there is often a need for board members to change their mindset about what the role of the CIO is and the potential for this position.

Interviewees V and Y assert that it is not always clear why organisations create the CIO position in the first place. Both participants argue that organisations should go through a reflection process and assess if they are ready to have a CIO or whether they require an IT director. Interviewee V asserts that it can be an uphill struggle for any CIO who is being brought into an organisation that is not clear as to what they would like to achieve through this newly created position. Interviewee V notes that even a highly competent CIO who exhibits characteristics of a transformational leader may not be able to do more than what a traditional IT director is able to do. Interviewee D recognises that about five years ago, it had become fashionable for public sector organisations to create a CIO position without really appreciating whether they required this type of position in their departments. Interviewee Y notes,

> *I don´t think organisations that go through the matching process of getting a CIO in, necessarily spend enough time on what do they need in the first place. And what sort of CIO do you really need? Do you really need an IT Director? Do you really need somebody that´s a business person that can lead your IT function from a business perspective and drive innovation and can drive differentiation in the marketplace, can play an active role in going to the top line and basically ultimately support business profitability?*
>
> *Interviewee Y*

Interviewee V notes that because of the nature of the CIO role and the rapid pace of technological evolution, the period of stability of the CIO position is fairly short, this incidentally has an impact on the level of understanding of the role. Interviewee V does not talk about evolution cycles, but revolution and argues,

> *In IT, I think that we work almost in revolutions rather than evolutions. And I think that because we don't have a long period of stability at any particular sort of phase of that revolutionary cycle, I think it's difficult for the business actually to get comfortable and get that kind of embedded understanding of what we do.*
>
> *Interviewee V*

Role set expectations and perception of the CIO role

One of the key constraints noted by the CIOs is performing an executive function in an environment where expectations and perceptions of the role are unclear. When discussing the critical skills and competencies of successful CIOs, Interviewee B referred to the analogy of behaving like a chameleon, in assessing the various views and expectations of IT in order to adapt to the conversations. The CIOs believe that there is still much discrepancy in terms of the expectations and perception of their role.

Interviewee G notes that it is not rare for CIOs to be seen as geeks regardless of whether the role and responsibilities have been clarified by the CEO. Interviewee G, a group CIO suggests that it took time, effort and perseverance to gain the trust of the leadership team and to be treated like any other member of the board. Interviewee S notes that the misunderstanding of their role can be at times frustrating. Interviewee R similar to many CIOs feels that they have the potential to contribute in a more significant manner but that they are not always given the chance to.

> *We are doing some of that [innovation] but I think in my opinion it's relatively minor. And … [CEO] will probably disagree with that, I'm not sure. He would say I play a major role in it... maybe that's true I just don't know. But I believe I can in fact do a whole lot more, and I imagine most CIOs probably feel that they can help the business a whole lot more.*
> *Interviewee R*

Interviewee D notes that role set expectations and the understanding of the CIO role, play a critical part in the way CIOs are able to perform their role. As noted by Interviewee D if top executives perceive the CIO and IT as just a means for storing data, then it is very unlikely that the CIO is perceived as an important member of the team. On the other hand, if IT is seen as a critical tool in improving efficiency and effectiveness, then the CIO's latitude of action will be greater. Interviewee L notes,

If you're seen as the IT guy, no one talks to you unless they want a new laptop or a new Blackberry or their email's broken or whatever. If you're seen as someone who can actually help them make stuff work then I think you're invited to the conversation.

<div align="right">

Interviewee L

</div>

When reflecting upon the reasons why some senior executives may be wary of the CIO, Interviewee B suggests that throughout their career, executives must have come across IT-lead projects that have not run properly or experienced service disruption, which in turn has tainted the reputation and credibility of IT leaders. Interviewee N has a more practical view, and suggests that often when individuals have worked in the same organisation for a number of years, they tend to be wary of newcomers, especially when these individuals have access to huge amount of information. Beyond this, ultimately, there is an element of mistrust and the unknown about technology that older generations of executives appear to struggle with. Interviewee R suggests that it is harder for the CIO to articulate the potential value of IT and technologies in a non-technologically savvy environment. This point is particularly well articulated by Interviewee E who emphasises,

I think it's a matter of generation. The moment you get a generation who just accept the technology for what it is, not wowed by it and can just take the technology to be another tool of the company, another thing that is used by the company, when you've got a board that is in that mindset then the job is going to get much more interesting or satisfying.

<div align="right">

Interviewee E

</div>

Misunderstanding of role and responsibilities

As one can expect, a misunderstanding of role and responsibilities translates into curious and entertaining anecdotes, but beyond this, it also reflects the extent to which in some organisations, IT still remains part of the unknown. As highlighted by several CIOs, this mismatch of expectations and lack of clarity around the role can be most disconcerting and, according to Interviewee M, there is still a lack of clarity over what a CIO does for many senior executives. However frustrating this can be for the CIO, this lack of understanding can also provide CIOs with the opportunity to explore new avenues and potentially limit some of the constraints that were discussed previously.

Many people in the business haven't got a clue what a CIO does, nor do they want to know. They just know that it exists or there's a thing called a CIO. So we operate in this quasi grey world of people not understanding and not wanting to get involved in that geeky stuff. It's almost like a smoke screen that you can go out and do certain things with if you exploit it correctly.

Interviewee M

Interviewee I corroborates with Interviewee M that, whereas some individuals have a very condescending view of the CIOs' capabilities, others are willing to give the CIO more credit and provide them with additional responsibilities and involve them in a wider range of projects. Interviewees P, T and W note that it is not rare for CIOs to be perceived as technicians. As will be discussed in the third part of this chapter, although CIOs do not deny the importance of understanding technologies, their role is clearly different to the one of a technician or IT manager. Interviewee T recalls a scenario where, after having spent several minutes discussing the outcomes of a programme worth hundreds of thousands, he was asked a question about his Blackberry by one of the Directors.

Interviewee W has experienced a similar situation which sums up the perception that some executives have of the CIO. Interviewee W recalls,

I got called to present at an executive board. As I was leaving, having just presented to the board including the Chair of the Governors there, he handed me his Blackberry. He said, could you get it fixed? Now that, I guess, sums it up. If I had been the Managing Director of BMW and he had a problem with his car, he wouldn't have given me his car keys and said go and get my car fixed? But he did. So I think in his perception, I was still a technician.

Interviewee W

Interviewee P suggests that despite their rank in the organisation as a CIO, ultimately, if they are in a meeting room with their executive peers and the projector does not work, all the eyes are focused on them and they expect them to the have the competence to fix it. Interviewee I argues that senior executives are often confused about the level of responsibility of the CIO and quite often see business executives reporting things directly

to him that do not need to come to his level, and would normally be handled at the service desk level.

Reporting structure and access to senior leadership

As it was demonstrated previously and reinforced by Interviewee N, some organisations are more mature in the way they perceive the CIO role. Conversations with the CIOs suggested that this maturity and willingness to involve the CIO in companywide initiatives is often reflected in the reporting structure of the organisation. Interviewee L argues that the success or failure of a CIO is dependent as much on the CIO as on the willingness of the CIO's colleagues to change. Interviewee L notes,

> *If people are unwilling to trust a CIO, are unwilling to have discussions that are more operational with the CIO, the CIO will only be able to deliver the operational services and so there has to be a willingness to change.*
>
> *Interviewee L*

Interviewee I postulates that if a CIO reports to the CEO, it is most likely that the CIO will be authorised to voice their opinion and make suggestions to the overall strategy of the organisation.

According to McDonald and Aron (2010), 38 percent of CIOs reported to a CEO, whilst 25 percent reported to the CFO.

Figure 4.4: CIO reporting structure
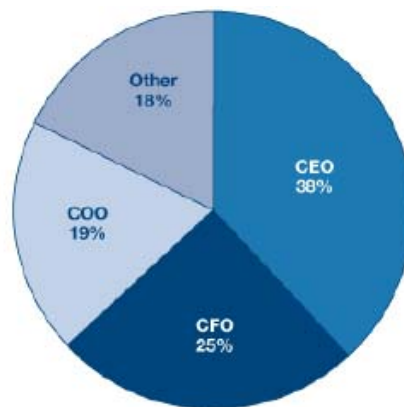
Interviewee G, a group CIO has a very pragmatic view of reporting structures. Despite reporting to the group CFO and not being a board member, he retains access to all board members and has regular working sessions with the CEO. They argue that access to senior leadership and the willingness of these leaders to involve the CIO in board room discussions and activities is more important than the reporting structure in itself. Interviewee H has had the opportunity over the years to experience the pros and cons of various reporting structures. Interviewee H notes that one of the direct benefits of reporting to the CEO is a higher visibility and clarity in terms of where the organisation is heading to.

Interviewee A reinforces the importance for CIOs to be a prominent board member. According to him, being a board member allows the CIO to gain additional credibility from within their team. In contrast, Interviewee W suggests that even when IT is present in the board room, generally speaking, the CIO often has less clout or political influence than the Head of Operations or Head of Sales.

Interviewee W reports to the Chief Operating Officer (COO) and argues that in the current economic climate where budgets are being scrutinised, it is better to report to the COO rather than the CFO since in the case of the latter, often discussions are based on numbers and costs as opposed to strategy. Interviewee L expressed strong views about

reporting to the CFO. According to him, asking a CIO to report to a CFO is effectively diminishing the level of influence of the CIO in a climate where IT should play more of a leadership role than ever. Interviewee L reflects,

> *If a lot of the efficiencies that organisations have been trying to realise are as a response to the economic environment, are those not enabled by IT? And so, it's almost as if we have this perverse thing, where at the point in the cycle where we needed IT to play more of a leadership role, we've diminished it to a less influential position.*
>
> *Interviewee L*

4.4.3 Capability and individual constraints

When reflecting upon the CIO role constraints, one cannot omit the discussion on individual constraints. As it has been demonstrated, the CIOs highlight a number of constraints related to the industry they work in, the organisational culture and they recognise that as the role changes from a support function to a strategic function, there are a number of individual constraints.

Interviewee J notes that there can sometimes be a cultural mismatch between IT and the other functions of the organisation.

> *These people [business executives] are extroverted, they love talking to other people. They want to persuade people about things, you know. And you've got your IT people who are just sort of sitting there, you know, going I like working with my computer. I don't want to have to talk to many people. I mean, so just as a team, we're very different.*
>
> *Interviewee J*

Interviewee E and J posit that the CIO and IT executives, due to the nature of their roles, tend to be fairly logical individuals with limited appreciation for internal politics. Interviewee J goes as far as to suggest that some CIOs struggle to understand why logical explanations are not sufficient to influence a decision. As pointed out by Interviewee E, boardroom experience is about reading and anticipating reactions and identifying individuals who play to their own agendas.

The participants recognise that in some organisations, there is a blame culture, where the finger is pointed to the CIO whenever a service delivery issue would arise. Interviewees K and Q stress that issues often arise due to the organisations' inability to define what their needs are.

The participants asserted that there are also a number of constraints which could be attributed to individual capabilities. Interviewee U argues that a good numbers of CIOs exhibit characteristics of IT managers. Interviewee U goes as far as to suggest that it is because of the capabilities gap that some CIOs find it difficult to work closely with the CEO and to be accepted as a business executive. Interviewee B notes that they have seen CIOs present enterprise architecture maps to business executives. Interviewee B candidly admits to having made a similar mistake and argues that becoming a business technology leader should be considered as a journey. Interviewee W posits that the root of this phenomenon stands in the way that talented IT employees are promoted to management positions. The latter reflects,

> *To me, there is a problem in IT departments anyway and this is a universal problem and this one is difficult to fix and I'll give you this example and this goes all the way up to the CEO. Sometimes as senior IT managers we have fantastic technicians working for us, fantastic senior technicians. Now you get to the point where the only way we can give them more money for what they do is to promote them and promote them into a management position.*
>
> *Interviewee W*

According to Interviewee B, often a failing of some CIOs is acting on their strategy and demonstrating the required leadership behaviour.

> *You can have the best strategies in the world, and you know, actually that's one of the failings of some CIOs as well, that they put in great strategies but they don't show the leadership behind it. And they gained the credibility, at least the initial credibility with the board within the first six to twelve months and then things don't start to happen according to that, and very quickly they lose their credibility.*
>
> *Interviewee B*

Interviewee B emphasises once more the importance of gaining credibility quickly. When discussing the notion of credibility and more specifically the reasons why some CIOs struggle with acquiring a certain level of credibility within the c-level suite, Interviewee R holds the CIOs to account, who in his experience can be too inward looking and not focused on seeing the bigger picture.

As highlighted in the literature review, one of the recurrent criticisms of the CIO role surrounds the amount of time spent on the technological aspects. Interviewee D argues that spending time on IT operations is required, especially if there are some serious delivery problems. However, some CIOs might choose to do so as this represents their comfort zone. Interviewee E agrees with this statement and asserts that many CIOs find it difficult to break out of the technical arena.

4.5   CIO Choices

The last section of this data analysis chapter explores the CIO choices. As highlighted in Stewart's (1982) DCC model, individuals in managerial and executive positions are presented with a series of choices, opportunities to 'do different work, from another and to do it in different ways' (Stewart, 1982: 9). Some empirical data suggests that if CIOs are to make the transition from IT experts to business leaders, they must make a series of choices. As it is demonstrated in the following section, becoming a transformational CIO requires a change of mindset and behaviour.

Figure 4.5: CIO role choices overview
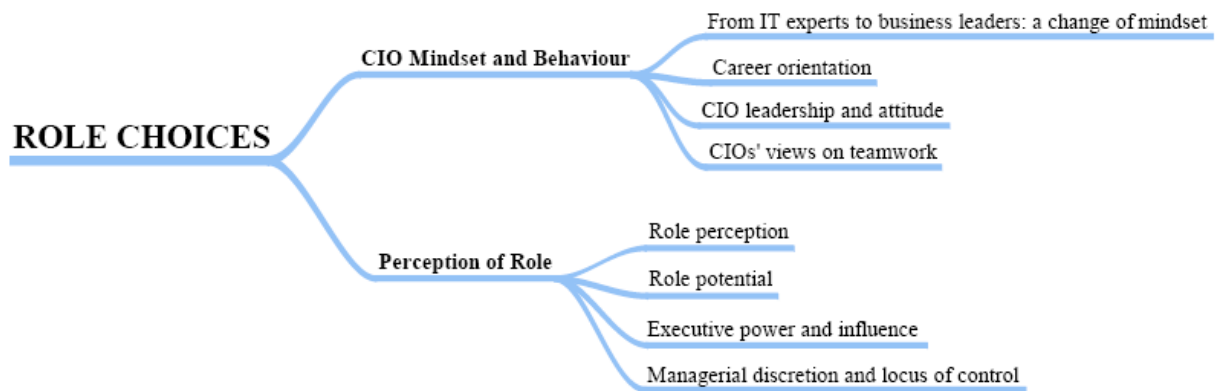
4.5.1   CIO mindset and behaviour

From IT experts to business leaders: a change of mindset

When reflecting upon the transition from IT experts to business leaders, CIOs argue that one must consider this transition as a journey. Interviewee J and M argue that this transition from IT director to CIO, in the true sense of the term is a very difficult process, which involves a change of mindset. Interviewee U stresses that this journey is essentially a conscious move from a managerial mindset to a leadership mindset, and a reflection upon one's career aspirations. Interviewee U suggests,

> *It is definitely a journey, and it is a conscious decision, I want to be a leader and not a manager, I want to be a business-focussed person more than an IT-focussed person. I want to direct and not do, that is something which I think people keep on postponing, at some point in time people have to come to terms with themselves.*
>
> *Interviewee U*

Interviewee G notes that in recent years, the business expectations of the CIO role have changed and that CIOs are appointed on the basis of driving strategic change. Interviewee G argues that IT executives ought to decide whether they want to be leaders in the true

sense of the term or whether they would like to work as functional managers. Interviewee F states that this transition is a very complex process that requires a change of mindset and attitude combined with a desire to develop oneself. Interviewee F posits that these changes must occur on a deep level and go beyond a simple change in the individuals' skill set.

There are various factors that have an influence on the role that a CIO plays within their organisation, one of them being the maturity of the organisation in addition to the attitude of the CEO and the board. Interviewee W argues that irrespective of the CEO's perception, if a CIO does not possess the right mindset, a constant need to learn and a desire to grow as a business executive, he/ she will be relegated to the rank of technician. Interviewee W provides some useful insights into this journey and transition phase. According to this respondent, the key differentiator between a CIO that has gone through this journey and one that has not yet, remains with whom their loyalty is to. Interviewee W suggests,

> *Talk to a senior technician in IT their first loyalty is to their profession and not to the business they're working in. And that's the big difference I think between a senior IT manager whether they be a CIO or a unit head. Their first loyalty has got to be to the business, not to the technology or to the IT profession. And I think that's what makes the difference.*
>
> *Interviewee W*

Interviewee D notes that there are a certain number of CIOs who exhibit the behaviour and mindset of IT directors. Interviewee D argues that this transition is particularly complicated for individuals who have not had the opportunity in their career to step out of the IT world and gain experience in another function. Interviewees W and Y both reached the CIO rank via non traditional IT routes and believe that their career path enabled them to make the transition from IT executive to business executive. Interviewee Y argues that in their experience, CIOs that grow through the traditional IT route often need support in terms of the softer aspects of the role, such as; relationship and stakeholder management. Interviewee W now works as a CIO after spending several years working as a Management Consultant and suggests that the experience and insights

gained during their work as a consultant have broadened their knowledge and enabled them to perform the CIO role with a business outlook. Reflecting on their experience as a consultant, Interviewee W posits,

I've also talked to colleagues that have never done consulting and haven't moved around and have stayed in one organisation for 20-odd years. And some of them have struggled to make that leap. It doesn't mean they're bad CIOs. But I think they could be better because they don't have the breadth of experience and they're quite blinkered in the way they look at things.

Interviewee W

Career orientation

As highlighted in the previous section, it appears that gaining experience outside of the IT function can prove to be particularly beneficial for IT executives willing to broaden their skill set. The conversations with CIOs have suggested that along with a change of mindset, CIOs ought to slightly alter the orientation of their career. For instance, Interviewee G, a group CIO who started his career as a Network Engineer made the choice early in his career to broaden his skills by joining an organisation that would give him the opportunity to be involved in companywide projects. Interviewee G notes,

I had mostly two choices. I was a specialist in networking. I had this opportunity to work for a company like xxxx. I went to that option because what they were talking about was not about technology, they were just talking about the business and how you could drive value, etc. So for me, from the early days, I've always learned this and that's really what gets me excited.

Interviewee G

Given the current business expectations for the CIO role, Interviewee U along with other participants argue that CIOs, whilst maintaining a certain level of technical understanding, ought to detach themselves from the technical aspect of their role. This is something that as suggested by Interviewees U and Y is not always easy to do. Interviewees B and W have separated themselves from the technical aspect of their role,

and confess that whilst their interest in technology remains, their technical ability has drastically decreased. Interviewee B notes,

> *I've got a degree in computer science, in business and IT and I started my career as a programmer, but when I start talking to some of the techies now, I haven't a clue what they're talking about. And I don't want to have a clue what they're talking about. What I want to do is I'll focus on managing the people and driving strategic change.*
>
> *Interviewee B*

CIO leadership and attitude

Despite the fact that some executives perceive the CIO role as a managerial role, the role according to CIOs is clearly one of leadership. This distinction was noted by several participants and especially by Interviewee G who states,

> *It's not a manager role. There are some people that use it as a kind of manager role and then you end up being a day to day man, while the beauty of the role is really the kind of setting the vision, and envisioning a brand new world.*
>
> *Interviewee G*

Several of the interviewees suggested that one cannot discuss the importance of having the mindset of a leader without reinforcing the need to lead by example or walk the talk. The CIOs firmly believe that attitude and integrity are two aspects of leadership that are highly relevant in the CIO role.

Interviewee M through a witty metaphor reinforces the need when working as a CIO to possess the right mindset and attitude, which ultimately pushes individuals to develop themselves, and to go through the journey that was discussed earlier in the chapter.

If you want to climb up a mountain and you don't have the right mindset you're going to fail at the first plateau, you're going to look up the mountain, you're going to look down the mountain and you can turn around and say "My goodness it's probably not worth climbing it up because I can see the view from where I am."

Interviewee M

Interviewee U notes that individuals in leadership positions, before trying to change others, must first assess whether they are themselves willing to change. As explained by Interviewee U, in the context of the CIO role, a CIO cannot expect individuals within his team to think in terms of business solutions, if he is not himself willing to move from a technology leader position to that of a business leader. They suggest that over a desire to learn new things, leaders ought to be willing to go through a process of un-learn to then re-learn.

I cannot expect people to govern more than manage or lead more than manage if they see me managing on a micro level rather than leading, so it is a question of mindset, it's a question of readiness and to un-learn and re-learn.

Interviewee U

Interviewee T, a CIO in a highly conservative organisation confesses that ever since they have joined their current organisation, they seem to have struggled to engage with key business stakeholders. They recognise that there is something about the way that they try to engage within the organisation that is not working. Interviewee T demonstrates a great example of positive attitude and humility, two characteristics that CIOs recognise to be critical elements of the CIO mindset.

Interviewee I argues that the CIOs' attitude to the role plays a critical part in how they are perceived within the organisation. According to this participant, CIOs earn a great deal of credibility if they are perceived by the members of the executive team, in addition to those within their own team, as being genuine and not driven by personal gain. Interviewee J argues that as a CIO and the leader of the IT function within their organisation, they have a duty to demonstrate integrity in their behaviour. They believe

that this is a particularly important aspect if they are to lead their team and the IT function in the right direction. This view is shared by Interviewee A who asserts,

> *You certainly need to be passionate and you need to have a huge sense of integrity and decency. You must be absolutely immaculate in your behaviour and treat people with decency.*
>
> *Interviewee A*

Interviewee H notes that during their career as a CIO, they have had the opportunity to meet a certain number of CIOs to exchange ideas on various topics. Interviewee H notes that the most successful CIOs, in their opinion, seem to have quite low egos and remained content to achieve success through others instead of being perceived as lead contributors.

CIOs' views on teamwork

When asked to comment on what leadership means within the context of the CIO, Interviewee G posits that leadership is a mixture of several elements, such as; the ability to set a vision, self-confidence and self awareness, but also the ability to build an outstanding team and to empower team members.

Interviewee E points out that the CIOs like any other c-level executives are incredibly pressed for time, and must ensure that they have a pretty strong team beneath them, who will be there to support the day-to-day operations. Interviewee Y shares this view and argues that CIOs cannot survive in the current climate without focusing on their own department. Interviewee H provides an interesting view of human capital management and notes that the ultimate role of a leader is to make themself redundant and consequently they should treat the development of individuals as equally important as their own development.

Interviewee G firmly believes that empowerment and recognition are the characteristics of a true leader. Interviewee G suggests that CIOs as true leaders must possess the ability to build an outstanding team and empower their leadership team. Interviewee A pointed

out that there are a variety of awards in each industry that the CIO and his team can apply for and these are perceived to be a fantastic way to promote the work conducted by the IT organisation and to motivate the team.

> *I think you need to promote your team…, if you can think of something where you can go for an award and the team get it, that's fantastic motivation. So it's brownie points all around.*
>
> *Interviewee A*

Interviewee L notes that CIOs similar to other executives should aim at achieving outcomes not by controlling the individuals working for them, but by inspiring and empowering them, as this participant notes it requires the individual to possess a different mindset.

4.5.2 *The perception of role and the role set*

The last section of this data analysis chapter presents the CIOs' perception of their role, with a focus on the potential of the role, in addition to their perception of the amount of power and influence that their role provides them.

Role perception

Inextricably linked to the notion of mindset is the concept of role perception. As highlighted by Carpenter and Gold (1997), an individual's perception of their own role influences others' perceptions and has a direct effect on how much managerial power is attributed to this individual.

For the purpose of this section on the CIO mindset and behaviour, it is interesting to understand the CIOs' perception of their own role and of their role set. It is also interesting to note that many CIOs recognised that the characteristics of individuals are according to them, more important than the characteristics of the role. For instance, Interviewee I and U argue that the title that is given to IT executives is irrelevant, and that

it is the individuals behind the title that will make the role a reality for the organisation. Interviewee I posits that what is important to be successful as an IT leader is the way an individual acts in meetings and communicates. This point is particularly well articulated by Interviewee U who notes,

> *How you perceive your own role, how you project it, how others perceive the role, it's not just the role, if you have a good person, call him what you want, you call him a CIO, you can call him a business person, you can call him anything. In fact, what actually happens very often is that people are not given responsibilities based on the role entirely but also based on their competencies and their experiences.*
>
> *Interviewee U*

As demonstrated, the role of the CIO due to its immaturity lacks the homogeneity in terms of its understanding. Indeed, there are a number of factors that influence the role that the CIO or IT executive plays within their organisation. CIOs do not perceive the role to be any different to any other executive role. For instance, Interviewee G and X do not believe that being a CIO is a tougher role than any other c-level executive role.

Role potential

Despite the lack of understanding and engagement from some parts of the organisation, CIOs appear to be particularly well aware of the potential for the role. As noted on several occasions, CIOs have privileged access to a wealth of information and the opportunity to work across the entire organisation. This provides them with a strong understanding of key business processes and an overview of how the organisation functions. A number of participants pointed out that working as a CIO could be a step towards a role with larger responsibilities.

Interviewee X posits that CIOs generally have a broad view of the organisation, perhaps even broader than other executives on the board. Interviewee A also acknowledges the potential of the CIO role and posits that the lack of technology literacy of the board can

also sometimes be an advantage and provide CIOs with a fair amount of influence and discretion.

Interviewee K believes that CIOs are well suited to move on to COO positions. Interviewee I suggests that there are a number of CIOs that would have the necessary knowledge and experience to make the transition to a general manager or CEO type of position. Interviewee I argues that many CIOs enjoy the dual aspect of their role and would not be particularly interested in these types of roles. Interviewee Q has a different view on this matter and as much as they believe that being a CIO can be considered as a step toward a CEO position, they feel that they would need to get a better understanding of certain areas, such as; marketing and sales. Interviewee Q notes,

> *If somebody asked what is a good step from my perspective to begin developing a situation where you can be considered for a CEO, I'd need to get into the marketing arena, I'd need to get into understanding how the sales operating companies work, having a better appreciation of the customers because, let's be realistic, a CIOs customer fundamentally is the business users except where they're interacting with external parties in terms of interfaces. Very rarely will we get involved with what is perceived to be the company's end customer.*
>
> *Interviewee Q*

Interviewee M, a CIO in the public sector who has had the opportunity in his career to work as a managing director and CEO agrees with Interviewee Q and believes that if a CIO was to move to a CEO type of position, he would have required operational experience. Interviewee M notes that the type of pressure when working as a CEO is significantly different and it can be challenging and nerve racking for CIOs who have come from a traditional IT background.

Interviewee V, a CIO with experience working as a CEO notes that despite a few exceptions, it is fairly rare for CIOs to move to a CEO type of position. Interviewee V argues that this should not only be perceived as a capability gap between CEOs and CIOs, but that this career path is not yet accepted by other board members or investors.

Executive power and influence

It has been demonstrated that there are a number of external and internal factors that are critical to the success of a CIO. It appears that relationship and stakeholder management is considered by CIOs as a critical success factor. Empirical data revealed that the ability to create strong working relationships with executive peers can be a source of influence and executive power for CIOs.

The CIOs argue that whilst being an active board member provides direct access to the leadership team and ultimately increases the opportunities for involvement in activities outside of IT, executive power is directly linked to an individuals' mindset and their ability to establish strong relationships with the executive team.

Interviewee L suggests that the CIO's executive power and influence depends on the ability to establish strong relationships. Unlike CEOs, the CIO cannot rely on hierarchy to influence the decisions that are being made, and consequently have to exert their influence on the basis of their relationships with individuals who possess strong executive power. This point is articulated particularly well by Interviewee W who notes that despite not being part of the executive team, they are still able to exert a certain level of influence within their organisation.

> *Although I don't have a seat at the executive table, I have developed, and that's important to develop a good working relationship with the CEO. Certain CIOs have this obsession that they have to be there on the board sitting at the executive table. I don't think that's absolutely necessary in every organisation. I have a boss that is very supportive but where necessary the CEO will come to me and have that discussion directly with me and I sit on committees where strategy is discussed.*
>
> *Interviewee W*

Interviewee M believes that the CIOs' perception of their roles, level of executive power and managerial discretion play a key role in determining whether a CIO will be successful.

What makes a successful CIO, it's the environment, it's the task and it's probably your own personal perceived role and power that you have, or flexibility or freedoms to go and do certain things.

Interviewee M

Interviewee Q agrees with this view and argues that the CIOs' perception of their role is a critical component of the success of any given CIO. Interviewee Q feels that they possess the same amount of executive power as their executive peers as they are perceived by their peer group as individual who can bring value to the discussion table.

When I sit at a forum and we're discussing something and I get invited to specific forums because people perceive that I have a better appreciation, not because that is my responsibility, it's just something I do, I have a vested interest in understanding how it all ties together as does everybody else but they may not feel or pursue that as actively as a CIO does. Do I have the same power? Absolutely.

Interviewee Q

Interviewee B feels that their perceived power at the executive table comes from the 23 years of experience within a specific industry and his understanding of the organisation. Interviewee M emphasises that as long as a CIO understands their authorising environment, he/ she does not necessarily need to be on the board. A strong relationship with the CFO or COO can be enough to influence some of the decisions being made at board level. On the other hand, Interviewee R has a different opinion and suggests that they would not take a CIO role if they are not on the operating committee. The rationale behind this is that, if a CIO is not on the board and provided with an opportunity to contribute to the growth of the organisation, there are some risks that this individual is at some point considered as a support resource.

Managerial discretion and locus of control

To conclude this section on the CIO mindset and attitude, it is believed that an analysis of the CIOs' perception of their level of discretion and control would enhance our understanding of how CIOs perceive their roles. As highlighted in the literature review

chapter, the concepts of locus of control and managerial discretion have been extensively used in managerial studies. It is interesting to note that the CIOs, despite stressing that organisational context, organisational dynamics, board room composition and organisational maturity influence their role, believe that they possess a high level of control over the evolution of their role. Interviewee B notes that if a CIO has a strong mindset and possesses good business knowledge and effective relationships at board level, he/ she can pretty much shape the role as required. Interviewee D agrees with Interviewee B who confesses that whenever they have walked into an organisation, they have always been setting their agenda and shaping their role. Interviewee U notes that they possess a fair amount of managerial discretion as long as they exercise this discretion within organisational boundaries.

> *I am the one to decide more than the financial person but within boundaries if the budget that can be allocated for such a system, I don't know, one million Euros, for example, then what type of system within those boundaries is up to the IT executive but if it's going to be at a higher budget, then it's different.*
>
> *Interviewee U*

Interviewee X stresses the importance for IT leaders to exercise their role with as much flexibility and freedom as possible. This often means shaping one's own role and making it evolve as the organisation itself evolves. As one could expect, doing so requires a specific mindset in addition to a certain amount of autonomy. Interviewee X argues that they do not wait to be told what to do or when to do it, they tend to make their role evolve as they see fit. Interviewee X suggests,

> *I'm a person that doesn't wait to be told how to perform the job, you shape the job as you think is relevant and recognise how the business is changing and the way that one can sort of support and drive that forward. So I've never really seen or waited for somebody to influence how I should do my job.*
>
> *Interviewee X*

4. 6   Chapter Summary

This chapter enabled the opportunity for the researcher to present some of the most relevant data that was gathered during a series of in-depth semi structured interviews with CIOs. For the purpose of this PhD thesis, the researcher decided to make great use of the Stewart (1982) DCC framework. The interviews with CIOs highlighted a number of role constraints, role demands and also role choices as illustrated in Figure 4.6.

Figure 4.6: Data summary: The CIO environment
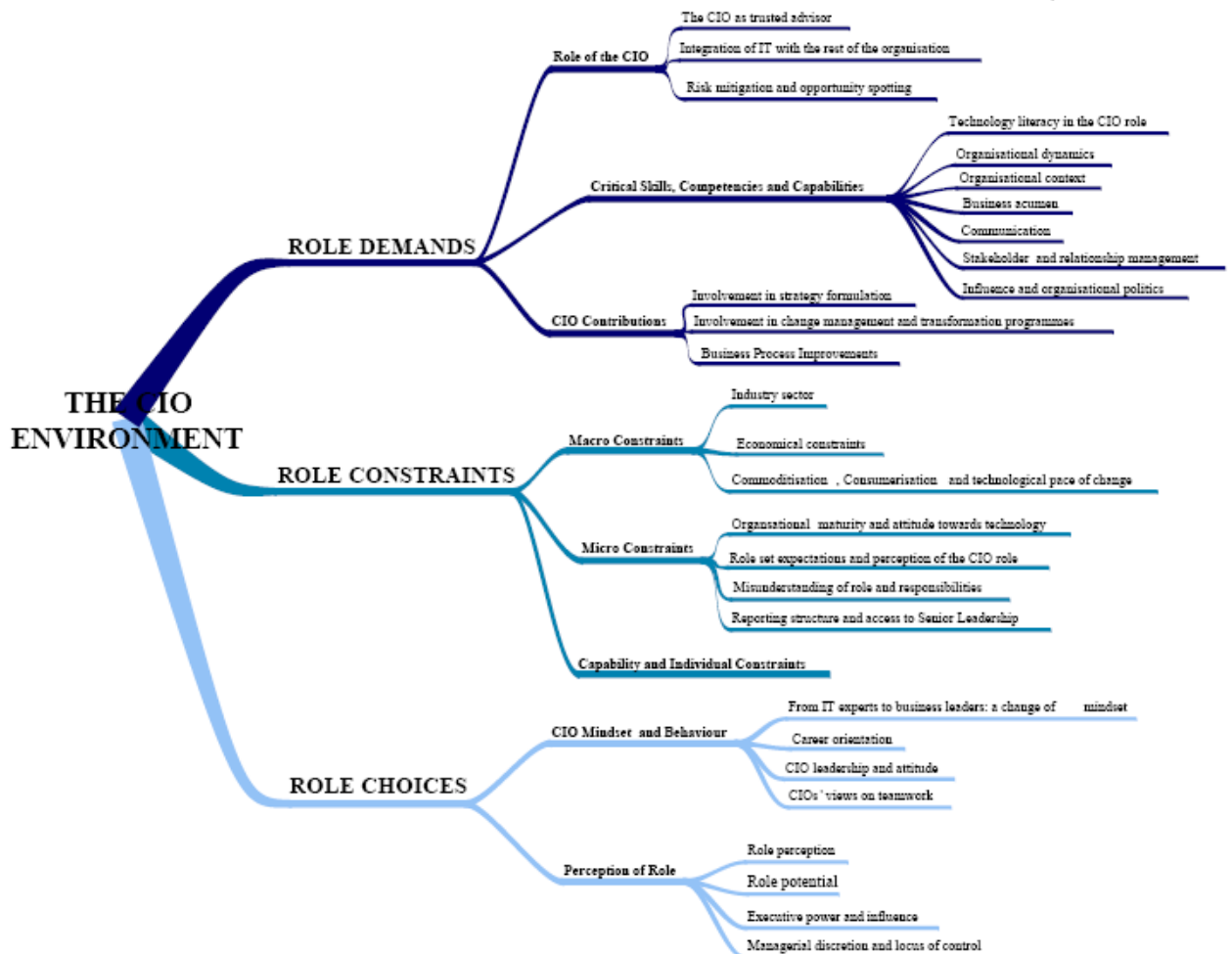
Source: Compiled by the researcher

4. 7   Chapter Conclusion

The aim of this analysis chapter was to present the data collected via in depth face-to-face and telephone interviews with CIOs. This data analysis chapter highlighted a number of role demands, role constraints and role choices faced by senior IT executives.

The following chapter presents a reflection of the impact of this data on the literature surrounding the CIO role and role theory.

CHAPTER FIVE: EXPLORING THE DEMANDS, CONSTRAINTS AND CHOICES IN THE CIO ROLE

5.1 Chapter Introduction

The aim of this discussion chapter is to explore the CIOs' perception of their own role. It is believed that this chapter not only enhances our understanding of the CIO role, but it also highlights the factors that according to CIOs play a critical element in the success or failure of individuals in this position.

To conclude this chapter two models of the CIO role are presented. Both models identify the critical importance of perception and choices in CIO role enactment.

5.2 Exploring Role Demands in the CIO role

5.2.1 CIO role demands

As demonstrated throughout this inquiry into the role and contribution of CIOs, it appears that the CIO role is a complex one where the evolution of technology and its application constantly changes the expectations of the role of IT and of the CIO and their team. This section explores the demands within the CIO role and contrasts the CIOs' views with previous research studies. Despite agreeing with the evolution of the CIO role and the demands associated with this role, CIOs noted the importance of providing reliable IT operations, and consequently highlighted the dual aspect of their role. Participants suggested that while the expectations for IT have evolved and CIOs are trusted with additional responsibilities, the operational side of the role remains important. This point was particularly well articulated by Interviewees C and R who noted that providing reliable IT operations and IT support is often the first step to being invited to participate in large enterprise-wide discussions, in other words, a way of earning one's credibility.

It's all down to credibility. And the credibility is based on, number one; have you earned what we call a licence to operate, i.e. the IT function is running properly and smoothly and doesn't cause the business any issues.
Interviewee B

Research participants believe that the CIO role has most definitely evolved and is clearly different to the role of the IT director, which according to Interviewee N is more of a portfolio type of role, where tasks are executed in a sequential fashion. Edwards et al. (2009) reflect upon the confusion around the CIO role and argue that a key aspect of the confusion emanates from the lack of consistency with IT executives' job titles. Edwards et al. (2009) notes that IT director and CIO titles are used interchangeably and not often consistently. Edwards et al. (2009) point out that whereas the CIO title has become an established position in US organisations, many European organisations have a preference for the job title of IT director.

The CIOs perceived their role in terms of trusted advisors for whom the ultimate goals are to deliver on strategic objectives, mitigate risks, spot new opportunities and integrate the IT function with the rest of the organisation. This last point was noted by O'Riodan (1987) who suggested that one of the key roles of the CIO is to broaden the vision of the organisation and encourage company-wide use of IT in innovative ways.

Gottschalk (1999), Cash and Pearson (2004) noted that one of the key areas of contribution from the CIO is in the field of change management. This assumption appears to be confirmed by research participants who argued that the role of CIOs today has more to do with the management of organisational change than the management of technologies. The CIO participants noted that conducting change is embedded in the role so deeply that, as suggested by Interviewee F, change management is a silent competency. The increasing role that the CIO plays in change management initiatives was documented by Gottschalk (2000) who found evidence that CIOs spend an increasing amount of their time on activities related to change management.

Earl and Feeny (1994) argue that it is usually safer for CIOs to play the role of facilitator in large change management programmes, as individuals that lead these types of initiatives often accumulate a number of powerful enemies. Interviewee H agrees with this notion and emphasises that CIOs would not be able to lead change at a corporate level without the full support of the board and the senior management team. Interviewee H notes that even in the eventuality where the CIO was to receive the required executive support, they might still encounter a certain level of resistance from senior executives. As will be demonstrated further on, it appears that CIOs perform their role within a heavily constrained environment.

> *How can you not be comfortable with this [organisational politics] and be influential, because it's closely linked, and if you cannot do this you cannot be influential, because that's part of it. So at the same time, if you can't do this then probably you should not do the job, because it's part of the job.*
>
> *Interviewee G*

As identified by Interviewee C, it appears that if CIOs are to be trusted with additional responsibilities and be involved in strategy related activities, they must first and foremost demonstrate that they can provide reliable and robust IT operations but also possess a number of key characteristics. Jones et al. (1995) and Chatterjee et al. (2001) firmly believe that CIOs, given their role within organisations, are in a unique position to make a significant contribution to the formulation of corporate strategy. This point was reinforced by Earl and Feeney (2000) who point out that issues associated with information are inextricably linked to corporate strategy. The participants unanimously believe that their position and the knowledge acquired whilst performing their role puts them in a position where they can make a relevant contribution to strategy related discussions. However, it is interesting to note that the CIOs believe that their involvement in these activities depends a great deal on their personal credibility, the maturity of their organisation and the composition of the board. This observation was noted by Chun and Mooney (2009: 331) when they suggest that 'the degree to which a firm's strategy and processes are IT enabled has a profound influence on the CIO's ability to change and evolve in his/her roles and responsibilities'. The research participants note that unlike IT

directors whose responsibility is limited purely to the execution of a strategy formulated by other individuals (Jones et al., 1995), CIOs today ought to have a certain level of involvement in strategy discussions. Interviewee B notes that most CIOs, especially the ones with a global remit of responsibility, possess a strong grasp of corporate strategy that makes their views valuable. Interviewee A reinforces this point and suggests that it is crucial given the role that IT plays in organisations today to involve the CIO in the formulation of corporate strategy. Empirical material concludes that whilst CIOs believe that they need to be involved in the formulation of corporate stategy, they recognise that the overall responsibility to set the objectives for the organisation should remain with the CEO. This affirmation reinforces the role of trusted advisor as previously discussed.

> *I think the CIO's responsibility is to support and help realise the strategic direction of the organisation. I don't want to play too much about with words or anything like that but I still think it is the responsibility of the CEO's to determine the strategic direction with the input from other respective inputs and it's the role of CIO as well as every other, whether it's a Vice President or Directorship to support that strategic direction by doing all they possibly can within their power to implement or introduce initiatives that support where the direction of the company is going.*
>
> *Interviewee Q*

The CIOs believe that if they are to be trusted with additional responsibilities and involved in the formulation of corporate strategy, they should not only possess certain characteristics and skills, but possess the adequate mindset and attitude. This is particularly well articulated by Trigo et al. (2009: 66) who notes,

> *'If CIO's do not get better at projecting themselves into the centre of the corporate decision-making process, their job will not steer the company towards its next competition-crushing opportunity and will probably be taking orders and putting out fires'.*

Although this will be discussed in a greater level of detail in our exploration of choices within the CIO role, it would nevertheless be beneficial to discuss the skills and capabilities that the CIOs perceived to be critical to perform this role.

Gottschalk (2000) argues that CIOs should bring both a technology and a business perspective to their role, this begs the question of how much understanding of technology is required to perform the CIO role. Prior to addressing this point, it is pertinent to explore a comment made by Interviewee F who believes that a good CIO should be a hybrid type of executive, able to straddle the fence between both technology and the business world. This statement by Interviewee F reinforces Jaska and Hogan's (2006) view of the archetype CIO.

When asked to comment on the amount of technological knowledge that is required to perform the CIO role, Interviewee X believes that possessing a strong understanding of technology could to a certain extent prevent the CIO from approaching their role in a holistic manner. Except from Interviewee X, the remaining participants believe that possessing a strong understanding and appreciation of technology is critical to the success of the role. Interviewee A notes that a CIO who did not possess an understanding and appreciation of technologies would be at risk of making serious irreversible mistakes in terms of technological choices that could be very costly to the organisation. It is however interesting to note that despite stressing the importance of possessing a strong understanding of technology, every respondent argued that possessing only technical skills is far from being enough. Interviewee V notes that it is very important for a CIO to be able to quickly assimilate new technologies and to determine whether their application is relevant within the context of the organisation, a task that calls for a certain understanding of one's own organisation and strong commercial skills.

> *The ability to quickly assimilate new technologies and to think about and understand whether or not they're relevant to your particular business, and if they are relevant, how the business will go about exploiting them. I think that's where the real skill is.*
>
> *Interviewee V*

Trigo et al. (2009) agree with the views illustrated in this research study and note that CIO's must be able to quickly study and assimilate key technological concepts and to advise the leadership team accordingly.

Coghlan and Hurley (1996) argue that CIOs should be perceived by their executive peers as business executives. In contrast, Maruca (2000) notes that if CIOs are to be accepted within the c-level suite, they ought to possess a deep understanding of their organisation, its major functions and to occupy strong financial competencies (Polansky et al. 2004). The empirical material presented in this PhD thesis supports the view by Polansky et al. (2004). Unanimously, the CIO participants believe that in order to be successful, one ought to be perceived as a business leader, and to behave as such. The importance of possessing a strong commercial astuteness came across strongly during discussions with the CIOs.

Several participants noted that possessing a deep understanding of their own organisation and their industry helps not only to make the right decisions at the right time, but also to gain credibility that ultimately helps them to exercise some level of influence. Earl and Feeny (1994) assert that CIOs should be able to absorb the various terminologies used within their organization in order to communicate effectively with the executive community. The importance of possessing strong communication capabilities when working in the CIO role was highlighted by several studies and confirmed during in-depth discussions with the study participants.

Romanczuk and Pemberton (1997) argue that effective communication has always been an area for improvement for many CIOs. Onan and Gambil (2001) and Andriole (2007) point out that CIOs are required to communicate with non IT specialists and consequently must adapt their language accordingly. Several of the CIO participants confessed that they have learned the hard way the consequence of misaligned communication with members of the executive community. Empirical data suggests that the CIOs are very much aware of the need to adapt their communication style and method of delivering key messages to their audience. Interviewee V, for instance, argues that using a similar language to executive peers increases the credibility and reinforces the image of the CIO as a business executive, this as we demonstrated previously improves the relationship between the CIO and their executive peers.

Do your updates in the right language, avoid the jargon, avoid the technology descriptions, and I think that just establishes this degree of credibility where the CIO can get into a more open dialogue where you're going to have awareness at a much more detailed level as to what's really going on.

Interviewee N

When reflecting upon the demands of the CIO role, the research participants note that it is not possible to perform the CIO role at an acceptable standard without possessing the ability to manage relationships with key stakeholders and to manage the expectations associated with these relationships. Interviewee B argues that CIOs should closely manage their relationship with the CEO, in addition to their executive peers (CFO, Head of Sales, Human Resources). A point also highlighted by Feeny et al. (1992) who posit that two of the most critical skills for CIOs are relationship building and appreciation of organisational politics. Interviewee G notes that understanding internal politics and navigating through them must be a key competency of any executive, and that CIOs, not unlike other executives within their community, must understand business relationship dynamics and politics.

Applegate and Elam (1992) posit that IT executives have traditionally been weak at establishing internal and external networks of relationships. The empirical data presented in Chapter Four suggests that the CIO participants are very conscious of the importance of relationship building, and consider it as a crucial skill to possess to be successful in this position. Interviewees E and O assert that building effective relationship requires a change of behaviour and mindset and a strong understanding of one's emotions, but more generally of human emotions.

That's all around emotional intelligence in there. This is something that unfortunately IT has never been blessed with a high amount of. If you can't sell ideas, if you can't build trust, you're not really going to get too far forward.

Interviewee O

Interviewees E and O refer here to the notion of emotional intelligence, a concept introduced by Goleman (1998). The importance of demonstrating empathy was noted by

Stephen and Loughman (1994) and considered as a key element of successful communication. Enns and Huff (2003) demonstrated that organizations have experienced a change in decision making structures in the last few years; this reinforces the need for CIOs to exert influence. Interviewee W asserts that one cannot perform the CIO role without obtaining support from key stakeholders and that influencing is a critical aspect of leadership behaviour. Interviewee V notes that exercising influence was a key differentiator in roles that they had previously held prior to becoming a CIO. The importance of influencing was highlighted on a number of occasions in the leadership section of the literature review and is a key component of the Four I's of transformational leadership proposed by Avolio et al. (1991). Peppard (2006) refers to this phenomenon as the conundrum of IT management, which they define as the generation of value through IT without access or authority over the required resources.

5.2.2 Role demands in the CIO environment

The CIO participants noted that factors, such as; appreciation of organisational dynamics and politics, business acumen, communication skills and management of relationships with external and internal stakeholders have an impact on the way the CIO role is being perceived and therefore on the expectations for this role. CIOs are expected to perform their role within a highly constrained environment and empirical material concludes that the role a CIO plays greatly depends on factors, such as; the composition and attitude of the board, the maturity of the organisation towards the use of technology, role set expectations, understanding of the role of the CIO, reporting structures and access to senior leadership. Empirical data indicates that the level of skills, competencies and capabilities exhibited by CIOs alleviate or reinforce the constraints within their environment.

As suggested in the data analysis chapter, CIOs believe that one of their ultimate assumed roles is to be considered as a trusted advisor to the board. However, it appears that this would only occur if a CIO is perceived as such by the board members. Indeed, the empirical data suggests that if a CIO fails to engage with the board, to demonstrate their

ability to contribute at a strategic level and they fail to be perceived as a business executive, it is very unlikely that this individual will be perceived as a trusted advisor and it is even less likely that they will be invited to participate in strategy discussions or to be trusted with large change and transformation initiatives. In other words, empirical data indicates that the capability, skills and competencies of the CIO dictates the role that they will be expected to play within their organisation.

> *Once you build up an element of trust, then effectively you've got a seat at the table to discuss strategy and the conversation changes as a CIO because you stop talking about screws and widgets and start talking about how IT can help the business. And that's a completely different discussion that starts there and I think that's far more important. So that's where I see-, over the three years that I've been here, that's where my role has changed. Now I have strategic discussions with the executive and other senior managers across the organisation, not operational discussions.*

> *Interviewee W*

The empirical data points out that CIOs' understanding of their organisation and its politics, methods for communicating the value delivered, the way in which key relationships are managed can potentially decrease micro constraints, such as; the misunderstanding of the role of IT and the expectations of the role of the CIO and this can change the attitude of the board towards technology. The CIO's ability to communicate with individuals located outside of the IT function is also believed to assist in setting realistic expectations and consequently decreases the impact of macro constraints, such as; the commoditisation and consumerisation of IT.

The research participants believe that providing reliable and robust IT services to the organisation is the first step towards establishing trust, and only after a level of credibility has been established among the c-level suite and a CIO is recognised as a business executive, will they be able to influence the demands within the role, and consequently they would be trusted with additional responsibilities and invited to make a wider contribution to the organisation. The same principle applies to the other key roles that the CIO is believed to play, namely identifying opportunities and mitigating risk.

To conclude this exploration of role demands, it has been demonstrated that the demands of the CIO are greatly influenced by individuals' skills, competencies and capabilities. Empirical data suggests that these capabilities have a positive impact on the perception of the CIO within the organisation, which consequently increases the likelihood of being trusted with additional responsibilities. This section also stressed the importance for the CIOs to possess good interpersonal and communication skills and a certain level of understanding of organisational politics and dynamics in addition to technological knowledge.

5.3   Exploring Role Constraints in the CIO role

The review of the literature on the role of the CIO as presented in Chapter Two highlighted the various elements that compose the CIO role demands. The demands of the CIO role have been subject to a vast amount of research, however, with the exception of studies by Varajao et al. (2008) and Rusu et al. (2009) there appear to be few recent studies examining the constraints in the CIO role.

One can speculate that there are a number of constraints in the CIO role that are similar to any c-level role, however, the CIO participants highlighted many constraints which appear to be specific to their role. Varajao et al. (2008) observed that the importance of the CIO role greatly depends upon a number of factors, such as; the size of the organisation and its geographical location. More importantly, Varajao et al. (2008) concluded that three main barriers exist in the CIO role, namely; the lack of time to think and define strategies, an overwhelming number of requests and projects and inappropriate budgets. Rusu et al. (2009) identified two types of barriers. The first category of barrier consists of the various challenges faced by the CIO when managing the day to day operations and processes of IT. The second set of barriers is related to the environmental challenges that organisations face when working across global markets.

When reflecting upon the micro constraints (defined for the purpose of this inquiry as constraints specific to a given organisation) a number of respondents posit that all too often the role of the CIO is not well, if at all, understood by the rest of the executive team.

> *Senior managers are happy to let me get on with things, don't get me wrong, but I don't think they always realise what role I'm playing, really, they don't understand how to make the most of myself or the team, and although things have changed, I'm taking a lead on these projects, they've still got that image in the back of their head.*
>
> *Interviewee S*

This specific constraint was highlighted by Maruca (2000) whose study participants suggest that because senior executives fail to understand the role of the CIO, often the CIO's capabilities and full potential are not exploited. This feeling of not being exploited to one's maximum potential is echoed by research participants who report similar concerns. Interviewee R when talking about the role of IT in fostering innovation suggests that despite their contribution to the innovation processes, they often feel that a lot more could be done by the IT organisation. Interviewee R believes that this is a feeling that is shared by many CIOs regardless of their industry.

> *I believe I can do a whole lot more, and I imagine most CIO's probably feel that they can help the business a whole lot more*
>
> *Interviewee R*

Maruca (2000) and Feeny et al. (1992) note that the CIO role is not well defined, and consequently CIO role demands are highly subject to micro constraints, such as; organisational maturity, senior executives' attitude towards technology or role set expectations of a CIO. According to Peppard (2009: 17) the quest to deliver value from IT 'cannot be enshrined in an individual role but demands a collective responsibility from all in the c-suite'. Peppard (2006) argues that many executives fail to accept that they have a responsibility in ensuring that value is derived from IT. Barnier (2010) for example, in his recommendations on how CIOs and CFOs can collaborate more effectively suggests that CFO's should get IT executives involved in business discussions

and encourage CIO's to be proactive. When reflecting upon the confusion around the role of the CIO, Interviewee M notes that this issue often arises because there appears to be a lack of homogeneity in the nature of the CIO role itself. They believe that different organisational contexts call for different types of CIOs, a phenomenon that is believed to be specific to the CIO role and that would not occur in the case of more established functions.

> *If you are a CFO, I think that you have an incredibly mature role. And I think most organisations understand quite clearly what the boundaries of the CFO role are, whereas with the CIO, it's somewhat grey around the edges.*
>
> *Interviewee V*

Peppard (2009) suggests that before hiring a CIO, the executive team should reflect upon the environment in which the CIO will operate, as this can greatly influence the performance and effectiveness of the CIO. A number of recent studies have put forward the hypothesis that perhaps researchers ought to reflect upon the CIO role, not in terms of individuals' characteristics, but in terms of organisational requirements. Some findings from Edwards et al. (2009) as illustrated in Figure 5.1 suggest that there are four different types of CIOs, each corresponding to the maturity stage of an organisation and this addresses therefore a specific need.

Figure 5.1: The Evolution of IT Leadership
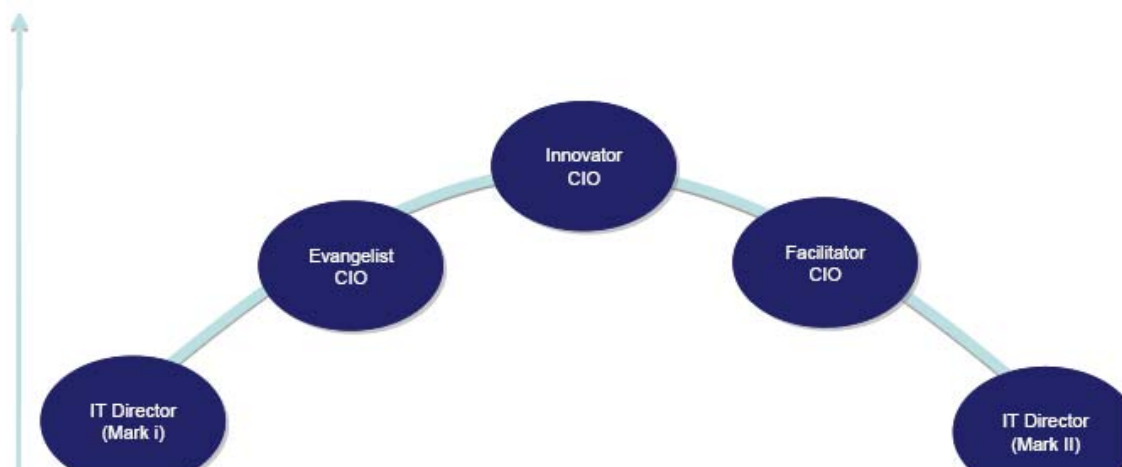
Source: Edwards et al. (2009)

Chun and Mooney (2009) believe that there are four types of CIOs; nurse/ firefighter; landscape cultivator; opportunity seeker and innovator/ creator. Empirical data concurs with Edwards et al. (2009) and suggests that various factors, such as; the industry sector of the organisation, the core activity of the organisation and its maturity in terms of using technology would call for different types of CIO. Interviewee M and V reinforce the need for CIOs to possess a very broad set of skills and to be flexible in their approach to the role.

> *I would say that CIOs have an ability to be a little chameleon-like and that what we tend to do in order to try to be successful in our own context within the organisation is that we will put on a colour of skin if you like that is acceptable to the organisation. So if the organisation is looking for somebody that's going to drive out cost then that's what we do. If they're looking for somebody that's going to radically bring about business transformation or open up new challenges then we turn our hand to that. And I think actually the CIO has to have a very broad set of skills in order to carry the role off.*
>
> *Interviewee V*

Interviewee F believes that the lack of understanding of the CIO role is very much due to the fact that hardly any executives sitting within the c-level suite have had the opportunity to work as a CIO previously in their career. Whereas most executives understand the role and responsibilities of CFOs or the Head of Sales, it is still pretty rare for Chief Executives to gain this position via the CIO route. The lack of understanding as to what the role of the CIO is demonstrates the relative novelty for board members to be required to interact with the CIO.

As demonstrated in the data analysis chapter, a number of CIO participants suggested that it is not rare for the CIO to be perceived as an IT technician. Interviewee T shared his experience of being asked to repair a colleague's blackberry as they were leaving the board room. In contrast, Interviewee P feels that during meetings, they are regarded as the person to talk to in case of any technical issues. Interviewee I experienced similar situations and was often asked by their executive peers to intervene in technical situations that were normally handled at service desk level.

Often I get people coming directly to me to report things that do not need to come to my level. They are probably handled at a help desk level. So they think "Okay, this guy is managing the help desk overall; therefore, I can report it to him and it will get to the help desk." That's one perception. The other thing is that they probably do not know what is the right level for this, but also they do not understand what your role really is and that it's not just operational, which is what a lot of our colleagues perceive us to be.

Interviewee I

In addition to micro constraints, research participants also highlight the changes that factors such as the commoditisation and consumerisation of technology have had on the behaviour and expectations of end-users. Interviewee P notes that it is crucial for CIOs to anticipate and manage users' expectations, as often they underestimate the complexity of technology. Interviewee O argues that the CIO role, a couple of decades ago was most probably easier than today, as IT was considered as a sort of dark art. However, these days IT appears to the untrained eye as easy to manage, but as Interviewees E and P note, IT on a corporate level is significantly different to home IT, a distinction that many executives fail to acknowledge.

You have to get people to understand that corporate IT delivery is so different to home IT delivery. They're just poles apart but that's not easily understood.

Interviewee P

Interviewee O posits that IT delivery is much more complicated now, and it has been subjected to a number of industry changes, such as; the introduction of new service delivery platforms (i.e. cloud computing) that have distorted the perception of end users and inflated their expectations. Dawson and Kauffman (2010) note that top executives, such as; the CEO, COO and CFO are somewhat more immune to abrupt changes within their respective disciplines whereas in the case of CIOs they have to manage a number of potentially disruptive technologies.

The problematic aspect of the CIO role is highlighted by Heresniak (1999) who notes that CIOs are damned regardless of the decisions that they make. If they initiate changes too

rapidly it is very likely that these changes will raise complaints from the user community, but if they do not initiate changes quickly enough, CIOs run the risk of being perceived as lethargic, and consequently will fail to make an impact within their organisation.

The participants suggested that it is common for CIOs to be perceived by their executive peers as outsiders, a feeling also highlighted by Grover et al. (1993). Interviewee G stresses that it is not uncommon for CIOs to be perceived as geeks and techies, and that it takes time and effort for them to change an individuals' mind about the role and capabilities of technology. Interviewee E and S argue that the acceptance of the role of technology within organisations is a matter of technology literacy and that from the moment senior executives understand technology and embrace its capabilities, micro constraints will be alleviated.

> *I think it's a matter of generation. The moment you get a generation who just accept the technology for what it is, not wowed by it, not going on about, we must have one of this or one of that, gets on and can just take the technology to be another tool of the company, another thing that is used by the company or the organisation, when you've got a board that is in that mindset then the job is going to get much more interesting or satisfying.*
>
> *Interviewee E*

Jablokow et al. (2010: 119) agree with this statement and notes 'many CEO's and CFO's found in "younger" organisations seem to understand better the value of the CIO and IT to the business. Peppard (2009) argues that the IT knowledge of the CEO and the leadership team is a central element to the success of a CIO. Kaarst-Brown and Robery (1999) conducted an ethnographic study of individual perception of IT within organisations and concluded that for many people IT remains part of the unknown. Peppard (2006) goes as far as to say that even in the terminology used, there appears to be some sort of segregation between IT and the rest of the organisation. Peppard (2006: 4) notes,

> *'Often, they are even physically located at a different site; an island away from the mainland. In many cases they have their own budget. All those employees outside of "IT", as the IT function is colloquially referred to, are seen as working in "the business". Thus, even words and language propagate this separation'.*

Interviewee M posits that the role and responsibilities of the CIO are still for many executives a grey area. As frustrating as this can appear, Interviewee M notes that the lack of understanding can also at time provide CIOs with a fair amount of managerial discretion.

> *Many people in the business haven't got a clue what the CIO does, nor do they want to know. They just know that it exists or there's a thing called a CIO. So we operate in this quasi grey world of people not understanding and not wanting to get involved in that geeky stuff. It's almost like a smoke screen that you can go out and do certain things with if you exploit it correctly.*
>
> *Interviewee M*

Hierarchy and reporting structure in the CIO role is perceived by research participants as another set of constraints. A number of studies (Nilson, 1998; Sojer et al., 2006; Cohen and Dennis, 2010) acknowledge that the organisational position of the CIOs dictate the amount of influence they have on organisational success. Empirical material suggests that a number of CIOs perceive the reporting structure and the lack of access to senior leadership as a major role constraint.

However, Interviewee G notes, that it is the actual access to senior leadership more than the actual reporting line which is appears to be more important. This is confirmed by several other participants who argue that being a prominent board member and reporting to the CEO appears to increase their credibility and the likeliness to be perceived as a business executive. A study by McDonald and Aron (2010) suggested that 25 percent of CIOs currently report to the CFO, a reporting line that CIOs perceive as a real constraint. Interviewee W asserts that in the case of CIOs reporting to CFOs, it is more likely that discussions evolve around delivery costs as opposed to strategy.

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It's actually better reporting to the COO because I'm talking strategy as well as numbers. If you report to the CFO, unfortunately, you start to talk numbers only. There's no strategic discussion.

Interviewee W

5.3.1   Role constraints in the CIO environment

The CIO participants have identified two main types of constraints, that both have a very similar effect on the CIO role demands. Empirical material suggests that macro constraints have a negative impact on CIO role demands. Interviewee B and D note that the activity sector of an organisation will determine to a great extent the role a CIO is most likely to play within a given organisation. Both interviewees argue that the contribution of a CIO depends greatly on how information intensive an industry sector is. Interviewee Q notes that the recent economic turmoil has had a drastic impact on the role that IT and the CIO are expected to play. Indeed, despite being able to make a significant contribution to their organisation in a variety of domains, many CIOs have seen their role moving back to a tactical one as they were instructed by Chief Executives to lower costs and to hold off on future investments. Participants noted that the economic climate has had a negative impact on many projects that the CIOs were planning on delivering, and consequently greatly altered the CIO role demands. Interviewee Q argues that the role of a CIO in a stable environment is significantly different to the role of a CIO in uncertain economic times. The latter notes that at their company, the innovation process has been going through some tough times which has resulted in them temporarily playing a short-term and tactical role.

The CIO participants noted that social and demographic factors can also have an impact on the demands of the role. The effects of commoditisation and consumerisation of IT are viewed by many CIOs as a constraint. CIOs believe that this phenomenon has inflated the expectations of users who do not necessarily appreciate that home IT is significantly different to corporate IT and who are therefore inclined to perceive the IT organisation as a barrier to the adoption of new technologies. Research participants believe that these commoditisation and consumerisation phenomena have played a double role. On the one

hand, popular home devices such as smartphones have opened executive's eyes to the possibilities that technology offers, but on the other hand demystified the complexity of technology. This point is particularly well articulated by Interviewee E who suggests that because many individuals use technology on a recreational basis, most of them have a view of how IT should be run within the organisation, and fail to appreciate the difficulty of managing technology on a larger scale.

The difficulty of exercising influence in the CIO role was highlighted by Peppard (2006), who defined this phenomenon as the conundrum of IT management. Interviewee T argues that there is a relationship between the organisation's maturity towards technology and the level of empowerment granted to the CIO. This observation is in line with research findings by Peppard (2009) suggesting that there are a number of factors that greatly influence the CIOs' ability to drive value from IT. Peppard (2009) highlights the contextual aspect of successful IT transformation and argues that getting the right CIO is only part of the equation. Peppard (2009) argues that there is often a strong gap between the expectations of the CIO and the expectations of the executive team for this role. Sojer et al. (2006: 111) in their study of the CIO role concluded,

> *'The role of a CIO can de defined by looking at the strategic importance of running IT on the one hand and the strategic importance of changing IT on the other. If the strategic importance of both is high, the CIO appears as a driver of technology influencing all aspects of the value chain. On the contrary, if both are low the role of the CIO is that of a manager of IS mainly supporting and maintaining existing IT infrastructures'.*

Interviewee V highlighted the complexity of the CIO role, where the role demands are greatly influenced by the role set. Interviewee V asserts that on some occasions, even the most innovative and respectable CIOs can only do an IT Director job if the organisation is unclear as to what the role of the CIO and IT should be. These observations were noted by study participants in Jablowow et al. (2010) who suggested that it is not uncommon for CEOs and the board to not fully understand the role of the CIO and how to make the most effective use of IT within their organisation. The difficulty of the CIO role is highlighted by Interviewees K and Q who believe that there is within certain

organisations, a blame culture where IT and the CIO are held to account for issues that often are the result of the organisations' inability to concisely formulate its needs.

> *'We've got IT issues', and I knew about these issues! I knew all the background associated with the situation so it wasn't an issue but it's that capability that people think that it's a very easy opt-out to be able to turn around and blame somebody else.*
>
> *Interviewee Q*

In our exploration of the CIO role demands, it was concluded that CIOs are invited to participate in wider conversations and entrusted with additional responsibilities when a certain level of trust has been established and they are perceived as trusted advisors. Empirical data suggests that micro constraints have a negative effect on CIO role demands. Indeed, in highly constrained environments where the CIO role is not understood and IT is considered a support function, it is very unlikely that a CIO is perceived as a powerful executive and invited to participate in discussions related to corporate strategy or large scale transformation programmes. Research participants stress that it is most likely to take a lot of time, effort and patience for the CIO to establish a certain level of credibility and change the way technology is being perceived. To achieve this, a CIO will need to be a great communicator, demystify the role of technology and be a proficient reader of situations (Stephens et al., 1992; Stephens, 1993). As pointed out by Moghaddasi and Sheikhtaeri (2010), executive power is not automatically granted to CIOs. However, given the increasing influence of technology, CIOs are potentially in a position to exploit a variety of organisational power sources.

> *Empowerment that the executives have very much depends on the culture of the organisation. If you have, let's say, a chairman or a chief executive that do not believe very much in empowerment, the likelihood is that all the executives will suffer whereas if the mentality is to empower then the likelihood is that all executives will be empowered*
>
> *Interviewee U*

Empirical data revealed that generally speaking, senior executives do not have in the CIOs' opinions a real understanding of the CIO's role and its potential for the organisation. This lack of understanding as demonstrated in the data analysis chapter can

sometimes influence reporting structures and restrict CIOs access to senior leadership team members. Empirical material concluded that CIOs believe that they must possess some level of exposure to senior leadership if they are to gain a greater level of visibility and to understand where the organisation is heading, as it would be easier for them to align the IT strategy to the strategy of their organisations.

This also suggests that a third category of constraints exist, which are directly related to the capabilities of individuals working within the IT function. As noted by a number of respondents and especially by Interviewee U there are still a number of CIOs who continue to consider the CIO role as that of a manager, and exhibit few of the characteristics that were described in the CIO role demands section. Interviewee B believes that this type of CIO is in danger of being replaced as more and more organisations are turning to IT to deliver innovative solutions and to gain a competitive edge.

> *CIO is only a title. I mean I've met CIOs who are IT managers. I've met CIOs who are IT directors. I've met CIOs who are Heads of IT in terms of my own classification. I've met some real CIOs who will talk about the business. I know when I've met a CIO when most of my conversation is about the business, and then how they have used technology to help the business. But when I meet a CIO and he starts talking about technology, I don't think he's a CIO.*
>
> *Interviewee B*

As one can expect, a CIO who does not exhibit the right level of capability is most likely to fail to perceive the subtleties of organisation dynamics and organisation politics. Preston et al. (2008) conducted an empirical study of CIO strategic decision-making authority and concluded that in addition to organisational climate, CIO's structural power, strong partnership between the CIO and the top management is required for CIOs to possess a high level of decision-making authority.

5.4 Exploring role choices in the CIO Role

The first two sections of this discussion chapter have looked deeper into the role demands and role constraints of the CIO role. However, this last section will explore the choices that CIOs and IT executives have to make throughout their career. CIO testimonies in Jablokow et al. (2010) highlight the important of personal choices in becoming a CIO. Jablokow et al. (2010: 114) observed that 'several participants discussed how some individuals prefer to stay on a technical track as they develop professionally, while others welcome the opportunity to span the technical and management domains as they develop into the "next generation" of CIO'.

It emerged from this inquiry that CIOs believe that in order to perform the CIO role and add value to the organisation, individuals ought to go through a change of mindset, during which their perception of their role evolves from being a functional manager to business executive. As noted by Interviewee U, this change of mindset, attitude and behaviour requires individuals to embark upon a journey during which they make a conscious move to lead as opposed to simply manage.

> *It is definitely a journey, it is a conscious decision, I want to be a leader and not a manager, I want to be a business-focussed person more than an IT-focussed person. I want to direct and not do, that is something which I think people keep on postponing, at some point in time people have to come to terms with themselves.*
>
> *Interviewee U*

The difference between leading and changing has been documented in the leadership literature (Zalesnik and Kets de Vries, 1975; Katz and Kahn, 1978) and most importantly by Broadbent and Kitzis (2004) who argue that successful CIOs lead the IT function as opposed to simply manage it. Stephens et al. (1992) and Fitch (1987) found evidence that the CIO role is a true executive role as opposed to one of a functional manager. When exploring the CIO role constraints, the participants concluded that there are some CIOs who still consider the CIO role as a managerial one, despite the fact, that as noted by Onan and Gambil (1990), the CIO role has moved away from just being in charge of data

processing. Empirical material confirms this and as noted by Interviewee G, organisations' expectations of the CIO role have evolved and as the role matures, CIOs are now being recruited on the basis of driving strategic change.

As noted by Interviewee F, changing one's attitude and mindset is a long and complicated journey that involves a constant desire to learn and approach the CIO role in a more holistic manner.

> *Talk to a senior technician in IT their first loyalty is to their profession and not to the business they're working in. And that's the big difference I think between a senior IT manager whether they be a CIO or a unit head. Their first loyalty has got to be to the business, not to the technology or to the IT profession. And I think that's what makes the difference.*
>
> *Interviewee W*

Indeed, Interviewee W notes that CIOs ought to approach their role with the whole organisation in mind, as opposed to keeping in mind a single business function. Interviewee W argues that this shift of loyalty and holistic approach to the role is the key difference between an IT Director and a CIO, in other words, the individuals' mindsets and attitudes. Interviewee U notes that IT executives have to come to terms with themselves, and at some point in their career accept that they may have to distance themselves from the technology aspect of the role to solely focus on developing as business leaders.

Interviewee B notes that the technology evolves so rapidly that their experience as a computer science graduate and programmer from twenty years ago is completely irrelevant these days. Interviewee B notes that when talking to technicians they struggle to understand them, and confesses that they do not want to understand them. As previously pointed out, it is important for the CIOs to possess a strong understanding of technology and its application but not imperative for them to possess a deep knowledge of technology. Jablokow et al. (2010) argue that problem solving and ultimately success in the CIO role will depend a great deal more on an individuals' ability to deal effectively with people rather than on the technology itself.

As highlighted in our exploration of the CIO role demands, there are no doubts that possessing mere technical skills is not sufficient. Soat (2008) agrees with this statement and suggests that recruiting the perfect CIO is nearly impossible. When reflecting upon the ideal skills for the CIO, Onan and Gambil (2001) posit that the ideal profile of a CIO would include both technical qualifications and a background in finance, marketing and strategy. Cash and Pearlson (2004) when examining the profiles of successful CIOs concluded that it is not rare for them to possess a varied career history, including several years spent in a non-IT function. It is interesting to note that this feeling is shared by the CIO participants who recognise that they have made a conscious choice throughout their career to gain experience in a business function in order to broaden their skill set.

> *I had this opportunity to work for a company like ……... I went for that option because what they were talking about was not about technology, they were just talking about the business and how you could drive value, etc. So for me, from the early days, I've always learned this and that's really what gets me excited. For me, I would answer it's more your mindset that is going to make a difference*
>
> *Interviewee G*

Interviewee D asserts that a number of IT executives who appear to be struggling to transition from an IT director role to that of a CIO have not had or seized the opportunity to step out of the IT world to gain experience in another business function. Several respondents including Interviewee W have reached the CIO function via a consulting route and this as concluded by Kakabadse et al. (2006) appears to be a particularly good way of gaining a wealth of knowledge in various industries. When analysing the fact that industry knowledge is considered as a key success factor in gaining credibility in the CIO role, one can appreciate why CIOs perceive this career path as being particularly relevant.

Empirical material suggests that CIO choices occur on the job and influence the style of an individual, but if an IT executive aspires to be what is described later on as a transmuted CIO, they should make a series of conscious choices that will shape their careers and prepare them for further leadership roles. As demonstrated previously, CIOs

believe that if one is to gain a breadth of experience and knowledge, this may require aspiring CIOs to step out of the IT world temporarily in order to acquire general business knowledge. Interviewee G, a group CIO made a conscious choice early in their career when working as a network specialist to join a larger organisation that offered them the opportunity to be involved in general management and the management of operations, which later on proved to be particularly useful to perform the CIO role. Interviewee Y argues that quite often, CIOs who have reached the CIO rank via a traditional IT route need more support in terms of acquiring critical soft skills, such as; relationship and stakeholder management. It is interesting to point out that both of these skills that are considered as critical in establishing one's reputation are also considered as the CIOs' weakest point. As highlighted in the data analysis chapter, Interviewee W worked for a number of years as a management consultant and notes that some of their CIO peers who have gained the CIO rank via a more traditional IT route appear to struggle to approach their role in a holistic manner.

> *I've also talked to colleagues who have never done consulting and haven't moved around and have stayed in one organisation for 20-odd years. And some of them have struggled to make that leap. It doesn't mean they're bad CIOs'. But I think they could be better because they don't have the breadth of experience and they're quite blinkered in the way they look at things.*
>
> *Interviewee W*

The necessity to step back and look at areas where technology could play a key role is highlighted in a study by IBM (2008d), which notes that the CIOs are in the ideal position to create a huge amount of value to the organisation providing that they take the time to step back and approach their role in holistic manner. The requirement of leading the IT function in this manner as described by Interviewees F and W has been particularly well articulated in Planes and Castillo (2002), where one of the research participants argued that they approached their role from a business perspective as opposed to a technical perspective. The latter suggests that their role as a CIO is about providing the right tools thus making individuals' lives easier and ultimately helping customers. Empirical data suggests that detaching oneself from the technical aspect of the

CIO role is not an easy process and often requires individuals to learn to delegate and empower other individuals working closely to the CIO.

> *I remember very well going through this stage which was actually letting go. You can't deliver it, other people are going to do it and therefore to be effective is so much more around leadership, supporting people, not losing that ability to deep dive when you need to, and not asking people to do classical things, and not asking people to do things you wouldn't do yourself.*
>
> *Interviewee Y*

The notion of delegation is particularly well articulated by Interviewee U who notes that one of the mistakes made by IT managers and aspiring CIOs is that often individuals try to retain their technical knowledge and are not willing to step back from this aspect of the role and empower others to do so. The point made by Interviewee U has been addressed in the literature in various studies (O'Riodan, 1987; Stephens et al., 1992; Earl and Feeny, 2000; Grover et al., 1993; Weil, 2008). Earl and Feeny (2000) and Weil (2008) suggest that surrounding themselves with talented people that can be trusted and take ownership of the day to day activities is a key characteristic of the successful CIO and this is discussed further on regarding executive leaders. The CIO participants appear to acknowledge the importance of teamwork and unanimously recognise that empowerment is a characteristic of true leadership. Interviewee G recognises the role of empowerment when performing as a CIO and argues that building an outstanding team is a prerequisite of the success in this role. This feeling is shared by Interviewee Y who asserts that given the incredible amount of pressure and time constraints, a CIO cannot be successful on their own. Interviewee L firmly believes that successful CIOs do not achieve outcomes by controlling people but by empowering them, inspiring them, in other words by leading rather than managing.

Absolutely, it very much depends on how the person is groomed, his mindset, his readiness to change himself first before actually trying to transform others, leading, as we said, by example, walking the talk. In my opinion, if one is to succeed in doing something, he has to first go through it himself, I cannot expect people to change from doing systems analysis to business analysis because now we're focusing more on the business than on the technology.

Interviewee U

As highlighted in the literature review chapter, there is a strong body of research that supports the idea that CIOs ought to possess leadership capabilities (Broadent and Kitzis, 2004; Onan and Gambill, 2001; Applegate and Elam, 1992; Polansky et al., 2004). Possessing leadership capabilities is even more important considering, as the CIOs' noted that the expectations of users and the perception of technology within organisations has radically changed. A survey published by IBM (2008e) concluded that CEOs expect for the forthcoming years, a stronger expansion into emerging markets in addition to an increase in strategic alliances. As one could expect, these types of initiatives call for a greater level of leadership from the top executives team including the CIO.

Empirical data suggests that the CIOs' perception of effective leadership is very similar to the various concepts presented in the literature review chapter. For instance, it has been argued that adaptability is one of the key capabilities of leaders. Indeed, Avolio and Bass, (1988); Bass, (1985); Berson et al., (2001); Schepers et al., (2005) believe that effective leaders ought to possess the ability to alternate and adapt their leadership styles to the context of their organisation. Interviewee B argues that CIOs should be able to thrive in a constantly changing environment, be able to blend in and adapt themselves to the dynamics of their organisation. The latter believes that CIOs can be compared to chameleons. Remenyi et al. (2005) used a similar metaphor when talking about the critical skills that the CIOs ought to posses. Remenyi et al. (2005) 'CIOs ought to change rapidly, see in multiple directions, strike fast when required, and hold on tight in difficult situations'.

Interviewee G regrets that some CIOs consider the role as a managerial one, when the beauty of the role remains in setting a vision for the IT organisation and leading this

function throughout change. When exploring the concept of CIO leadership with Interviewee M, the latter posits that ultimately leadership is a matter of mindset, an assumption shared by Katz and Kahn (1978) who postulate that leadership can be an attribute of personality, a matter of individuals' actual or perceived position in addition to an attribute of context.

> *What makes a successful CIO, it's the environment, it's the task and it's probably your own personal perceived role and power that you have, or flexibility or freedoms to go and do certain things.*
>
> *Interviewee M*

The contextual aspect of leadership has been highlighted by many researchers (Conger and Kanungo, 1987; Bass et al., 1987; Schepers et al., 2005; Sidani, 2005), and is interestingly highlighted by the research participants who stressed the role of organisational context in the success or failure of any given CIO. Empirical evidence suggests that in order for CIO leadership to occur, there is a need for an individual to possess the right mindset and for many executives to accept that they have a responsibility in ensuring that value is derived from IT.

Interviewee U strongly believes that the journey to becoming a leader starts with a complete change of mindset and occurs when individuals are ready to unlearn and to then relearn.

> *If I am not going from technology manager to business manager, I cannot expect people to govern more than manage or lead more than manage if they see me managing on a micro level rather than leading so it is a question of mind-set, it's a question of readiness and to unlearn and relearn*
>
> *Interviewee U*

As highlighted in the literature review chapter, the notion of learning is omnipresent in the leadership literature. Buell (2008) demonstrated that authentic leaders' success was a great deal due to a relentless focus on further developing oneself. Avolio et al. (1991) suggest that transformational leaders over the course of their career constantly develop

themselves and encourage followers to do the same, thus creating a learning mindset within their organisation (Conger and Benjamin, 1999), a phenomenon also know as the falling dominoes effect (Avolio et al., 1991; Bass, 1990).

Mastrangelo (2004) posits that individuals working in organisations are more likely to cooperate willingly if they perceive that their leader truly cares about them. It is interesting to note that several participants believe that the behaviour of executives plays a key role in establishing their credibility with their peer group but also within their own team. Interviewee I believes that success in leading the initiatives described in the role demands section only occurs when stakeholders feel that the CIO genuinely believes the vision and is not driven only by personal gain.

> *But you certainly need to be passionate and you need to have huge integrity, and decency is the word I think is very important. So you're absolutely immaculate in your behaviour and treating people with decency. And that is one of the attributes that I think is true of any leader. But attracting winning people doesn't necessarily mean they compliment the other one as being willing to accept complimentary strengths in your team. And that's going back to emotional competence, recognising you need different people, bringing them into your team, attracting them or obtaining them is all part of that package.*
>
> *Interviewee A*

Graetz (2000) emphasises that transformational leadership only occurs within organisations where executives 'walk the talk', an interesting concept echoed by Interviewee U who believes that if a change of behaviour or mindset is to occur within organisations, this can only happen providing that the CIO is personally willing to go through this process of changing. The latter notes that they cannot expect individuals reporting to them to behave as leaders, if they see them acting as a functional manager and micro managing their team. As noted in the literature review chapter, when reflecting upon followers' motivation, Avolio et al. (1991) posit that the transactional ideology is yet to demonstrate why followers are willing to sacrifice their own interests for the welfare of their organisation. Avolio et al.(1991) therefore argue that honesty and integrity are two behavioural characteristics of transformational leaders. Adding to

Avolio et al. (1991)'s list of characteristics of leaders, Kirkpatrick and Locke (1991) argue that effective leaders exhibit strong drive, motivation, honestly, self-confidence, cognitive ability and business knowledge.

The critical role of integrity in the CIO role was highlighted by Earl and Feeny (1994) and confirmed by Interviewees A and J. Interviewee H makes an interesting point in suggesting that most of the successful CIOs that they had met over their career had all possessed a low ego and we were content to achieve success through others rather being recognised as sole contributors.

> *I'd describe it as modesty or ego, and in terms of thinking about the CIO wanting to achieve things through others or through the corporate performance.*
>
> *Interviewee H*

This observation is particularly interesting when considering the concept of servant leadership that stipulates that leaders are servants who ought to place the interests of followers before their own personal interests and ambitions (McMinn, 2001). Sidani (2005) posits that effective and charismatic leaders often possess a strong sense of humility, a characteristic highlighted by CIO participants and a key pillar to the servant leadership ideology. When discussing CIO constraints, Interviewees E and O believe that CIOs similar to any other leaders should demonstrate a certain level of empathy and emotional intelligence, if they are to establish good working relationships with executive peers and team members. Huy (1999) confirms this statement and argues that leaders must exhibit some level of empathy, which is believed to be a central element of being emotionally intelligent. When reflecting upon the criteria for a successful evolution from CIO to CEO, Chatham (2005) argues that the missing or lacking skills of the CIOs are often associated with right brain activity, such as; the ability to feel and show emotions.

To conclude this section on CIO choices, it is interesting to discuss the perception that CIOs have of their own role and contrast it with some of the theoretical frameworks discussed in the role theory section of the literature review chapter. It emerged from this

inquiry that the mindset of CIOs greatly influences their perception of their own role and ultimately the choices that they make. Stewart's (1982) demands, constraints, choices framework suggests that managers have choices, opportunities to do their work differently from one another and this despite the fact that choices are limited by constraints and demands, these can change over time and be influenced by individuals. This is confirmed by Kakabadse and Kakabadse (1999) who suggest that individuals with a broader role remit can be expected to be in a position to influence the demands and the constraints of their role. As it will be discussed at greater length further on, empirical material suggests that the CIO's mindset and attitude enables them to decrease role constraints while increasing role demands, which ultimately provide CIOs with the opportunity to perform their role as they see fit. Empirical data suggests that there is a link between role choices and role making.

Interviewees I and U believe that individuals are not given responsibilities based on their role but on their perceived competencies and experiences. Interviewees I and U argue that IT executives titles are irrelevant and that it is the way that CIOs perceive their role, how they project their role and how their role is perceived by the role set which will alleviate or reinforce the role constraints and increase or decrease role demands. When discussing this issue with Interviewees G and X, they do not see the constraints of a CIO as being any different to the constraints of any other c-level role. Interviewee R goes as far as asserting that CIOs are to blame when there is a lack of understanding and engagement coming from the rest of the organisation as most probably, the CIOs have not done enough to demonstrate the value they can bring to the organisation. Empirical data supports the view of Troyer et al. (2004) that roles corresponding to a position always have the potential to be made by the occupant of the position.

I blame the CIO. I blame the CIO because I don't think the CIO has done enough work to bring to the rest of the business to our attention, as to what the CIO can bring to the game, what CIO can bring to the table.

Interviewee R

Interviewee L notes that executive power and influence is usually linked to one's ability to establish a strong relationship with the CEO. Interviewee L argues that CIOs cannot rely on hierarchy to exercise influence, and are therefore forced to exercise influence on the back of strong relationships. Pfeffer (1981; 1992) and Haleblian and Finkelstein (1993) argue that perceived power enables executives to exercise a degree of influence over their peers and allows them to exert their will. Empirical data suggests that the same principle applies to the CIO role. When discussing role perception, Interviewee M argues that the success of a CIO is very much a matter of context and environment, but also a matter of perceived role and perceived power. Interviewee M suggests that it is the perception that CIOs have of their own role, and of the executive power that they possess that determines whether they will be successful. Interviewees B and Q fully support this view and believe that their executive power is a result of appreciation for their understanding of the organisation. Interviewee Q notes that they are often invited to participate in board meetings as they are perceived by executives as a key contributor, and their opinion should be sought prior to making specific decisions. Interviewee B agrees with this statement and argues that their level of executive power comes from their 23 years experience working within the same industry. This observation is in line with Peppard (2009) who notes that it is important for CIOs when present at the board table not to have only a seat but a voice. Wahlgren (2003) stresses that there is a clear link between the Stewart's (1982) demands, constraints, choices model and the concept of managerial discretion defined by Hambrick and Finkelstein (1987) as individual empowerment to act. As demonstrated in the literature review chapter, evidence gathered from various research studies into the field of managerial discretion demonstrates that a link exists between an individual's perception of their discretionary power and their level of involvement with organisational issues, and consequently on the likelihood of being perceived by others as powerful individuals. Carpenter and Golden (1997: 192)

concluded that individuals who perceive themselves as possessing a higher level of discretion are more likely to influence critical issues.

The concept of managerial discretion is particularly relevant to our exploration of the CIO role. Empirical data suggests that if a CIO possesses the adequate mindset, has established a certain level of credibility at board level and understands the organisation's boundaries, he/ she can shape their role. Interviewee U believes that they possess a fair amount of managerial discretion and they are free to exercise this within reasonable limits. In contrast, Interviewee X strongly believes that they have full control over how they should perform their role as a CIO. Interviewee X argues that it is critical for IT leaders to be able to make their role evolve as the organisation itself evolves which, as suggested by Interviewee X requires having the right mindset.

> *I'm a person that doesn't wait to be told how to perform the job, you shape the job as you think is relevant and recognising how the business is changing and the way that one can sort of support and drive that forward. So I've never really seen or waited for somebody to influence how I should do my job, yeah. So there are probably some external pressures that mean you have to think a little bit differently, but I like to think that one drives how one operates the role sort of personally.*
>
> *Interviewee X*

The statement by Interviewee X confirms that CIOs are very much aware of the necessity to make their role evolve as organisations move forward and are therefore involved in the role making activities. Petrovic (2006) notes that role discretion should be perceived as individuals' opportunities to modify their role rather than to adapt their behaviour to the role. Hambrick and Finkelstein (1987) note that managers' discretion has technically speaking, no rigid boundary, it is only limited by their own awareness and repertoire and consequently managerial discretion is a function of an individuals' personal and cognitive characteristics.

Hambrick and Abrahamson (1995) and Rotter (1966) established a link between managerial discretion and internal locus of control. It is interesting to note that empirical data suggests that successful CIOs' are involved in role making and believe that they

possess a fair amount of managerial discretion. This was particularly well articulated by Interviewee U who suggests that IT executives should not position themselves as a victim and ought to realise that the choice is theirs to become a successful business executive. Although this is not the focus of this inquiry, one could theorise that successful CIOs are most likely to possess an internal locus of control.

5.4.1   Role choices in the CIO environment

The previous sections highlight the potential impact that mindset, behaviour and perception of one's role has on IT executives.

Where reflecting upon the demands in the CIO role, it was posited that if a CIO is to be considered as a trusted advisor, they ought to be perceived first and foremost as a business executive. It was argued that in order to do so, a CIO must possess a number of attributes, such as; business acumen, communication and stakeholder management skills, in addition to an appreciation of organisational dynamics. Empirical data suggests that these essential skills are acquired as a result of choices made by individuals. Interviewee U articulates in a concise manner the journey that CIOs should pursue to move from IT experts to business leaders. It is posited that for CIOs to make this transition, they ought to make a series of choices and conscious decisions, such as; gaining experience in a non-IT function and distancing themselves from the technical aspect of their role. Empirical data suggests that the attitude and the behaviour of CIOs also has an impact on the potential areas of contribution and that it is very unlikely that a CIO who is perceived as a pure technologist will be trusted to lead large and complex change management and transformational programmes or to be involved in the formulation of the corporate strategy.

5.5   Emergent Models

Sojer et al. (2006) call for new models to understand the CIO role and this is precisely what this section will address. Empirical evidence concluded that individuals' choices are critical to determine which type of CIO an individual will be. Indeed, as highlighted at

several points throughout the analysis chapter and the discussion chapter, it appears that IT executives during their career and progressing toward becoming a CIO ought to make a series of choices, in other words, they should embark upon a journey. During this journey, individuals will develop critical skills and capabilities, become exposed to a broader business context and be involved in large and complex programmes.

It appears that the role of a CIO is affected by a number of constraints, which can vary in nature (macro and micro). Macro constraints, as discussed throughout the data analysis chapter, consist of socio and demographical factors, such as; the industry sector, commoditisation and consumerisation of IT and technological pace of change. The CIOs noted that constraints can also be specific to the organisation and consist of the role set expectations of the CIO in addition to the attitude and maturity of the board towards the use of technology. Combined together, these factors can result in a misunderstanding of the CIO role and consequently lead to a limitation in the type of activities performed. Empirical material suggests that CIOs who have been through the journey described in the previous section are very much involved in role making and firmly believe that it is up to them to alleviate the constraints and to change the demands within their role.

Empirical data has revealed that individuals who go through the transition from technologist to business leader perceive their role in a different manner and consequently exhibit a different mindset and behaviour. It was argued that CIOs who have made this transition often have made a conscious decision to step out of an IT role and to gain experience in a non-technical and broader role. It was also highlighted that these individuals are very much aware of the various components that make an effective leader and perceive the CIO role as not being different to any other c-level executive role.

5.5.1   The Abeyant CIO

Interviewee B notes that there are various types of CIO. Empirical data suggests that there is a crucial difference between CIOs who have been through a journey during which they have made a conscious decision to become business leaders and individuals who have not been through this journey and who still have the mindset of an IT manager.

For the purpose of this inquiry, IT executives who have not yet made this transition are referred to as the abeyant CIO. The concept of abeyance is an interesting one and refers to a state of inactivity but with the possibility of becoming active. Figure 5.2 illustrates the role formation stage in the abeyant CIO scenario.

Figure 5.2: The Abeyant CIO
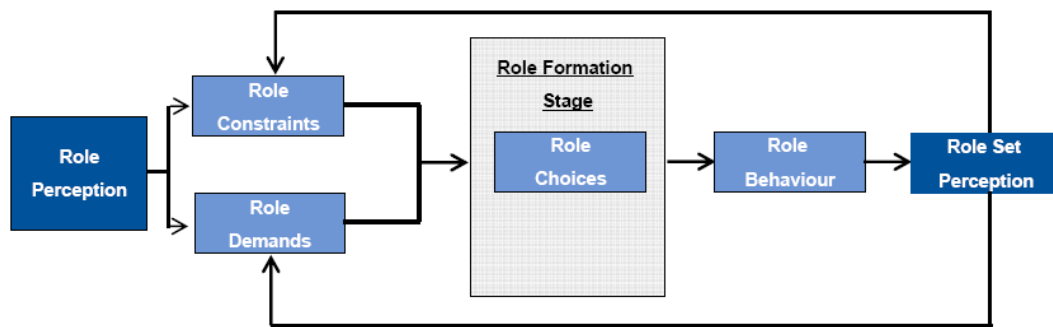
In the abeyant CIO scenario, the role formation stage and choices around the way one is planning to perform the CIO role occur once the individual has assessed the role constraints and the role demands existing within a given environment. In this scenario, individuals are the recipient of a role which has been for the most part formulated by the role set; having consequently very little involvement in role making. The role set and the senior leadership team determine the role constraints and role demands for the CIO. The individual having not been through the transition journey does not perceive him/herself as having the capability to influence their direct environment and end up making choices on the way to perform the CIO role within a predetermined environment.

The managerial power of the abeyant CIO is low and it would take a great deal of effort and perseverance to influence role set expectations. Individuals who possess the appropriate mindset and who are in transition to becoming a transmuted CIO (Figure 5.3), may be able to exercise enough influence to affect a situation and to change the

perception of the role, consequently alleviating the constraints within the environment and changing its demands.

In a situation where individuals have not yet made the decision to take a holistic approach to the CIO role and consider the CIO purely as an IT role, it is very unlikely that these individuals will be able to influence their role, and will be condemned to play a part that has been laid down for them by the role set. It is also very likely that the behaviour of the individual confirms the need for the role set to limit boundary spanning opportunities and to maintain a certain level of control over the CIO role.

As illustrated in Figure 5.2, in the abeyant CIO scenario, the role of the CIO is determined by several factors and one can assume that individuals have not been through the journey and reflection process that is required to make a conscious choice to become an executive leader and are very unlikely to be trusted with additional responsibilities, a sine qua none condition to influencing role demands and role constraints (Kakabadse and Kakabadse, 1999).

Given the fact that the role set determines the constraints and demands within the CIO environment, the individual is very likely to fail to make an impact regardless of the level of constraints set by the role set. Empirical data suggests that abeyant CIOs will most likely fail to make a critical impact within the organisation, which may result, depending on the expectations of the role of IT in the organisation, in the individual being dismissed and replaced by a more performing individual.

5.5.2   The Transmuted CIO

In contrast to the abeyant CIO, the transmuted CIO (Figure 5.3) represents the profile of a successful CIO. In this context, as suggested in the literature review chapter, a successful CIO is defined as being perceived as playing a critical part in the execution of corporate strategy and being considered by other executives as a business leader. Successful CIOs are perceived by their team and peers as executive leaders and behave as such. They

demonstrate a high level of executive power and possess a high level of managerial discretion.

Figure 5.3: The Transmuted CIO
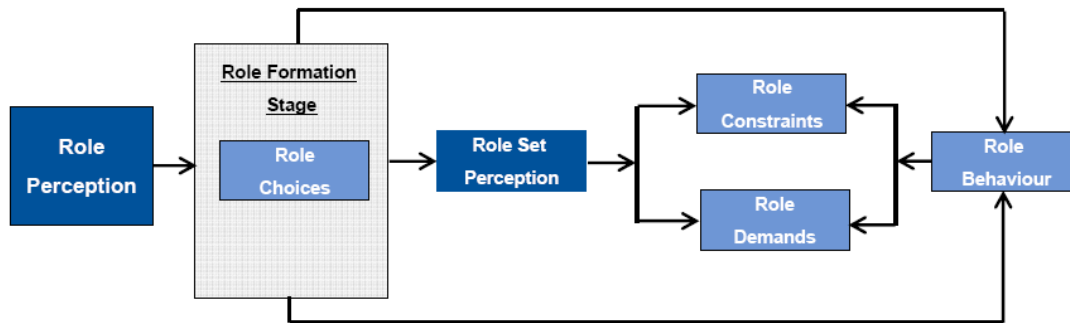
In this scenario described by many research participants, individuals have been through a self reflection process and have made conscious choices throughout their careers that result in them possessing a different mindset. In contrast to the abeyant CIO whose role formation stage is influenced by the demands and constraints of the environment, transmuted CIOs because of their personal journey have made choices about what the CIO role should be prior to joining an organisation. As a consequence, they are less likely to be influenced by the constraints and the demands of the role.

The mindset of the transmuted CIO is reflected in the individual's behaviour which has a positive impact on the role constraints and the role demands. Individuals' mindset, attitude and perception of their own role enable them to exercise a certain degree of influence over key individuals who have the power to alleviate some of the constraints and change the demands of the CIO role. As noted by Kakabadase and Kakabadse (1999), individuals with larger role remits are most likely to be in a position to influence the demands and constraints existing within their role. Empirical evidence clearly demonstrates that transmuted CIOs both directly and indirectly influence the demands and constraints existing within their environment and are consciously involved in role making.

In the transmuted CIO scenario, the choices that individuals make are made throughout the individual's career and are therefore less likely to be influenced by the organisation's existing constraints and demands. The mindset and the behaviour of the transmuted CIO are such that individuals are able to identify, understand and manage the constraints within their environment and create new demands for the role.

Table 5.1 presents the respective profiles of the abeyant and transmuted CIO.

Table 5.1: Abeyant CIO and Transmuted CIO Characteristics

Characteristics	**Abeyant CIO**	**Transmuted CIO**
Approach to role	− Hands on	− Holistic
IT knowledge	− Detailed	− High level
Working experience	− Mainly within IT	− Varied
Ability to influence	− Limited	− High
Boundary spanning activity	− Limited	− Frequent
Ability to build personal network and maintain relationships	− Low	− High
Role behaviour	− Set by environment	− Set by individual
Team characteristics	− Focus on execution	− Focus on innovation
Involvement in role making	− Low	− High
Ability to alleviate organisational constraints	− Low	− High
Potential to increase role demands	− Limited	− Unlimited

Executive power	– Low	– High
Managerial discretion	– Limited	– High
Leadership style	– Transactional	– Transformational
Leadership repertoire	– Limited	– Varied

Source: Compiled by the researcher

5.6   Research Models Assumptions

The research models have led the researcher to make a series of assumptions that are presented below.

The CIO's role behaviour and role perception have an impact on the role demands and role constraints;

The CIO mindset, attitude and role perception can develop or limit the role demands and reduce or increase role constraints;

Empirical data presented in this study has highlighted the importance of the CIO mindset, attitudes and behaviour. It is proposed that the CIOs' role behaviour and perception of their role has an impact on role demands and role constraints. This is even more pertinent when considering that role behaviour is 'what the manager does in response to the messages that he or she has perceived and in response to his or her own expectations create demands and constraints on the job holder' (Fondas and Stewart, 1994: 85).

As demonstrated in the discussion chapter, it appears that there is a direct link between the CIO role choices, constraints and demands. Empirical data suggests that the conscious choices made by CIOs throughout their career and whilst performing their role has an impact on role demands. Empirical data concluded that it is most likely that a CIO who possesses the adequate leadership capabilities, is perceived as a business executive and invited to take part in discussions which are outside of the traditional scope of the

responsibilities of a CIO. It is also suggested that CIOs' perception of their own role and approach to executive power and managerial discretion has an impact on the role set's perception. For the purpose of this discussion, this can be described as a CIO who perceives themself as a business leader and possessing the appropriate leadership capabilities is likely to positively influence the expectations of the role set and consequently increases the likelihood of being invited to take part in wider discussions, and to be considered as a trusted advisor.

Empirical data suggested that the CIO's attitude, behaviour and perception of their role has a positive or negative effect on role constraints. Kakabadse and Kakabadse (1999) posit that individuals with a wider remit of responsibilities are most likely to be in a situation where they increase the demands of their role whilst decreasing constraints. The same scenario was highlighted in the transmuted CIO model, where it is argued that a CIO who behaves as a business leader, possesses leadership attributes and increases the performance of the IT function is very much likely to decrease some of the micro constraints existing within the environment. It was demonstrated that factors, such as; the misunderstanding of the CIO role, attitude and the maturity of the board towards the use of technology can be changed or reduced providing that the CIO is considered as a trusted partner.

It was posited in the abeyant CIO scenario that the individual's role behaviour can be heavily influenced by the role constraints and demands set by the role set, and consequently it is very unlikely that abeyant CIOs are able to change the demands of their role and decrease the constraints set by the role set. It is therefore proposed that CIOs' role behaviour and role perception have an impact on role demands and role constraints.

The CIOs' expectations and perception of their role has an impact (positive or negative) on the role set's expectations and company-wide perception of the CIO role;

Throughout this study it was argued that the mindset, behaviour and attitude of the CIOs play a key role in their success.

Biddle (1986) argued that expectations generate behaviours. According to Campbell (1999) role expectations are a combination of the individuals' expectations of their role and the expectations of other individuals within the same role set. As noted in Figures 6.3 and 6.4, one of the key differentiators between the abeyant CIO and the transmuted CIO stands in the individual's perception of their own role. In the case of the transmuted CIO, it is believed that individuals differ in their mindset, behaviour and attitude and that the transmuted CIOs are most likely to be influenced by the demands and constraints within a given environment and ultimately more likely to be involved in role making activities. It is also believed that the transmuted CIOs given their experience in relationship building and ability to influence key stakeholders are more likely to clarify their role and the expectations of the CIO role to an audience of executives. It was also argued that the transmuted CIOs differ in their perception of the amount of executive power and managerial discretion that they possess. With this in mind, it is proposed that CIOs' perception and expectation of their role has a direct impact on the role set's understanding and expectations of the role of the CIO role. Given the importance of attitude and behaviour in establishing sound relationships with influential stakeholders and gaining executive trust, one can understand how the CIOs' perception of their own role influences the perception of the role set.

There is a link between the CIO's attitude when communicating with key stakeholders and the involvement in boundary spanning activities;

Katz and Kahn (1966) highlighted the difficulty in crossing organisational boundaries. Balogun et al. (2005) demonstrate that in order for information to flow between business units, the boundary spanner must possess specific skills and influence individuals who can sometimes differ in their willingness to cooperate (Cadwell and O'Reilly III, 1981). Research studies by Adler et al. (2003), and Pawlowski and Robey (2004) note that given the organisational reach of technology, CIOs and IT executives ought to develop their boundary spanning capabilities.

It is proposed that a link exists between the CIO's attitude to communication with key stakeholders and the involvement in boundary spanning activities. It is also proposed that involvement in boundary spanning activities is only possible providing that the CIOs are willing to step away from the technical aspects of their role. The literature on the CIO role demonstrates that communication is a critical success factor in the CIO role. Empirical data suggests that there is a strong link between the communication methods employed by the CIO with key stakeholders and the perception of this individual within the organisation. Indeed, as stipulated by Kaarst-Brown and Robey (1999) and confirmed in this study, there are still a large number of executives who do not have a precise idea of the role of a CIO and who consider the CIO as a functional manager.

As noted throughout the course of this research study, it is critical for the CIOs to establish trust with executives and to be perceived as a business leader as opposed to an IT manager. Arrow (1974), and March and Simon (1958) demonstrated that the isolation phenomenon that occurs between business units within organisations is often the result of an inability to communicate using a common language.

Balogun et al. (2005) posit that the skills required to be a successful boundary spanner are very similar to the skills required to be a successful change agent, a role that CIOs themselves are comfortable playing. However, Tushman and Scanlan (1981) demonstrate that the success of boundary spanners is not dependent on individuals' formal status but on individuals' perception of competency, from the role set and the individual itself. With this in mind, the researcher posits that CIOs' involvement in boundary spanning activities is dependent on CIOs' perception of their own role, and the perception of the role set. It is also posited that CIOs' communication style and ability to adopt the same language as their executive peers will increase the flow of information between the IT function and the other functions within the organisation, facilitating therefore the "bridging" role of the CIO and increasing the likeliness for the CIO to be considered as a trusted advisor and to be invited to play a larger role within the organisation.

Boundary spanning activities between IT and other business functions are dependent on the CIO's ability to depart from certain aspects of their role;

Balogun et al. (2005), Levina and Vaast (2005), and Wisenfield and Hewlin (2003) observe that often boundary spanners occupy managerial positions and are unwilling to part from specific aspects of their role to focus solely on boundary spanning activities. The researcher believes that there is a direct link between the mindset of the CIO and the success of their involvement in boundary spanning activities. Several CIO participants noted that building relationships is a laborious task that requires investing a significant amount of time. Therefore, the researcher posits that the involvement and success of a CIO in boundary spanning activities is only possible providing that individuals are willing to part from the technical aspect of the role to focus essentially on managing relationships with stakeholders.

In relation to the emerging models presented in Chapter Five, it could be argued that IT executives whose profile corresponds to the abeyant CIO are less likely to succeed when involved in boundary spanning activities. The rationale behind this being that abeyant CIOs are individuals who have not yet been through the journey from IT manager to business executive, and therefore it is very unlikely that their mindset and behaviour enable them to successfully carry out boundary spanning activities that are similar to conducting organisational change. In addition, as previously posited, abeyant CIOs evolve within a heavily constrained environment where the role set perception and expectations of the individual are set in a way which prevents role making activities.

The abeyant CIOs are more inclined to role ambiguity and role conflict than the transmuted CIOs;

Role theory researchers suggest some situations call for greater levels of disturbance and disruption (Merton, 1969). Studies by Friedman and Podolny (1992); Levina and Vaast (2005) and Nygaard and Dahlstrom (2002) demonstrated that individuals involved in boundary spanning activities are more likely to experience role conflict or role ambiguity,

two concepts introduced in the literature review chapter and that both result in a degree of incongruity and incompatibility of expectations.

Miles (1977: 23) articulates particularly well the difficulties faced by boundary spanners and notes,

'a person occupying a liaison position linking two organisations or departments is subject to many potential conflicting role pressures coming from individuals who are likely to have inadequate conceptions of the focal role and who are located in separate units or organisations, each having its own goals, objectives and norms'

Secord and Backman (1970) assert that role conflict is a result of a discrepancy of expectations between an individual's expectation of his or her role and the organisation's expectations of the individual's role. According to House and Rizzio (1972), role ambiguity, on the other hand is the result of a lack of clarity regarding the outcomes of an individual's behaviour.

It was asserted previously that transmuted CIOs, due to their mindset and attitude are most likely to be more successful in conducting boundary spanning activities than abeyant CIOs, and given Dalton's (1959) theory which stipulates that strong executives have a higher tolerance for role conflict and suffer less of the effects of job discord, the researcher believes that abeyant CIOs are more inclined to role ambiguity and role conflict that transmuted CIOs.

As demonstrated when presenting the emerging models chapter, it is firmly believed that in the abeyant CIO scenario, individuals have very little involvement in role making and that their behaviour responds to the demands and constraints that are predetermined by the role set. It is also posited in this model that individuals have a limited amount of managerial discretion and executive power.

When reflecting upon Dalton's (1959) theory, one can easily imagine that an individual who exhibits the characteristics of an abeyant CIO may be affected by a discrepancy of

expectations between their expectations of the role and the evolving expectations of an organisation that would experience strong growth or would be involved in a series of acquisitions. It is posited in this research study that abeyant CIOs due to their lack of maturity, experience and inability to make their role evolve are more inclined to role conflict and role ambiguity than transmuted CIOs who would be more inclined to adapt their role behaviour and to re-align their expectations accordingly to the changing context of their organisation. This research model assumption demonstrates the importance of adaptability, being a good reader of situations, and the need to constantly re-assess one's expectations when working as a CIO.

Transmuted CIOs are more likely to possess a higher level of managerial discretion, a stronger perception of managerial power and an internal locus of control than the abeyant CIOs;

When considering the key differences between abeyant and transmuted CIOs, it is proposed that transmuted CIOs are more likely to possess a higher level of managerial discretion, demonstrate a high level of perceived managerial power and an internal locus of control than abeyant CIOs. As asserted throughout this study, transmuted CIOs differ from abeyant CIOs in their perception of their role and the mindset that they possess. Pfeffer (1981; 1992) noted that perceived power is what allows executives to exercise a degree of influence over their peers and allow them to exert their will (Haleblian and Finkelstein, 1993). Other research studies into executive power concluded that individual power is a result of a perceived ability to alleviate environmental and organisational uncertainties (Hickson et al., 1971; Pfeffer and Salancik, 1978). Therefore, it can posited that transmuted CIOs are most likely to possess a stronger perception of managerial power than abeyant CIOs.

Transmuted CIOs are more likely to exhibit transformational leadership characteristics than the abeyant CIOs;

Empirical data gathered throughout the course of this research study concluded that CIOs understand the importance of behaving as an executive leader and leading the IT function as opposed to behaving as a functional manager. CIOs suggested that whilst the

operational side of the role is a key success factor in establishing one's reputation, it is believed that in order to be successful in their role, they ought to possess a number of key attributes and create a vision that motivates, in addition to demonstrating high levels of humility and integrity. Several research participants noted that CIOs given the complexity of organisational dynamics should be good readers of situations and demonstrate high levels of emotional intelligence. The concept of emotional intelligence was introduced in the literature review chapter and has been subject to numerous studies that suggest that there is a link between a high level of emotional intelligence and the leadership styles of an individual. Shivers-Blackwell (2004) in their investigation of determinants of transformational and transactional leader behaviour concluded that low self monitoring managers (individuals for whom social cues from other individuals or direct environment have very little impact on their behaviour) are most likely to exhibit the characteristics of transactional leaders. According to Shivers-Blackwell (2004) transactional leaders, due to their insensitivity to role expectations often fail to modify their behaviour in accordance to their environment.

Empirical material suggests that abeyant CIOs are yet to go through the leadership journey that is required to become a transmuted CIO. Moore (2008) emphasises that growing up in terms of responsibilities is only part of the leadership journey and that there is a need for executives to develop themselves and grow as individuals. Given that it is proposed that abeyant CIOs fail to understand the subtleties of organisational politics, struggle to establish strong relationships with executive peers and adopt a communication style that suits various audiences, one could suggest that abeyant CIOs are most likely to exhibit a lower level of emotional intelligence, which as pointed out by Shivers-Blackwell (2003) is a characteristic of transactional leaders.

Bowman and Kakabadse (1997) suggest that individuals who determine a way forward within their organisation essentially make of a discretionary role a leadership role. This is an interesting perspective that suggests that individuals who possess a high level of managerial discretion and are involved in role making essentially make their role one of leadership. As demonstrated previously, transmuted CIOs are characterized by a strong

involvement in role making and a high level of managerial discretion that suggests that transmuted CIOs can be considered as executive leaders. Given the input by Shivers-Blackwell (1994) in transformational leadership, it is proposed in this research study that transmuted CIOs exhibit the characteristics of transformational leaders. In contrast, the abeyant CIOs can be considered as transactional managers, a distinction that CIO participants did not fail to point out.

The transmuted CIOs can, depending on the context of the organisation act as ghost leader;

It is theorised that transmuted CIOs are most likely to exhibit transformational leader characteristics. However, empirical data suggests that there are no doubts that transmuted CIOs demonstrate transformational leadership capabilities. The CIO participants appear content to remain in a supporting leadership role. As suggested by several participants, there is a strong gap between the CIO and the CEO role that would require gaining a different set of capabilities and parting with the dual aspect of the CIO role. The participants perceive that the CIO role, due to its diversity, dual aspect and the nature of technological advances is more dynamic than other c-level executive roles, including the role of CEO. When discussing the involvement of the CIO in the formulation of the strategy, empirical data suggests that whereas the involvement of the CIO in the execution of corporate strategy is undeniable, the formulation and envisioning of strategy is ultimately the responsibility of the CEO. In addition, several CIO participants suggest that even if they could potentially gain access to a CEO role, they would not consider taking on the job. One could therefore posit that transmuted CIOs act as ghost leaders. When reflecting upon previous models of leadership, Lee-Davies et al. (2007) suggest that it may be possible to identify within a given organisation, more than one leader. The concept of ghost leadership is intrinsically linked to the concept of shared leadership, which as noted by Kakabadse and Kakabadse (2004) represents a shift from previous models of leadership that focus on hierarchical power. According to Lee-Davies et al. (2007), ghost leaders are leaders who can evolve on different organisational levels, but who may have influenced some of the thinking behind critical decisions. Given the role of technology within today's organisation and the evolving role of the CIO, one could

argue that transmuted CIOs' who exhibit transformational leadership and influence key stakeholders can, depending on the context of the organisation act as ghost leaders.

5.7 Chapter Conclusion

This chapter has explored the demands, constraints and choices existing within the CIO role and concluded with the presentation of two CIO role models; the abeyant CIO and the transmuted CIO. This chapter presented individualistic key characteristics that may be applicable to each role model.

Both research models provide an additional perspective into the role of the CIO in presenting how the CIOs perceive their role. Academic researchers, such as; Paz et al., (2010); Edwards et al. (2009); and Peppard (2009) stressed the importance for researchers to increase the scope and depth of studies on the CIO role and develop pertinent and relevant role models that would enable a better understanding of the implications of working as a CIO.

Chapter Six presents the most pertinent findings that have emerged from this study on the role and contribution of CIOs'.

CHAPTER SIX: RESEARCH CONCLUSIONS

6.1   Chapter Introduction

The aim of this conclusion chapter is to present the most relevant findings that have emerged from this inquiry into the role and contribution of CIOs. The researcher judged it appropriate to briefly highlight some of the key points from the literature review, data analysis and discussion chapters. Upon presenting a summary of the research conclusions, the researcher also takes the opportunity to develop a series of research propositions.

As noted in the introduction chapter, this PhD research study intended to explore the perception that CIOs' hold of their role with a particular focus on the demands, constraints and choices offered in their role. As noted by McLeod et al. (1997) and highlighted throughout this study, many studies have been conducted on the role of the CIO, but few have focused on ascertaining CIO perceptions of their own role and contribution. Indeed, most studies have focused on highlighting the alleged role of the CIO or concentrated on the skills that CIOs ought to possess to be successful. Edwards et al. (2009: 4) argue that academic studies have tended to add to the confusion surrounding the CIO role, they note,

> *'Academic studies have tended to add to the confusion. Prior research seeks to discover the different competencies of CIOs' (for example: strategist, relationship architect, integrator, information steward, IT educator and utility provider). Whilst useful, they are not grounded in a precise understanding of the job of the CIO and what incumbents are expected to achieve for their organization'.*

As stated in the introduction chapter, this inquiry was conducted with the sole purpose of answering the question: How do CIOs perceive their role and contribution within their organisations?

Four main objectives have been identified for this research study. Firstly, it was intended to conduct a thorough examination of the current and relevant literature on the CIO role, then through empirical research, the researcher assessed how CIOs perceive their role and contribution and highlighted the necessity for individuals in the CIO position to demonstrate adequate leadership and boundary spanning capabilities. As clearly indicated in the data analysis section of this research study, it appears that mindset, attitude and role perception are three critical success factors for IT leaders.

As a result of this inquiry, two models are presented, thus enabling a clearer understanding of the CIO role. By adopting a reflecting approach, important elements, such as; mindset, attitude and individuals' role formation stages have been taken into consideration and are reflected in these models. The researcher firmly believes that both the abeyant and transmuted CIO models represent a more accurate and updated vision of the CIO role and provide current and future CIOs with a platform for reflection and self-assessment.

6.2   Research Overview

6.2.1   Highlights from the methodology

Prior to presenting a short summary of the key components of the literature review chapter of this PhD thesis, it is critical to reflect upon some of the methodological and philosophical choices made throughout the course of this inquiry. As noted in the methodology chapter, the first choice faced by the researcher was in respect to the ontological position to adopt. Given the nature of this inquiry and reflective approach taken throughout this project, the researcher opted for a constructivist approach that as noted by Blaikie (2007: 25) allows researchers to produce relative knowledge. From an epistemological point of view, the researcher opted for an interpretivist position which enabled to understand from the participants' point of view the various elements, tensions and dynamics that compose their role.

From a social theory viewpoint, the approach of the researcher was to examine the role of the CIO and then to develop theories. Bryman (2008) qualifies this approach as inductive, and both the abeyant and transmuted CIO models presented in the discussion chapter are a result of this approach. On a more practical level, the researcher decided to adopt a qualitative approach to this inquiry. This choice was justified by the researcher's desire to re-acquaint himmself with this specific research strategy and to reinforce the belief that if one is to understand how a certain category of individuals perceive their role and contribution within a given environment, this can only be achieved through an examination of an individual's perception and consequently requires in-depth conversations with recipients.

In total, 25 in-depth interviews with CIOs and senior IT leaders have been conducted. Semi-structured interviews have proved to be particularly efficient and allowed for more meaningful interactions with research participants. As noted by Hunter (1995), it is particularly challenging to gain access to a community of elite participants, and the researcher's position within Gartner Ltd and the Executive Programs has enabled the creation of a strong network that has proved most useful when approaching potential research participants.

In an effort to preserve the validity of the data gathered, the researcher's affiliation with Gartner Ltd was taken into consideration and research participants were made aware that this inquiry was part of an academic excercise and carried out in conjunction with the University of Northampton. Additional information on ethical considerations is presented in Table 3.4 of the methodology chapter of this PhD thesis.

6.2.2   Highlights from literature review

As highlighted in the introduction chapter and reinforced earlier, one of the key objectives of this inquiry was to carry out an extensive review of the past and current literature on the role of the CIO and other research areas useful to achieve the set of objectives presented in the introduction chapter. A strong body of research supports the idea that CIOs must possess adequate leadership capabilities (Broadent and Kitzis, 2004;

Onan and Gambill, 2001; Applegate and Elam, 1992; Polansky et al., 2004) and it therefore appeared appropriate to focus the literature review on three streams; the CIO role, executive leadership and role theory (Figure 6.1).

Figure 6.1: Literature Review Research Streams
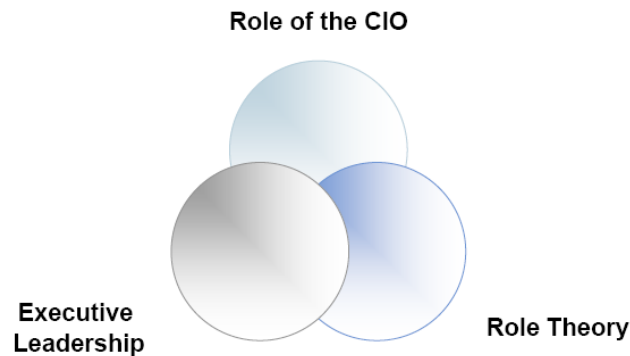
Role of the CIO

There is unanimous agreement within academic and practitioner communities that the role of IT within organisations has changed considerably over the last few decades and that increasingly the role of the CIO is to support the Chief Executives' vision and ultimately provide a source of competitive advantage to the organisation. However, as noted by Maruca (2000) and reinforced in this study, it appears that there is still a lack of clarity of expectations over the role that CIOs are supposed to play within their organisation. Whereas, a number of executive functions within today's organisations have clear role expectations, this is not yet the case for the CIO. As a potential source of explanation for this phenomenon, the literature suggests that the CIO role is a dual role where individuals are still expected to perform some elements of operations on a daily basis (Planes and Castillo, 2002; Lindstrom et al., 2006). Edwards et al. (2009) believe that much of the discord between the IT function and the rest of the organisation can be attributed to unrealistic expectations as to what the role of the CIO should be.

It appears from the literature that in some cases, the responsibilities of the CIOs are extended beyond the traditional scope of their initial role and that they are expected to deliver not only reliable and improved IT services, but they are also invited to participate in larger and broader discussions, where their input into strategic initiatives are sought (Casper, 2008). This process of involving the CIO in broader discussions is a fairly new phenomenon as traditionally noted by Jones et al. (1995), CIOs have always primarily focused on implementing strategies formulated by their executive peers. The literature on the CIO role suggests that there are a variety of areas where CIOs have the capabilities to make a significant contribution to their organisation. Research studies have shown that areas, such as; organisational change and transformation programmes are the areas where the CIO's broader view of the organisation and understanding of key business processes can be most useful. As pointed out in Hoffman and Stedman (2008), often heads of business units know about their own business functions but get little visibility into the issues that their executive peers are facing, a privilege that very few executives possess.

There is a strong body of research that suggests that the involvement of CIOs is made possible only if they possess a combination of certain skills. The research studies suggest that the role of the CIO has evolved in such a way that it is now increasingly common for CIOs to take a step back from the sole management of technology. Remenyi et al. (2004) identified knowledge and understanding of key corporate strategy elements as being a critical success factor in the CIO role. Coghlan and Hurley (1996) argue that CIOs have more chance of earning executive peer credibility by demonstrating general knowledge of business and management than technical skills. In contrast, Maruca (2000) asserts that the skills that CIOs must possess should be very similar to the skills of the CEOs in the sense that CIOs must be able to understand how the various components of the organisation fit together and interact with each other. A study by IBM (2008f) concluded that despite the importance of being technology savvy, CIOs ought to possess strong elements of business acumen.

Many of the studies have attempted to examine the skills and competencies that are required to be a successful CIO. Amongst several critical skills, communication is often

referred to as the most relevant skill, as often the CIOs are required to communicate their vision upwards, downwards but also across functional silos (Jaska and Hogan, 2006). Several studies also highlight the importance for CIOs to discuss key issues with their executive peers using non-technical language. Earl and Feeney (1994) and Trigo et al. (2009) argue that CIOs should be able to absorb the language used by their executive peers and use it during their communication with the various stakeholders in the organisation. Finally, the literature review suggests that to be successful in the role of CIO, individuals must be proficient at building and managing relationships (Feeny *et al*, 1992), in addition to demonstrating the ability to educate executive peers on how to best leverage technology within their organisation (Passino and Severance, 1988 and O'Riodan, 1987).

Executive Leadership

When reflecting upon the various skills and capabilities required to emulate a successful CIO, many researchers assert that the CIOs ought to become business leaders. Taubert (1999) argues that the lack of leadership skills is what has historically prevented many CIOs from becoming CEOs. Zalesnik and Kets de Vries (1975) stress that there are a number of key differences between managers and leaders, and according to Broadbent and Kitzis (2004), whereas management is about control and execution, leadership is about change, inspiration and empowerment. Avolio et al. (1991) demonstrate that transformational leaders display four main characteristics; individualised consideration, intellectual stimulation, inspirational motivation and idealised influence. Graetz (2000) notes that transformational leadership only occurs when executives 'walk the talk', set high moral standards and demonstrate a high level of honesty and integrity. Other studies into leadership development conclude that true executive leaders possess strong drive, motivation and self confidence (Kirkpatrick and Locke, 1991) and they possess a constant appetite for learning and developing themselves. Finally, Katz and Kahn (1978) assert that leadership is an attribute of personality but at the same time very much an attribute of context, which explains why a number of studies highlight the importance for executives to adapt their leadership styles to the context of the organisation and possess a

repertoire of different leadership styles (Goleman, 2000; Boleman and Deal (2006). To conclude this section, George and McLean (2007) believe that executive leadership is a matter of mindset and should be considered as a journey within oneself.

6.2.3   Highlights from data analysis

Empirical data has highlighted the dynamics of the CIO role. Whilst CIOs recognise that their role has evolved and should be treated as one of strategy, it appears, however, that providing strong and reliable operations is still a critical part of the CIO role. Several research participants suggested that providing reliable operations is a first step to establishing one's credibility and ultimately leads to being involved in company-wide initiatives.

As suggested by Interviewee A, if the CIOs are too involved in the management of operations, they are most likely to fail to make a strong impact within their organisation. However, if they are not paying enough attention to the operational part of their role, they run the risk of providing unreliable services that would ultimately taint their reputation and increase the level of mistrust within their peer group. Despite the importance of providing reliable IT services to the organisation, there is a desire from CIOs to distinguish their role to the role of an IT Director, which according to them is more of a portfolio type of role where the agendas are relatively fixed and projects executed in a sequential manner.

The CIOs perceive their role as the one of a trusted advisor, which can have different meaning depending on the context and strategic goals of the organisation. Several CIOs suggested that their expertise in large and complex programme management can be useful when time comes to objectively assess the viability of a programme. CIOs also recognise that they have a role to play in creating bonds with other business functions and educating senior executives on how technologies can be leveraged within the organisation, in addition to making the organisation aware of the risks associated with particular technologies. CIOs noted that technology provides a wealth of opportunities and it is the role of the CIO to guide the organisation through these technological choices

and identify the most relevant ones. The notion of bridging the gap with other business functions was a recurrent concept in the CIO literature and confirmed by research participants. CIOs believe that their role is one of an evangelist, whose key responsibility is to ensure that the technology solutions proposed are aligned with the goals and objectives of the organisation. In order to do so, the CIOs believe that they require a deep understanding of the organisation and its objectives, if they are to lead the IT function and perform their role in a holistic manner.

One debate remains within the academic and practitioner communities on how much technical knowledge is required to perform the CIO role. CIOs firmly believe that a strong understanding of technology is required to be an effective CIO, however, it is more important for them to understand the potential application of a new technology and its relevance within a particular business context. The participants believe that to be successful in the role, one must be able to quickly understand the dynamics and the mood of the organisation, and as one participant suggested, understand the "topic of the month", the issues that are keeping their executive peers up at night.

Many of the studies have focused on the importance of using appropriate communication methods when working with non-IT specialists. CIOs believe that they should avoid using IT language when talking to their executive peers, as apart from frustrating them, this increases the risk of being perceived as an IT Manager and discredits their position within the c-level suite. The CIOs firmly believe that adopting the same language as used by their peers builds stronger relationships and establishes trust. This ability to establish strong relationships and manage key stakeholders is considered by CIOs as a critical success factor, as often CIOs are required to gain support from the most unlikely of sources.

The CIOs consider that they have the skills required to make contributions to three different areas, including corporate strategy, which is an area where historically CIOs have had relatively little input. CIOs believe that although the ultimate responsibility for the formulation of the corporate strategy remains with the CEO, they should nevertheless

be involved in shaping the strategy alongside CEOs and their executive team. The involvement of the CIO in these strategy related activities is particularly critical given the reach of IT and the potential afforded by new technologies. CIOs deem that they possess the adequate skills to be involved in large change management and transformation programmes, in addition to business process improvement initiatives, as these are two areas in which they have been involved on countless occasions throughout their careers.

As demonstrated by Stewart (1982), managerial roles are characterised by a set of demands, constraints and choices. Empirical data has revealed that there are three types of constraints existing within the CIO role. It was suggested that factors, such as; the industry sector in which the CIOs are working plays a key role in the function and responsibilities of the CIO. The participants also identified the economic climate as being a key constraint to the development of the role. As noted by several participants, the current economic climate has had a serious impact on the role played by IT executives. In many organisations, the CEOs in an effort to keep costs down, have put pressure on CIOs to decrease the size of their operational spending and put a stop to current projects. The CIO participants suggested that it has been increasingly common for them to work closely or to be completely realigned with the CFO. This is a hierarchical structure which the CIOs perceive limits the potential impact of technology on the organisation.

For the past decade, IT executives have experienced a change in user expectations. This can be seen as a positive change but needs to be managed carefully as this can also present a series of threats. The CIOs noted that prior to the commoditisation and consumerisation of technology, IT was considered as a dark art, and perceived as complex, however, this is no longer the case and consequently the CIOs must carefully manage the often inflated expectations of business users, who have their own view of how IT should be managed within the organisation and more often fail to recognise that home IT is considerably different to corporate IT. The consumerisation of technology also places the CIOs under the spotlight as they are expected to know everything about technology. If not properly managed, these changes of expectations can lead to situations where business users, unaware of the hidden complexity, bypass the CIO and their team

and procure themselves with technological solutions without any consideration of their impact on core systems.

The CIOs identified a number of constraints specific to organisations that can also influence their role. They unanimously asserted that the maturity and attitude of the organisation and its members of the board, towards technology determines the role that a CIO will play within a given organisation. Empirical data suggests that the level of conservatism and culture of the organisation is not only a determinant of the role that a CIO plays but also dictates the level of influence that individuals will exert. As highlighted in the data analysis chapter, there appears to be a direct link between the maturity and acceptance of technology across organisations and the level of empowerment of the CIO. Empirical data suggests that it can be a real struggle even for the best CIOs to make an impact within their organisation if the executive team does not consider technology as a key element of the corporate strategy.

The CIOs are unanimous that if a CIO is perceived as a functional manager, it is very likely that the level of managerial discretion will be restrained. The participants cited previous experience of service disruption, unsuccessful projects or difficulty to demonstrate the value delivered by IT executives as potential sources of the wariness towards the CIO. Empirical data demonstrates that according to CIOs, it is more beneficial for them to report directly to the CEO rather than to the CFO, as it is most likely that discussions with the CFO will be about cost containment rather than innovation and strategy.

The participants have also identified a series of individual characteristics that can also be considered as constraints. CIOs believe that there are individuals who despite having the title of CIO fail to perform their role in a holistic manner and find themselves being a little too inward focused.

Empirical data presented in this study suggests that as the role of the CIO evolves, IT executives' mindset and behaviour also has to evolve. It is posited in the data analysis

chapter that a change of mindset is required if individuals are willing to evolve from an IT expert to a business leader. A number of individuals referred to this process as a journey during which individuals have to make a conscious decision to become business leaders and to lead the IT function as opposed to focusing their attention to the day to day management of the operations. A number of research participants emphasised that IT executives and aspiring CIOs must make a conscious decision to go through a complicated process that involves a change of mindset, a desire to develop oneself both as an individual and at an organisational level and a willingness to separate oneself from the technical aspect of the role. The CIOs suggest that a change in loyalty is a key differentiator between a CIO and an IT Manager. Whereas, the IT Managers' loyalty remains with the technology, the CIOs loyalty stands first and foremost with the organisation they work for. Empirical data gathered in this study demonstrates that if a CIO does not possess the right mindset, it is very likely that this individual will be perceived as a technician and therefore considered as such by the executive team.

The CIOs suggest that given the complexity of this transition, it is easier to achieve this transition when individuals have had the opportunity to step out of the IT world and to perform a role within other business functions. The research participants note that individuals who have reached the CIO rank via a more traditional route, may not have the breadth of experience and insight than individuals who have gained experience outside of the IT area. A number of participants suggested that stepping out of the IT area has enabled them to gain insights that have have proved valuable when interacting with key stakeholders. Empirical data demonstrates that to be a successful CIO leader, individuals should demonstrate a series of characteristics that are not dissimilar to the characteristics of transformational leadership discussed in the literature review chapter. The CIOs argued that to be successful, one must demonstrate a certain level of humility, integrity, decency and most importantly be genuine. One particular participant suggested that often successful CIOs possess low egos and are content to achieve success through others. The importance of employee motivation and empowerment was highlighted in the data analysis chapter.

The CIOs also consider that to demonstrate effective leadership, the individuals must possess the ability to envisage a new world and present this vision in a way that motivates followers and secures the support of executive peers. In respect to role perception, as demonstrated in the role choices section of the data analysis chapter, CIOs who have embraced the role and managed to gain the trust of the organisation's senior leadership team are different in the way they perceive their role. Empirical data suggests that the title given to CIOs is irrelevant, and that it is the capabilities and characteristics of the individual behind the title that determines whether the CIO will or will not be successful.

Research participants argue that it is the attitude and behaviour, in addition to the individual's perception of their role and its potential, which are the critical success factors in the CIO role. The CIOs believe that in situations where individuals struggle to engage with executive peers, it is very often because they have failed to demonstrate what they can bring to the executive table and how IT can support the organisation's goals. Empirical data suggests that the CIOs' level of executive power and managerial discretion is dictated by the individuals' ability to establish strong relationships and influence members of the senior leadership team. The CIOs consider that once these relationships have been established and the CIO is perceived as a business executive, the individuals can be involved in role making and shaping the CIO role as they see fit.

Based upon secondary research and empirical evidence, the CIO success zone is presented. It is posited in this model (Figure 6.2) that the success of CIOs requires a double level of awareness both from an external/ environmental perspective and from a personal/ professional perspective. Throughout this PhD thesis, success in establishing oneself in the CIO role was defined as being considered by other executives as a business leader, and perceived as playing a critical part in the execution of corporate strategy.

Figure 6.2: CIO success zone
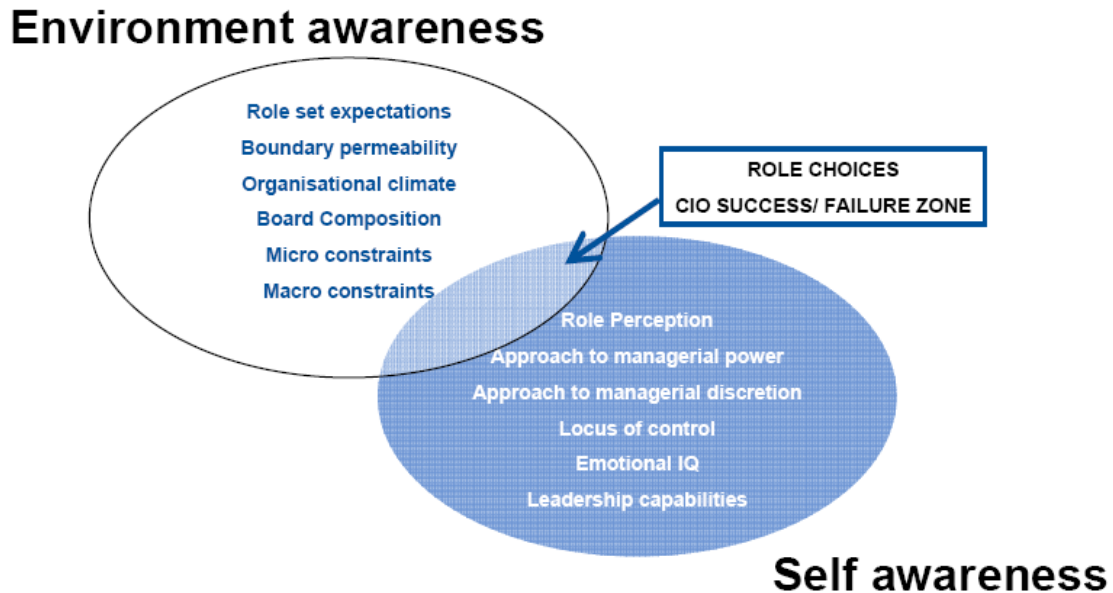
Source: Compiled by the researcher

As discussed throughout this study, there are a number of environmental factors, such as; the role set and senior executive expectations, organisation's boundary permeability, organisational climate, micro and macro constraints that can have a positive or negative impact on the role that a CIO is to play within the organisation. In addition to these, there are a number of individual and personal factors that, as suggested in the data analysis and discussion chapters, fall under the individual's mindset as critical to the success of any given CIO.

When reflecting upon the critical success factors of working as a CIO, Interviewee I believes that the individual's behaviour, beliefs and way of communicating with others are not only critical to the success of CIOs, but that they can also positively influence executives' perception of the role of the CIO.

By your personality, by your convictions, by what you want to achieve and by the way you communicate with your peers or users, you can then communicate better what your ideas are and gain respect in that way, which will then also facilitate your interactions in the long run.

Interviewee I

As noted in Figure 6.2, the CIO success zone is a combination of an individual's perception of their role, the approach to executive power and to managerial discretion, the leadership capabilities with the individual's capabilities to identify and adapt to organisational factors, such as; the composition of the board and their expectation of the role of the CIO, in addition to the permeability of the organisational boundary. Interviewees M and U illustrate the importance of understanding one's authorising environment.

I am the one to decide more than the financial person but within boundaries of if the budget that can be allocated for such a system is?, I don't know, one million Euros, for example, then what type of system within those boundaries is up to the IT executive but if it's going to be at a higher budget, then it's different.

Interviewee U

6.3   Developing Propositions

This empirical study on the role and the perception of the CIO has enabled the development of ten propositions; each referring to concepts discussed in the literature review, data analysis and discussion chapters. For the purpose of this conclusion, both emerging models are presented again in Figure 6.3 and Figure 6.4.

Sojer et al. (2006) noted that it is necessary for academic researchers to create more pertinent and relevant CIO role models. This empirical study on the role and the perception of the CIO role has enabled the researcher to develop two models, each corresponding to a different profile of CIO. As pointed out in the previous chapter, empirical evidence suggests that the key differentiator between the abeyant CIO and the transmuted CIO stands in individuals' perception of the role choices that are available to them.

Figure 6.3: The Abeyant CIO
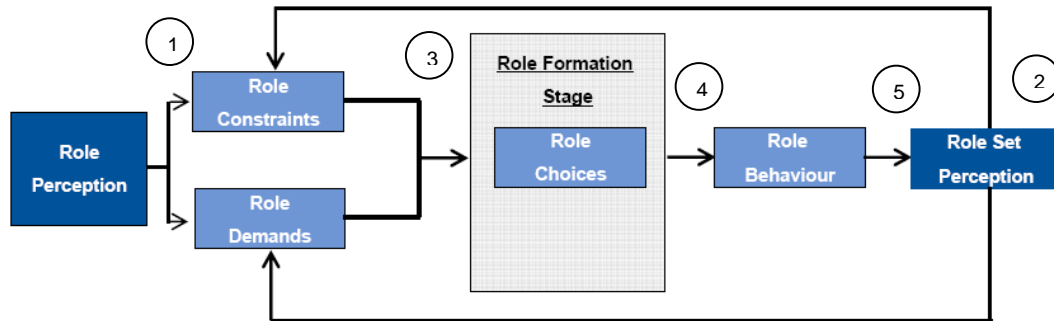
Proposition 1a: CIOs' perception of their own role has an impact on their perception of the demands existing within the role.

Kahn et al. (1964) demonstrated that the individuals' role in an organisation can be interpreted in a different manner, which consequently results in individuals behaving differently to each other despite similar organisational contexts. When reflecting upon the senior leadership teams' lack of understanding of the CIO role, Interviewee M notes that the lack of clarity around the role clearly should be considered as a constraint, however, at times this provides the CIOs with a certain level of discretion with the way IT can be used within the organisation. Interviewee M demonstrates here the crucial importance of the interpretation and perception of one's role.

Empirical data suggests that the individuals' perception of their role has an impact on their interpretation of demands existing within their environment. It is suggested in 'proposition 1a' that an individual's perception of their own role can impact one's ability to clearly identify the demands existing within the role.

Proposition 1b: CIOs' perception of their role has an impact on their perception of the constraints existing within the role.

Following on from proposition 1a, it is argued in the abeyant CIO scenario that individuals due to their mindset, lack of exposure to a wider business context and lack of understanding of the potential of the CIO role, are most likely to identify a number of constraints which can potentially hinder their contribution.

It is argued that in the abeyant CIO scenario the individuals' lack of awareness of their own environment (Figure 6.2) prevents them from correctly assessing the overall climate of the organisation, the expectations of the role set and the permeability of organisational boundaries, which ultimately can lead individuals to identify a higher number of role constraints.

Proposition 2: The role set's perception of the role of a CIO influences both the constraints and the demands existing in the CIO environment.

As demonstrated throughout the course of this PhD study, the attitude, behaviour and perception of the CIO can either increase or decrease the role constraints and role demands.

It is argued in 'proposition 2' that in the abeyant CIO scenario, due to an individuals' perception of their own role, misaligned mindset, lack of engagement with key stakeholders and limited influencing capabilities, it is very likely that the role set dictates the constraints and demands existing within the CIO role. On a practical basis, this can potentially limit the CIO's role to merely the role of an IT Manager and limit the individuals' exposure to company-wide initiatives. It is also most likely in this scenario that the CIO will not be considered as a true business executive and IT is therefore treated purely as a support function. As illustrated in Table 5.1, in the abeyant CIO model, the role behaviour of the individual is mainly determined by the role set. It will be demonstrated in 'proposition 9', that in the case of the transmuted CIO, the role set's perception of the CIO can alleviate constraints and create new sets of demands.

Proposition 3a: In the abeyant CIO role model, the role constraints have a direct impact on the individuals' role choices.

The idea behind the abeyant model is that individuals are yet to go through the reflection process and change of mindset that will enable CIOs to perform their role in a holistic way and ultimately to be considered as a business executive.

As demonstrated when discussing the assumptions behind these models, it is firmly believed that in the case of abeyant CIOs, the role formation stage and therefore the individual's role choices occur within an environment that is dictated by the role set. In this scenario, it is argued that the role constraints influence the choices that are available to the individual. In other words, the abeyant CIOs' latitude of action is dictated by the constraints existing within their environment.

Proposition 3b: In the abeyant CIO role model, the role demands have a direct impact on the individuals' role choices.

Interviewees Q and R noted the difficulty of performing one's role within a heavily constrained environment. They stress that because of the current economic situation the demands of their role were greatly affected. Interviewee Q notes that his ability to innovate and perform his role as he saw fit was greatly affected by the current economic climate.

It is however important to note that given the current economic constraints, every one of the CIOs' role choices have been dictated by the pressure of maintaining low operational costs, thus reducing their ability to perform their role as they see fit. The scenario depicted in 'proposition 3b' however, reveals a more permanent issue resulting in a gap between an individual's own capabilities and the requirements for the role.

Proposition 4: A relationship exists between the abeyant CIO's role choices and their behaviour.

Evidence from the literature and empirical research presented in this PhD study demonstrates the crucial role that adopting the appropriate behaviour plays in becoming a successful CIO. Empirical data suggests that there are a number of critical skills that must be acquired and mastered if the CIOs are to play a critical part in the transformation of their organisation, just to name a few, participants highlighted; communication skills, business acumen, industry knowledge, possessing the right mindset and attitude. Empirical evidence demonstrates the importance of role choices when acquiring some of these key skills. There is unanimous agreement from study participants that a number of the skills listed below can only be acquired providing that the individuals make a conscious decision to widen their skill set and to acquire critical experience outside of the IT organisation and to get involved in enterprise wide initiatives.

It is argued in 'proposition 4' that a relationship exists between the abeyant CIO role choices and their behaviour and that given the mindset of the individual and the restricted environment in which they performs their role, it is very likely that these individuals will exhibit the characteristics of a transactional managers as opposed to a transformational leader. It could be argued in the abeyant CIO model that it is very unlikely that individuals go through the reflection process described in the data analysis chapter that allows CIOs to gain a more holistic view of their role as opposed to performing their role strictly from a technological perspective.

Proposition 5: There is a relationship between the behaviour of abeyant CIOs and the role set's perception of the CIO.

As discussed in 'proposition 2', there is a relationship between the role set's perception of the role of the CIO and the demands and constraints that exist within an individual's environment. As demonstrated previously, there are a number of pre-requisites to becoming a successful CIO, one of which equates to adopting a holistic approach to the CIO role and possessing the appropriate capabilities that will earn the individuals a place

to participate in wider initiatives. It is argued in 'proposition 5' that the behaviour and mindset of abeyant CIOs can potentially have a negative impact on the role set's perception of the CIO role and consequently reinforce the constraints existing within the CIO's environment and decrease the demands of the role. 'Proposition 5' highlights one of the key problematic areas of abeyant CIOs, who unintentionally reinforce the role set's decision to treat IT as a support function and create the separation between IT and other business units, as noted by Kaarst-Brown and Robey (1999) and Peppard (2006).

Figure 6.4: The Transmuted CIO
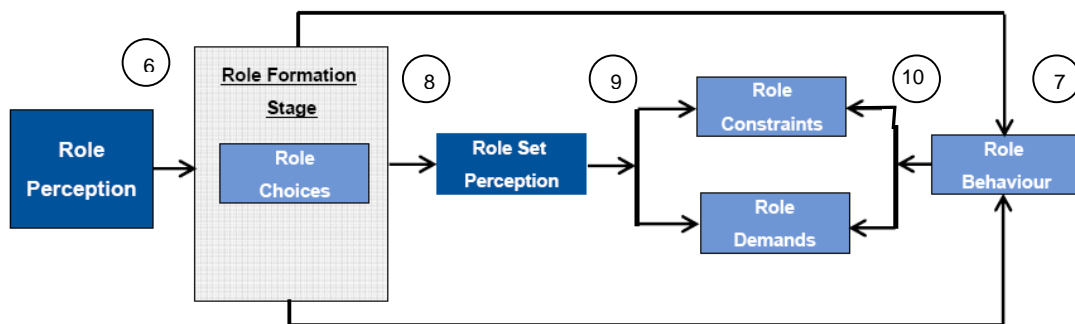
Source: Compiled by the researcher

Proposition 6: In the transmuted CIO scenario, the individual's perception of the role of the CIO influences the role choices that individuals make or have already made.

In contrast to 'proposition 1', where it is suggested that abeyant CIOs are most likely to identify a number of demands and constraints that will potentially hinder their contribution, it is argued in 'proposition 6' that the CIOs' perception of their own role has an impact on the choices made by individuals. As noted on numerous occasions, the key differentiator between the abeyant CIO and the transmuted CIO stands in the transmuted CIO's mindset and attitude, and overall approach to their role. It is argued in 'proposition 6' that the transmuted CIO's perception of the role and the potential of the CIO is significantly different than the abeyant CIOs', this results in transmuted CIOs performing the CIO role differently to the abeyant CIOs'. One could argue that the transmuted CIOs consider themselves as business executives and are most likely to bring their vision to the

role and to develop powerful relationships with key stakeholders. As noted in Table 5.1, it is also very likely that transmuted CIOs understand organisational politics and are involved in role making. This point was particularly well articulated by Interviewee Y when reflecting upon the differences between transformational and transactional CIOs. The transmuted CIOs make a conscious decision to perform their role like a business executive, which one could argue will result in an individuals' perception to possess a higher level of managerial discretion.

Proposition 7: There is a direct link between role choices and individuals' behaviour.

Similarly to 'proposition 4', it is argued in 'proposition 7' that in the transmuted CIO model, there is a clear relationship between role choices and role behaviour. However, whereas in the case of abeyant CIOs, an individual's role choices had a negative impact on their behaviour, it is argued in the transmuted CIO scenario that the role choices made by individuals reinforced the individual's capabilities to lead the IT function and convinced key stakeholders to adopt their vision.

When reflecting on the attributes of a successful CIO, Interviewee I suggests that the attitude and behaviour of CIOs during meetings with other executives plays a great deal of importance in establishing one's reputation and credibility with other c-level executives. It is argued in the transmuted CIO scenario that individuals because of their presence, 'can do' attitude and their holistic view of how IT should contribute within their organisation, are most likely to behave in a way that will be similar to the way that other business executives behave, thus enabling more easily their integration within the c-level suite.

Proposition 8: The individual's role choices influence the role set perception of the individual's role. In the case of transmuted CIOs, individual role choices have a positive impact on the role set perception.

Expanding upon 'proposition 7', it is suggested in the transmuted CIO model that the individuals' role perception and role choices create a virtuous circle that positively influences the role set. As a result, the CIOs are most likely to be treated as equals.

Proposition 9a: The role set's perception of the role of the CIO has an impact on the role constraints of the CIO. In the transmuted CIO model, it is argued that the role set's perception of the role of the CIO can decrease role constraints.

It was demonstrated throughout this PhD thesis that the role of the CIO depends a great deal on micro constraints, such as; maturity of the organisation, the role set's perception of the role of the CIO, in addition to the board's attitude towards technology. It was posited that the level of role constraints depend a great deal on the role set's perception of the role of IT within the organisation and the value that the CIO brings to the organisation. In the case of transmuted CIOs, it is proposed that the role set's perception of the CIO role can decrease the constraints existing within the role. Empirical data suggests that transmuted CIOs, who are considered as business executives and who consider themselves as such, are more likely to have established a trusted relationship with key stakeholders and therefore possess a higher degree of managerial discretion and executive power, which in turn can reduce micro constraints.

Proposition 9b: The role set's perception of the role of the CIO has an impact on the role demands of the CIO. In the transmuted CIO scenario, it is argued that the role set's perception of the role of the CIO can increase role demands.

Following on from 'proposition 9a', it is proposed that due to the transmuted CIOs' attitude, mindset and leadership capabilities, it is very likely that the role set and specifically the c-level suite recognises the potential of the CIO and increases the role demands by seeking the CIO's involvement with transformational programmes, large scale change management or corporate strategy. As discussed in 'proposition 9a', the role set is also in a position to alleviate some of the constraints existing within the

environment, such as; a change of reporting structure, or simply by clarifying the role of the CIO within the organisation.

Proposition 10a: Transmuted CIO behaviour is likely to decrease the constraints existing within the environment

As discussed throughout the conclusion chapter, empirical data demonstrates that the process of educating business executives on the potential application of technology helps the CIOs to develop strong relationships within the c-level suite.

It is believed that in the transmuted CIO model the attitude, mindset and holistic approach to their role can decrease some of the micro and macro constraints identified by the CIOs. By behaving like a business executive and communicating using the same language as executives within the organisation, it is posited that some of the micro constraints, such as; the misunderstanding of the role and confusion over the responsibilities of the CIO, in addition to the overall attitude of the organisation towards technology can be changed. The transmuted CIOs, by educating other executives on the potential application of technology, can also reduce ambiguities arising from the commoditisation and consumerisation of technology.

Proposition 10b: Transmuted CIOs' behaviour is likely to increase the demands existing within the environment.

It is argued in this last proposition that by demonstrating the appropriate behaviour and subsequently behaving like a business leader, the transmuted CIOs are able to create powerful relationships with executive peers and increase their chances of being trusted with additional responsibilities. In other words, the behaviour exhibited by transmuted CIOs has a positive impact on role demands.

Empirical data suggests that by behaving as business leaders and demonstrating leadership capabilities, the transmuted CIOs gain the trust of their executive peers, a

critical element to being invited to participate in business critical discussions. As suggested previously, the transmuted CIOs are heavily involved in role making.

6.4   Implications of the Research

When reflecting upon the implications of this research study, it appears that it has implications for both the CIO literature and the role theory framework. The aim of this PhD research study was to understand from an internal perspective how the CIOs perceive their role and contribution within their organisation. McLeod et al. (2005) identified this research gap and suggested that whilst much research has been focusing on the CIO role, there have been few studies concerning how the CIOs themselves perceive their role and the future of the CIO. Sojer et al. (2006) assert that researchers ought to consider a new definition of the CIO role and present new role models.

6.4.1   Implications of the research on the CIO literature

As reflected in the discussion chapter, this research study enabled the opportunity to confirm and/ or refute some of the conclusions drawn from previous studies on the CIO role. However, the researcher believes that the key differentiator of this study remains in the two emerging models which improve our understanding of the CIO role. Empirical data revealed that it is the behaviour and mindset of the individual that determine what kind of CIO an individual is, or whether this individual should be relegated to the role of IT Manager. However, throughout the CIO literature, very few studies with the exception of La Paz et al. (2010), Edwards et al. (2009) and Peppard (2009) acknowledge the few distinctions between the CIOs who perform their role in a holistic manner (transmuted CIOs) and the individuals who are yet to go through the mental process and mindset changes that are presented throughout this study (abeyant CIOs). It is believed that the concepts of transmuted and abeyant CIOs and this terminology can be adopted by other academic researchers conducting research in this field. It is however interesting to note that very few studies that acknowledge the differences in the profiles of CIOs have been

published over the last couple of years, which therefore reinforces the relevance of the research study.

From the perspective of the CIO, this research study also addresses fundamental questions, such as; the amount of technology savyyness required to perform the CIO role, the importance of leadership in the CIO role, the capabilities required for involvement in corporate strategy and boundary spanning activities, and the evolution of the CIO role. It is also posited in this study that the transmuted CIOs and ghost leaders (Lee-Davies et al., 2007) share a number of common characteristics.

Finally, by using Stewart's (1982) demands, constraints, choices model, the researcher was able to highlight and map the key components of CIOs' environment (Figure 6.5).

Figure 6.5: The CIO Environment
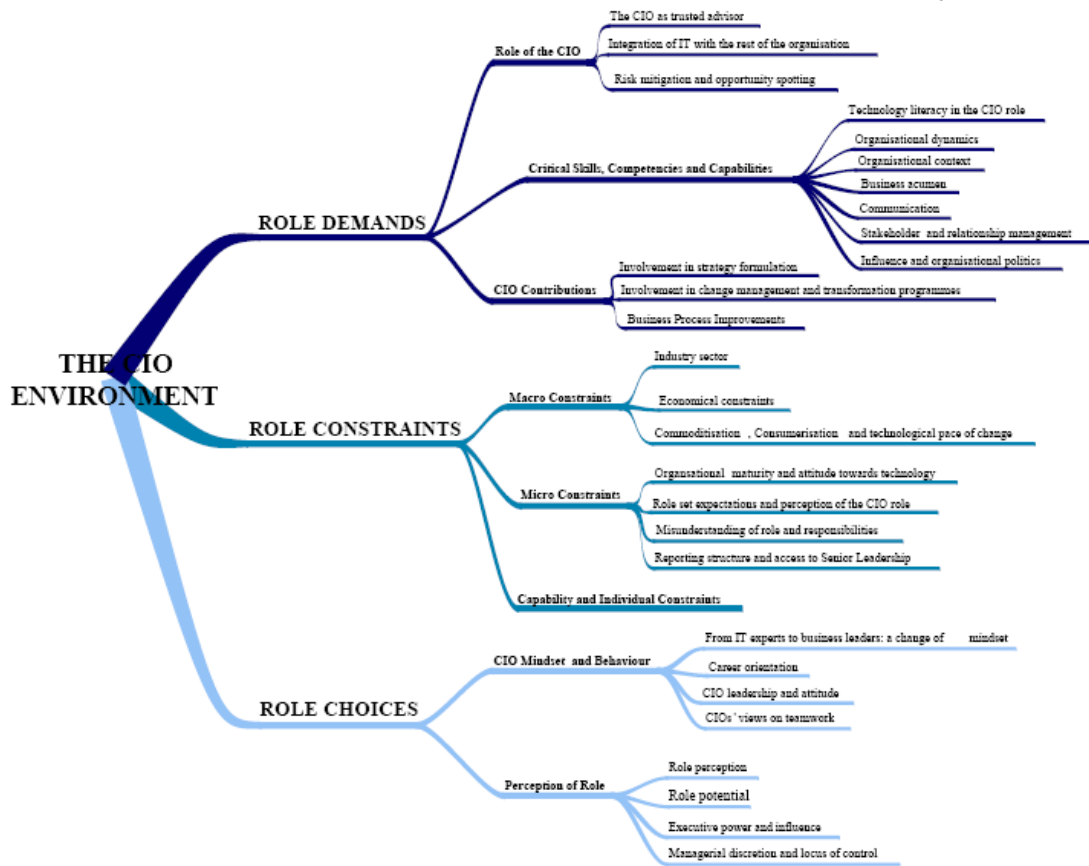
Source: Compiled by the researcher

6.4.2   Implications of the research on role theory

In addition to the various contributions to the CIO role literature, the researcher believes that this study contributes to the role theory framework in several ways. By combining various role theory concepts with empirical data, the researcher was able to generate a number of propositions, contributing therefore to the development of the role theory.

For example, it was posited that:

- The transmuted CIOs are heavily involved in role making.
- A link exists between the CIO's expectation of their role and the role set's expectations of the CIO role.
- The CIO's role behaviour and role perception have an impact on the demands and constraints of the role.
- The abeyant CIOs are more inclined to role ambiguity and role conflict than transmuted CIOs.
- The transmuted CIOs are more likely to possess a higher level of managerial discretion, stronger perception of managerial power and to exhibit characteristics of transformational leaders.

In addition to the generation of new theory directly relevant to the CIO role (Figure 6.6), the emerging models developed in this PhD thesis represent an attempt at re-grouping together several concepts and theories from various aspects of the role theory framework.

Figure 6.6: Implication of research on role theory
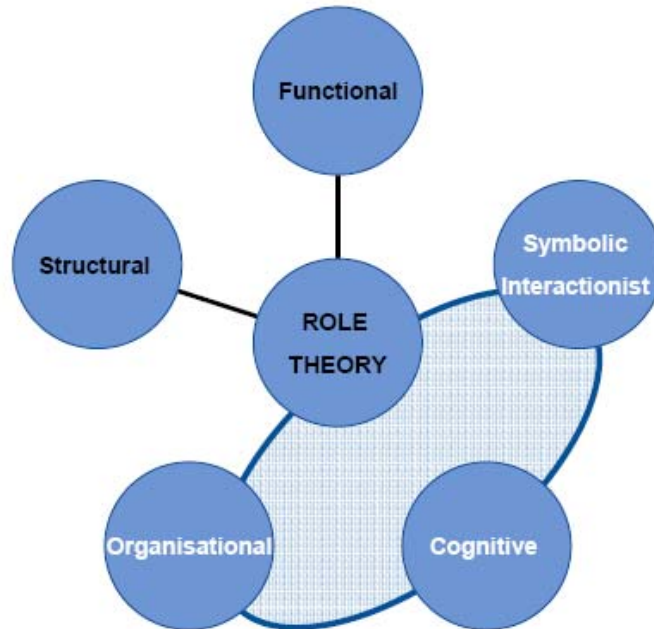
Symbolic interactionist role theory

As suggested by Biddle (1979) and Breese (1997), the interactionist perspective is recognised as being a more dynamic interpretation of roles, where roles are created through the interactions with others. As noted by Fondas and Stewart (1994), it is suggested in the symbolic interactionist perspective that role expectations and behaviours are constantly re-adjusted in a dynamic process of negotiation and mutual influence between job holders (in this particular case, the CIO) and role senders (executive peers). It is assumed that not only both parties send and receive messages, but also that job holders consistently attempt to reset the expectations so that these are in line with the job holder's own preferences.

When reflecting upon the emerging models, one can notice the influence of the symbolic interactionist perspective. In both the transmuted and the abeyant CIO role models, it is

posited that the interactions between the CIO and members of the role set, play a critical part in determining the demands and constraints existing within the CIO environment. It was also demonstrated in the case of the transmuted CIOs that, through interactions with key members of the role set, the perception they have is most likely to increase the CIOs' executive power and managerial discretion, thus enabling transmuted CIOs to be involved in role making. One cannot ignore the similarities between the above characteristics and some key aspects of the symbolic interactionist perspective, which places an emphasis on micro-scale social interactions.

Cognitive role theory

Both emerging models also have similarities with elements from social cognitive theory. As noted by Biddle (1986), the focus of the cognitive role theory is on relationships between role expectations and behaviour. In the context of this study, empirical data suggests that there is a relationship between the role demands and behaviour. It was demonstrated in the transmuted CIO model that the involvement of individuals in large business projects has an impact on their behaviour of and they are more likely to be perceived as business executives.

It is also posited in the discussion chapter, that there is a link between the role set's expectations of the role of a CIO and the behaviour of the CIO. When presenting the abeyant CIO model, it was suggested that the perception of the role of the CIO is very much likely to influence the CIO role demands, thus creating a situation where the activities of the CIO are limited, preventing therefore them from gaining crucial business exposure. It is the context of the abeyant CIO, where there is a direct relationship between role expectations and behaviour.

Organisational role theory

Finally, as demonstrated in Figure 5.1 and Figure 5.2, both emerging models use elements of Stewart's (1982) demands, constraints, choices model. Kahn and Katz (1978:

219) note that the role theory framework is a useful framework 'for linking the individual and organisational levels of research and theory'. As suggested by Petrovis (2006: 13), in the organisational role theory, roles are viewed as 'a pattern of behaviours associated with an individual occupying a particular position/ job within the structure of the organisation, which links the individual to their work group in order to perform the assigned organisational tasks'. In the context of this study, Stewart's (1982) DCC model was used extensively and its relevance is highlighted in both emerging models.

6.5   Evaluation of Research Quality

The aim of this section is to evaluate the quality of this research study. As asserted by Miles and Huberman (1994), the question of quality and rigor in qualitative research strategy has been subject to much debate. Scandura and Williams (2000) suggest that appropriateness and rigor of research methods are important factors in increasing the impact of studies in the management field.

Flick et al. (2004) inspired from contributions from Kirk and Miller (1986); Lincoln and Gruba (1985); Miles and Huberman (1994) argue that there are five quality criteria for evaluating qualitative research studies:

  – Objectivity/ conformability
  – Reliability/ dependability/ audit ability
  – Internal validity/ credibility/ authenticity
  – External validity/ transferability/ fittingness
  – Utilisation/ application/ action orientation

Table 6.2 presents an evaluation of this study in regards to research quality criteria proposed by Flick et al. (2004), a process also known as operationalisation of qualitative inquiry.

Table 6.1: The operationalisation of the qualitative inquiry

Quality criteria	*Operationalisation process*
Objectivity/ conformability	The research process has been documented in the methodology chapter of this PhD thesis, including justification of ontology and epistemology positions and logic of inquiry. Issues such as; potential bias, conflict of interest and research validity have also been addressed in the methodology chapter of this PhD thesis.
Reliability/ dependability/ audit ability	This study followed a strict process set by academic standards which included a thorough literature review, identification of gap and data collection/ data analysis choice of methodology. Data was collected via 25 in-depth semi structured interviews with CIOs', spanning across 14 industries, including participants from private, public and not for profit sectors. Key theoretical concepts have been used throughout this study and allowed for the creation of two emerging models, increasing therefore our understanding of the CIO role.
Internal validity/ credibility/ authenticity	Building of established theoretical frameworks, this study is the first research presenting the role of the CIO in light of its demands, constraints and choices. In-depth interviews with CIOs' have enabled the researcher to identify key success factors in the CIO role and provide potential explanations as for the reasons why some CIOs' are successful whilst others are not. The emerging models presented in the discussion chapter represent a first step to a better understanding of this role which has been drastically changing for the last two decades.
External validity/ transferability/ fittingness	The researcher firmly believes that some of the theoretical work presented in this study as well as the emerging models can be leveraged by other academic researchers and applied to a variety of organisational roles which are currently changing or evolving from their original purpose. Both emerging models can also be used to understand the distinction between CIOs' and other categories of IT Executives.

Utilisation/ application / action orientation	The researcher believes that this study can be used both by practionners and academics. It is anticipated that this study could benefit both CIOs' and aspiring CIOs' and provide a platform for self-reflection and self assessment. From a theoretical perspective, this study presents elements of information that puts forward developments to the role theory framework and the study of organisational roles .

Source: Adapted from Flick et al. *(2004)*

6.6   Achievement of Research Aims

The aim of this last section is to reflect upon the research objectives set in the introduction chapter.

a) *Thoroughly examine the existing literature*

A thorough examination of the CIO literature and the leadership literature is presented in the literature review chapter. The literature review identified critical aspects of the CIO role, such as; the skills required to perform the role, the key criticisms, but also the future of the CIO role. It emerged from the CIO literature that the role has evolved beyond the that of a functional manager to one of becoming a true executive role. Some of the relevant concepts from the leadership and role theory are also presented in the literature review chapter. The researcher feels that this research aim has been achieved.

b) *Empirically assess how CIOs perceive their role and contribution within their organisation*

In-depth semi structured interviews with CIOs have enabled the researcher to understand how the CIOs perceive their role and contribution within their organisation. The data analysis suggested that the CIOs perceive their role in terms of playing the position of

trusted advisor, risk mitigator, spotting synergies and contributing to the alignment of the IT functions with other organisational functions. This study also suggests that the role of a CIO very much depends upon internal factors, such as; the maturity of the organisation and its board of directors, in addition to external factors, such as; the industry sector and the overall state of the economy. Finally, it emerged from this study that being a successful CIO is very much a matter of mindset, behaviour and role perception. The researcher feels that the above research aim has been achieved.

c) *Explore the importance for CIOs to possess adequate leadership and boundary spanning capabilities.*

In-depth interviews with CIOs suggested that they are very much aware that their role has drastically changed and evolved outside of the original role scope. The CIOs realise that in order to be successful it is necessary to obtain more than the technical abilities. They suggest that successful IT executives go through a self reflection journey during which their mindset and behaviour evolve. The CIO participants cited leadership, stakeholder management and influencing as the most important capabilities to be successful in this role.

d) *Propose a new model to understand the CIO role*

In addition to the emerging models presented in Section 5.5, it is believed that the propositions developed in this conclusion chapter contribute to a better understanding of the CIO role. This final objective has therefore been achieved.

6.7   Chapter Conclusion

This research conclusion chapter has highlighted the main findings of this PhD thesis and presented the implications of this research on the CIO literature and the role theory literature.

This chapter enabled the researcher to develop a series of propositions that, complement the CIO role models presented in the previous chapter, evaluate the quality of this research study and reflect upon the achievements of the research aims presented in the introduction chapter.

The following and remaining chapter of this PhD thesis presents the contributions that this study has made to the various fields of research and it addresses some of the limitations. The researcher will also highlight areas for further investigation.

CHAPTER SEVEN: RESEARCH CONTRIBUTION

7.1   Chapter Introduction

The final chapter of this PhD thesis aims to demonstrate the originality and key contribution that this inquiry into the role and contribution of CIOs, provides to the academic field, but also to the practitioner community. As highlighted on several occasions throughout this inquiry, this doctoral thesis first and foremost addresses a pertinent observation by McLeod et al. (1997:5) who when reflecting upon the CIO literature noted that there have been few studies concerning how the CIOs themselves perceive their role and their future. Several studies pertain to urge researchers to increase the scope and depth of studies on the CIO role and develop additional role models (La Paz et al., 2010; Edwards et al. 2009; and Peppard, 2009). It is believed that this study provides an additional perspective into this role and that it is the first to present how the CIOs' perceive their role and to demonstrate how critical role choices are in the enactment of the CIO role.

This research contribution chapter is composed of several sections. Firstly, it is the researcher's intention to highlight the contributions of this study to knowledge, theory and practice. The second section of this chapter will be entirely dedicated to the limitations of this study and provides an opportunity for the researcher to reflect upon certain issues, such as; any potential bias, an alternative approach to research methods and the selection of research participants. Finally, this research contribution chapter concludes with a personal reflection section on this PhD study.

7.2   Contributions to Knowledge

Given the lack of clarity surrounding the CIO role in recent years, La Paz et al. (2010), Edwards et al. (2009), Peppard (2009) call for more up-to-date and pertinent CIO role models. The originality of this thesis remains in the fact that unlike previous studies, this inquiry has been conducted with an internal focus that resulted in the CIOs commenting

from their viewpoint on their role and the contribution within their organisation. This internal focus enabled the researcher to gain a tremendous amount of knowledge concerning the role itself, but also on the CIOs' perception of their role. With this in mind, the contribution to the CIO literature occurred on two levels.

Firstly, this PhD research study enabled the opportunity to confirm some of the findings and assumptions that were presented in the literature review chapter. As noted previously in the discussion chapter, a number of studies have focused on various aspects of the CIO role, such as; the skills that are required to perform this role or the different areas where the CIOs can make the biggest contribution. Secondly, this study differentiates itself in the use of Stewart's (1982) DCC model as a guiding theoretical framework that enabled a different approach to the study of the CIO role.

As noted in the conclusion section, it is demonstrated throughout this study that the CIOs are very much aware of the potential of their role, and ultimately perceive their role in terms of being a trusted advisor, risk mitigator and one of spotting opportunities. However, prior to being considered as trusted advisor, the CIOs recognise that there are a number of factors that can restrain CIOs from playing a key role within their organisation. The participants identified three types of constraints; macro, micro and individual. It is demonstrated in this thesis that a number of economic, social and industrial factors can be perceived by CIOs as constraints within their environment. The CIOs argue that phenomena, such as the commoditisation and consumerisation of IT, can at times inflate executive expectations, increase users' frustration and consequently damage the perception and reputation of the IT function. The CIOs identified another set of constraints that for the purpose of this study are described as micro constraints. It was noted that factors, such as; the maturity of the organisation, the attitude of the board towards the acceptance of technology, the senior executives' expectations and understanding of the CIO role, in addition to the hierarchical reporting lines constitute a set of constraints that should not be underestimated by the CIOs.

The CIOs also highlighted another set of constraints, which have been particularly well documented in the literature that consist of individual constraints. Indeed, CIOs recognise that despite possessing the same title, there is an enormous level of discrepancy in the skills set and the individual capabilities of IT executives, which has led to take a keen interest in some of the choices and conscious decisions that successful CIOs appear to make over the course of their careers.

This study also confirms that the success of individuals in a CIO position remains in their perception of their own role, in addition to the individuals' mindset and behaviour. CIOs argue that in order to be perceived as business leaders, they should demonstrate a thorough understanding of their organisation, its key processes and the industry within which they work. The CIOs note that this knowledge often has to be acquired whilst stepping outside of the IT function, in order to gain experience in a non-IT function. CIOs believe that the success of the role remains in an individual's ability to make career choices and conscious decisions that enable them to acquire the leadership capabilities required to perform the CIO role in a holistic manner. The CIOs highlight the importance of treating the CIO role as a leadership role and leading the IT function through organisational change and transformation. CIOs support the idea that if one must lead the IT function, one must also empower one's team and create an environment for personal development.

The CIOs argue that the IT executives' perception of executive power, influence, managerial discretion, in addition to the way they manage their relationships with various stakeholders, plays a critical role in determining the success of a CIO within a given organisation.

This inquiry into the role and contribution of the CIO enabled the development of two models as presented in the discussion chapter. Empirical evidence suggests that an individual's choices are critical to determining which type of CIO an individual will be. The importance of role choices was highlighted previously and constitutes a critical component of both CIO role models that are reviewed in the discussion chapter. This

inquiry concludes that the abeyant CIO model is particularly useful to understand the role enactment of CIOs and IT executives who have not yet made the transition from manager to leader. In this scenario, it is asserted that individuals are the recipient of a role that has already been formulated by the role set, which also determines the level of demands and constraints within the individual's environment. The individual having not completed this journey, as described by Interviewees U and Y, does not feel as though they have the required amount of executive power, influence and discretion to influence the existing demands and constraints in the environment. It is posited in this scenario that it is very unlikely that the CIO makes a significant contribution to the organisation, and consequently struggles to be perceived as a trusted advisor.

In contrast, the transmuted CIO model presents a different theory on CIO role enactment. In this scenario, CIOs have been through a process of self reflection and have made conscious choices throughout their careers that have resulted in them approaching their role differently and being more likely to influence the demands and constraints existing in their environments. It is posited that the CIOs' mindset and attitude, in addition to their perception of their own role enables them to exercise a certain degree of influence over key stakeholders who possess the power to alleviate some of the constraints and change the role demands. The transmuted CIO model suggests that CIOs are not the mere recipient of role set expectations but are involved in role making and this is reflected in their behaviour, attitude to stakeholder management and perception of their own role. It is posited in this scenario that the CIOs are considered as trusted and strategic advisors and are most likely to benefit from higher levels of managerial discretion.

7.3   Contribution to Theory

In addition to contributing to the knowledge of the CIO role, this research study has made a number of contributions to various aspects of the role theory framework. Firstly, as illustrated in Figure 6.6, when reflecting upon the implications of this study on the role theory framework, it appears that the emerging models represent an attempt at merging

several fields of research (organisational role theory, symbolic interactionist role theory and cognitive role theory) together under a common framework.

With the exception of Preston et al. (2008) and Cohen and Denis (2010), few academic researchers have used the role theory concepts to study the role of the CIO. This PhD thesis, through extensive use of the role theory concepts, provides an updated view of the role of the CIO. Indeed, by combining empirical data with concepts, such as; Katz and Kahn (1978)'s theoretical model of role formation, role making (Fondas and Stewart, 1994), role conflicts and role ambiguity (Miles, 1977; House and Rizzio, 1972), the researcher was able to present two research models that complete our understanding of the CIO role. Karahanna and Watson (2006) express the need to pursue a greater understanding of the specific constructs and mechanisms that cause IT leadership concerns. It is believed that both of the research models present CIO leadership in a different light.

The use of boundary spanning literature has enabled the researcher to highlight some of the constraints existing in the CIO role, in addition to presenting some of the skills that the CIOs perceive as critical when working across boundaries. The concepts of role conflict and role ambiguity (Miles, 1977; House and Rizzio, 1972) have also been particularly useful when reflecting upon some of the implications of a lack of role clarity between CIOs and the executive team in the abeyant CIO scenario.

One of the key theoretical contributions of this PhD thesis remains in the use of Stewart's (1982) demands, constraints, choices framework. Wahlgren (2003: 231) highlights the pertinence of this framework in the study of managerial work and suggests,

> *"In my view, this model is best used in qualitative, emic approaches which aim to increase our understanding of managerial work, since the flexibility inherent in managerial work speaks against overgeneralizing. In studying how managers see their work, the research deals with subjective realities, perceptions, and sensemaking".*

7.4   Contribution to Practice

Despite being essentially a theoretical exercise, it was important for the researcher to ensure that this study would still include some elements of practicality and that it would provide CIOs and the aspiring CIOs with a platform for reflection and self-assessment.

As highlighted in the introduction chapter and reinforced in the conclusion chapter, one of the key objectives of this study was to undertake an extensive review of the literature on the CIO role. As noted in the literature review chapter, a significant number of research studies have been published on the CIO role, however, it is the researcher's belief that few of these studies have been made accessible to the practitioner community.

Informal conversations between the researcher and the CIO participants have led the researcher to believe that busy diaries, un-scheduled meetings and urgent matters to attend, too often result in the CIOs not having the required amount of time necessary to keep themselves up to date with academic publications. In addition to this, it is the researcher's feeling that all too often the academic writing styles and publication formats can at times put individuals off exploring the studies published in the academic literature. With this in mind, the researcher believes that providing a thorough, concise and accessible review of the CIO literature and the leadership literature would contribute to a potential increase in the dissemination of academic research within the practitioner community.

Empirical material enabled the researcher to highlight and map the key components of CIO's environment (Figure 4.6), including the key demands, constraints and choices for this role. The CIO success zone model (Figure 6.1) presents a graphical illustration of the various elements that play a key role in the success or failure of CIOs. The researcher firmly believes that illustrating the various constraints and success factors existing in the CIO role can potentially enhance the CIOs' awareness of the importance of the softer aspect of their role and the critical impact that role perception has on the success of any individuals in an IT executive position.

Finally, the most significant contribution of this study to the practitioner community is undeniably the emergent models presented in Figure 5.1 and Figure 5.2. Despite being theoretical models, the researcher believes that both the abeyant and transmuted CIO models can bring an interesting perspective to the CIO community.

It could argued that these models potentially benefit less experienced CIOs who would struggle to identify the reasons behind a lack of engagement from executive peers. The aim of the abeyant CIO model is to provide IT executives with a platform for self-assessment and reflection which could potentially help to understand unfavourable organisational situations.

It is therefore believed that this model could help inexperienced CIOs to:
- Reflect upon the current demands and constraints existing within their role.
- Reflect upon their current contribution to the success of the organisation.
- Reflect upon the current mindset and behaviour and assess its appropriateness within the current organisational context.
- Reflect upon the current expectations of the role of the CIO within the organisation.
- Identify stakeholders which could help alleviating some of the role constraints and help build their credibility within the c-level suite.
- Help producing a self assessment and gap analysis of current skills against required skills.

The transmuted model could theoretically be used by less experienced CIOs in order to understand what the critical success factors are to perform this role. It could also be used by successful CIOs to reflect upon their strengths and weaknesses, a process that may be very useful when moving to the next stage in their careers.

The researcher believes that the transmuted CIO model could allow IT executives to:

- Reflect upon the current perception of the IT function within their organisation.
- Reflect upon current state of relationships with key stakeholders. This process would allow individuals to identify strong relationships but more importantly to identify stakeholders with whom the relationship could potentially be strengthened.
- Reflect upon possible professional/ personal choices that would enable them to grow both on a professional and personal level.

By providing a detailed list of the CIO role demands, constraints and choices, in addition to key success factors, it is believed that this study could also help aspiring CIOs in providing them with an objective and undistorted view of the role of the CIO that could prove useful to reflect upon one's career choices and career aspirations.

Finally, on a more practical level, this study also contributes to the field of research methods in providing a practical approach to elite interviewing. Further information about the approach to elite interviewing contained within this study is available in Kakabadse and Louchart (2012).

Table 7.1 highlights some of the theoretical, methodological and practical contributions that this PhD thesis brings to the study of the CIO role.

Table 7.1: Research contributions table

Contributions	Confirmed	Added	New
Theory	Importance of organisational context in the success of CIOs	Interpretation of CIOs' perception of their own role	Importance of role choices in the success of CIOs
Method	Relevance and pertinence of qualitative research in managerial studies	Use of Stewart's (1982) demands, constraints, choices framework	Combination of various concepts from the role theory framework
Practice	Obsolescence of current CIO role models	Platforms for self-assessment and reflection	Importance of role making and role choices is highlighted

Source: Compiled by the researcher

7.5   Research Limitations

As noted in the conclusion chapter of this thesis, Flick et al. (2004), Lincoln and Gruba (1985) and Miles and Huberman (1994) suggest that the quality and pertinence of a research study ought to be evaluated against a number of criteria. The aim of this section of the research contribution chapter is to acknowledge and reflect upon a number of limitations that may circumscribe some of the findings highlighted in previous chapters.

The first limitation of this research study remains with its methodological choices and more precisely with its research philosophy. As demonstrated in the methodology chapter, it is the researcher's belief that in order to achieve the research objectives set in the introduction chapter, an interpretivist approach was the most appropriate

philosophical position to adopt. Saunders et al (2003: 84) suggest that the role of the interpretivist is to 'seek to understand the subjective reality of those that they study in order to be able to make sense of and understand their motives, actions and intentions in a way that is meaningful for these research participants'.

However, when reflecting upon the inductive logic of inquiry, Blaikie (2007) suggests that adopting an inductive logic of inquiry involves a process of interpretation and could potentially threaten the objectivity of the research study. Unlike with positivist studies where 'the researcher is independent of and neither affects nor is affected by the subject of the research' (Remenyi et al. 1998: 33), it is near impossible, despite the researcher's best effort, to remain objective to prove that the researcher was not influenced in any way throughout the research approach depicted in Figure 3.2.

Moreover, it could be argued that the researcher's affiliation with the Gartner Executive Programs may have played a certain degree of influence some of the findings of this research study. Kakabadse and Louchart (2012) recommend that prior to embarking upon conducting a study that would require the input from elite participants, one must examine the strength of one's personal and professional network and assess the likeliness of gaining access to the elite participants. As demonstrated in the methodology chapter, the researcher's privileged position has enabled him to secure the participation of 25 CIOs'. However, it could be argued that the reason these individuals join an executive type of programs, like the one offered by Gartner Ltd, could reveal a desire to develop oneself and an awareness as to the potential of the CIO role. One could also potentially argue that the mindset of these individuals is different to the mindset of CIOs who have made the decision not to subscribe to any executive program memberships. Despite being a potential limitation, there is no empirical evidence to establish the existence of such a relationship.

It is the researcher's belief that some of the limitations of this research study, in terms of the choice of research participants, are not dissimilar to the limitations of other managerial and leadership research studies that have made great contributions to these

fields. Sojer et al. (2006) in their study on the hype and reality of the role of CIOs note that there appears to be a discrepancy between theory and reality with regard to the CIO's tasks. Sojer et al. (2006: 6) note,

> *'Very generally, we observed that CIOs' think of themselves as strategy oriented. More than two thirds define "creating value" as the primary task of IT while only roughly a third sees support activities as the foremost duty of IT departments. However, CEOs' have a slightly different opinion on this question and only 56% of them consider IT strategic'.*

Ackroyd and Hughes (1981: 81) remind us of the fact that individuals can lie or 'say things intended to maximise their self-esteem'. Kakabdase and Louchart (2012) argue that a snowballing technique is a particularly effective way of ensuring the participation of a satisfactory number of elite participants, however, as suggested by Tansey (2007) researchers should exercise caution with this method as respondents may suggest interviewing individuals who share similar opinions, or possess a similar mindset. In the case of this study, it is plausible that the CIO participants who were referred by previous interviewees shared a number of characteristics, such as; similar work experiences, mindset, attitudes and perception of the CIO role.

One of the key contributions of this research remains in the elaboration of two models representing profiles of individuals who exercise similar roles but who possess different mindsets and characteristics and ultimately approach their role differently. Table 3.2 indicates that the sample of this study is composed of 25 CIOs both males and females representing 14 industry sectors, but this does not present any information specific to the profiles of the participants. The researcher acknowledges this limitation and recognises that it would have been particularly interesting to ensure that an equal number of "transmuted CIOs" and "abeyant CIOs" were to contribute to the study, however, from a practical and deontological point of view, this simply would not be possible nor would it have been the researcher's intention to make this kind of segmentation.

Blaikie (2007) highlights another potential limitation which characterises the interpretivist position. They argue that it is incredibly difficult for social inquirers to

anticipate how many observations are required before data saturation is reached and the generalisation of knowledge made possible. In total, 25 in-depth interviews with CIOs' have been conducted, which it is believed to be a sufficient number to reach data saturation.

7.6   Further Investigation

Findings from this research study into the role and contribution of CIOs' have created a number of potential avenues for additional research studies. First of all, as noted in the conclusion chapter, it is the researcher's belief that there is an opportunity to use the emerging models presented in Figures 5.1 and 5.2 for future research studies looking into the enactment of roles in organisations. The researcher encourages other researchers to adopt and use both emerging models in different contexts and organisational settings and to test the relevance and usefulness of these models.

7.6.1   CIO leadership capabilities assessment

It appears that CIOs are very much aware of the importance of possessing the attitude and characteristics of executive leaders. Waller et al. (2010) suggest that there are seven leadership skills that the CIOs ought to possess to drive results. It is believed that additional research into the current leadership capabilities of CIOs' could prove useful. Whereas, it is argued that the theoretical framework presented in this PhD thesis could be used by IT executives as a platform for self assessment and reflection upon the direction of one's career, it is believed that the elaboration of a framework to assess the scale of the leadership aptitude and capabilities of IT executives, similar to the one developed by Collins (2001) would complement the initial framework developed in this PhD research.

7.6.2   The role of EQ in building strong relationships

A number of participants highlighted the role of emotional intelligence in the success of CIOs, but also noted that individuals working within the IT function appear to be less

familiar with this concept and often fail to appreciate the importance of the role of emotions in building strong working relationships. Kaarst-Brown and Robey (1999) acknowledge of the cultural differences existing between individuals in the IT function and individuals working in other functions. The researcher believes that it would be interesting twelve years later to establish whether there are still significant differences between individuals working within the IT function and other individuals, and if there are any differences, could these partly be generated by a different approach to emotions and variations in emotional intelligence. It is interesting to note that Grant and Hutson (2009), Chatham (2005) and Jablokow et al. (2010) also acknowledge that the importance of cognitive abilities in the context of the CIO research has been neglected over the years and that researchers ought to consider focusing their research efforts on this aspect of IT leadership.

7.6.3   CIO role perception: The perception of the role set

Many studies have focused on the relationship existing between CIOs and CEOs (DeLisi et al. 1998; Jones et al. 1995; Feeny et al. 1992). For the purpose of gaining a 360 degree view of the CIO role, the researcher would encourage the development of additional studies aimed at empirically assessing the perception of the CIO role, not only from other c-level executives but from individuals working alongside the CIOs and who currently report to the CIOs. It is believed that by doing so, clearer insights into the strengths and weaknesses of the CIOs would be gained and this ultimately would result in a better understanding of the areas where the CIOs should develop their skill set.

7.7   Personal Reflection

It is difficult to believe that it has been nearly five years since I approached the University of Northampton and Professor Kakabadse with the idea for this study. After thoughtful consideration, I made the decision to embark on this PhD research whilst maintaining my full-time job within the Gartner Executive Programs, a daunting and challenging task, which many believed to be impossible.

For the last four years, I have wondered what it would be like to write this personal reflection section, knowing then that most of the analytical and theoretical work would be complete, however, I must confess that I am doing so with mixed emotions. On the one hand, there is no doubt in my mind that I will greatly enjoy not having to study after my day's work and to come home at a time that most people would consider ridiculous, nor will I miss the evenings spent sitting in the rather cold Founder's Library at Royal Holloway University. Ever since completing an MA at the University of Northampton, I have known that I had to complete a PhD and despite numerous opinions, I now have the certainty that this was one of the best decisions that I have ever made. Completing a PhD is a once in a life time intellectual challenge, and this PhD thesis has been a journey filled with excitement, exhilaration, stress, doubts and panic but more importantly, this PhD research has brought me an amazing feeling of personal achievement.

This doctoral study has enabled me to grow on a professional level but also on a personal level, and I have only realised this change recently when Professor Kakabadse candidly pointed out to me, during one of our sessions, that I am a different person than I was five years ago when I walked into her office. I have acquired a great amount of knowledge over those last four years, and it is hard to make a detailed list of all the learning outcomes of this journey. However, I have had the opportunity to develop new skills, interview a number of senior executives, reacquaint myself with theoretical concepts, discover with delectation the world of epistemology and ontology and to gain my first experience in academic writing and publishing, which I am now looking forward to continuing with the dissemination of key research findings within the academic community.

7.8   Chapter Conclusion

This chapter marks the end of this PhD thesis. As noted throughout this last chapter, this PhD thesis has made a number of contributions to the knowledge surrounding the role of the CIO, but also to the theory and practice. This contribution chapter also provided the researcher with an opportunity to reflect upon the potential limitations of this study and the personal journey that this PhD thesis has represented. Finally, the researcher presented three areas of research that could potentially bring extra clarity to the role of the CIO.

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APPENDIX A – INTERVIEW PROTOCOL

This research study is carried out by Eddy Louchart in conjunction with the University of Northampton for the award of a Doctorate (PhD) in Leadership.

Research Aim

A thorough examination of the relevant literature revealed that recent organizational and technological changes have affected the role of the Chief Information Officer (CIO). The aim of this research is to ascertain how CIOs perceive their role and contribution within their organisation. Upon completion of this research study, a new model to understand the CIO role will be proposed.

This research project provides CIOs with the opportunity to comment on their role and contribution. Participants will be specifically asked to comment on the following topics:

1.   *Role of the CIO in organizations today*
2.   *Organizational challenges to overcome to be an effective CIO*
3.   *Expectations of executive peers on the role IT and of the role of the CIO*
4.   *Skills and Qualities of effective CIOs*
5.   *Importance of Leadership*
6.   *Future of the CIO role*

Interview Format

Length: 45-60 minutes

Recording: Yes (with participants' permission)

Interview format: Semi-structured

Telephone / Face-to-face

Informed Consent

This research study is conducted in line with section 3.2 of The University of Northampton's code of ethics. All data will remain confidential, participants will remain anonymous.

Upon Completion

Each participant will receive:

•   Executive Summary highlighting the key findings of this research study.

•   Copy of any article published in academic journals as a result of this research study.

APPENDIX B – RESEARCH STUDY QUESTIONNAIRE

Thank you for your time today. Just to give you a little bit of background about this research study. I am currently studying for a PhD at the University of Northampton. I have had the opportunity to work with CIOs for a number of years now, and I am particularly interested in the way the CIO role is evolving but more specifically how CIOs perceive their role and contribution within their organization. This is what I would like to discuss with you today.

Before to start the interview, there are a couple of things that I would like to mention. If that's okay with you, I would like to record this interview, this is purely for data analysis purposes, this conversation will be kept confidential and your identity will remain anonymous. You will be referred to as Interview x.

This is more of a conversation than a formal interview. There are two parts to this conversation, the first part is about the role of the CIO today and the second is more about your perception: what is it like to be a CIO, what does it mean to be a CIO.

Role of the CIO

1.   What would you say is the role of the CIO today?

2.   The CIO role has been in constant evolution over the last years, how do you think the CIO role will evolve in the future?

3.   Do you think that some of the new service delivery platforms like cloud computing will change the role of the CIO? In which ways?

4.   Talking about the title CIO: Would you say that what your title reflects what you do? If not which title do you think would suit you the most?

5.   To stay on the topic of the evolution of the CIO role. As the CIO role evolves, do you feel that you are in control, that you are shaping the way your role is evolving or do you feel like you go with the flow and tend to get carried along?

6.   In which areas do you think CIOs make the biggest contribution to the success of their organization?

7.   Do you believe that CIOs should systematically be involved in strategy related activities? Why?

Perception

8.   To which extent do you feel that you as a CIO can influence some of the top decisions that are made within your organization?

9.   Do you feel that as a CIO, you have the same level of power as your executive peers?

10.   Do you sometimes feel that there is a lack of clarity regarding the role that you are supposed to play?

        a.   How do you manage the different expectations of your role?

11.   Quite often I hear that being a CIO can be a tough and challenging role. What do you think is the single biggest challenge when working as a CIO?

12.   What would you say makes a good CIO (in terms of skills, mindset…)?

13.   As a CIO, how do you approach learning and personal development?
(what would you need to improve to be even better than now?)

14.   Would you see yourself as an IT executive or a business executive?

15.   What would you say makes a good IT leader?

16.   Do you believe that CIOs should be considered as potential candidates for CEO roles?

Researcher: Good afternoon, It's Eddy Louchart with the University of Northampton.

Interviewee W: Hi, Eddy.

Researcher: How are you?

Interviewee W: Yes, I'm fine thank you. I'm sorry I'm a few minutes late. I've got too many back to back meetings today.

Researcher: That's okay. Thank you very much for joining me today. It's much appreciated. As I told you in my email, I'm currently doing a part-time PhD at the University of Northampton. I've worked with CIOs for over four years and one of the things that I'm particularly interested in is trying to understand how CIOs perceive their own role within their organisation. So it's not really an interview per se, it's more of a guided conversation really. I don't know if you've noticed when you joined the teleconference but I'm actually recording this conversation, would this be okay with you?

Interviewee W: Yes, that's fine. That's not a problem for me at all, that's fine.

Researcher: It's basically just for data analysis but the study is completely anonymous and confidential.

Interviewee W: Okay, that's fine.

Researcher: One of the first questions I would like to ask you just to start this conversation is around the role of the CIO. There have been lots of changes occurring over the last few years or over the last two decades I would say. We've seen a shift from a focus on operations and tactics to a more strategic role. And the first question I would like to ask you if I may is what would you say is the role of the CIO today in an organisation?

Interviewee W: There're very much two and I would say equal parts to the role. There is the operational to keep the existing systems running, to keep the infrastructure running, to keep the applications running, to make sure they're operating as efficiently as they could, as effectively as they could, delivering-, you know, meeting all the SLAs and making sure the KPIs are produced monthly. So that's the operational side. The other one is the strategic side. However, before I get onto the strategic side which I think is as important if not more important, if a CIO is failing to deliver the operational, they're not going to be invited to the table to discuss strategy if operationally they are failing. So-, and from my point of view, my experience here has been-, when I joined, the department was not viewed as delivering operationally. Actually, that was a misguided view. It was probably half right but also half wrong. We weren't measuring properly. So there was a lot of noise about it not delivering operationally. So we-, so I did the obvious. I started measuring SLAs, I started showing-, delivering sort of KPIs every month and showing that we were

okay. But also we tightened up, you know. So the basics had to work, the email had to work, the network had to work, the applications couldn't fall-, you know, corporate applications couldn't fall over every five minutes. So once you get through that and you build up an element of trust, then effectively you've got a seat at the table to discuss strategy and the conversation changes as a CIO because you stop talking about screws and widgets and start talking about how IT can help the business. And that's a completely different discussion that starts there and I think that's far more important. So that's where I see-, over the three years that I've been here, that's where my role has changed. Now I have strategic discussions with the executive and other senior managers across the organisation, not operational discussions. But if suddenly the operational side started to fail, then again strategy goes out of the window and suddenly we're talking bits and bites and not strategy.

Researcher: That has come back on a regular basis in my conversations with CIOs. It seems important to actually keep the lights on, make sure that you get your basics right and then that's when you can start building trust and being invited to the executive table.

Interviewee W: I'm not part of the executive team, nor do I feel here I need to be. I have a voice. I have-, my boss is a CEO. So he is on the executive team, he represents IT there. However, I also both with the previous CEO and with the current one, I have a direct line to them so they don't feel they have to go through my boss for everything. Sometimes if they want a quick update, they will come directly to me or if they want a discussion they'll come directly to me. So although I don't have a seat at the executive table, I have developed-, and that's important to develop a good working relationship with the CEO. So this-, certain CIOs have this obsession that they have to be there on the board sitting at the executive table. I don't think that's absolutely necessary in every organisation. I have a boss that is very supportive but where necessary the CEO will come to me and have that discussion directly with me and I sit on committees where strategy is discussed. There's also a skill to being a CIO which I think a lot of people miss and that is we're an unusual department in that we have to understand the whole business. There're very few departments that have to understand the whole business and the way it works as part of their job and I think we do and I think that's a skill that's underestimated amongst a lot of the senior executives, just how much we understand the business or have to understand the business in delivering our job.

I actually haven't reported to a CFO for 15 years. I've reported to various-, in previous lives, I'm reported to the global CIO. In two jobs, I've reported to the global CIO and then I've reported to various sort of COOs and in my last job I reported to the chief executive. So I haven't reported to a CFO in a long time. I-, that's a historical reporting line. I'm not sure that's-, I don't see that as being as actual as it is unless you tell me otherwise. Obviously, working for Gartner, you may have a different perception. But I'm seeing that as a bit old fashioned, that perspective now. I think we [CIOs] have certainly got more in common with the COO than we have with the CFO, and actually in this current climate where I'm asked to deliver a 15% budget cut for next year, it's actually better reporting to the COO because I'm talking strategy as well as numbers. If you report to the CFO, unfortunately, you start to talk numbers only. There's no strategic discussion.

It's all about numbers. And actually I can deliver the numbers but that has a strategic impact and the COO is more inclined to sit and listen to me on what the impact might be to levels of service and everything else, whereas the CFO just wants the bottom line to add up at the end of the day because that's what they're reporting to the CEO on. That's a very personal view of mine but-

Researcher: There're still a large number of CIOs who are actually reporting to the CEO. But it appears from conversation with CIOs that what matters most is the level of understanding of the CFO when it comes to IT, the level of maturity in the organisation and how IT is perceived within the organisation.

Interviewee W: Well, it would be I think very negative for me to report to the CFO here. He has virtually no understanding of IT and he's just concerned about the numbers. So I'm in a much stronger position reporting to the COO and having this informal direct link with the CEO, which works very well.

Researcher: Do you feel that as a CIO you have the same level of executive power as some of your peers like the CFO or the COO?

Interviewee W: No, definitely not. I worked in the private sector before I came to xxxx and the people who have most clout on the board would be the sales and marketing-, would come first. Then IT would come a very-, IT would come sort of third because second would be HR I think and then a poor third would be IT. So that's-, certainly in my last two roles, that's where IT has sat. Although it's been on the executive board, it's sat a poor third.

Researcher: How do you see the role of the CIO evolving in the future? How do you see the CIO role in the next few years?

Interviewee W: It will evolve and I think it depends on the organisation. In my opinion, if the CEO views the IT function as being a strategic contributor to the business, then the CIO role is completely different to if the CEO still views them as just delivering equipment and some software. If they view it as a purely technical function, then that's a hurdle that the CIO has to overcome. A lot of it depends. Yes, it depends on us as CIOs and we need to talk business. We don't need to talk nuts and bolts and bits and bites. We need to talk business. If we talk business and show we understand business, then I think we'll be more readily accepted. So I think it works both ways. We have to show that we're part of the business and understand the business. But, equally, the CEOs have got to stop thinking of us as technicians. And so I think it's a two way thing. But we don't do ourselves any favours when we stand up in presentations and speak in language that the business doesn't understand. The language I use when I speak to a group of IT directors or CIOs has got to be different to the language that I use when I speak to a group of, you know, sales and marketing and operations staff because it's a completely different discussion. It's a business discussion. But if I can't have that business discussion, then I'm not going to win as a CIO really. So I think it's both ways. I think CEOs have changed a lot faster. I think certain CIOs have taken a lot longer to get there.

Researcher: From conversations with other CIOs, it was suggested that often some CIOs tend to be a bit maybe set in their own ways. They like the technical aspect of their role and are a bit reluctant to move away from the technical side to be more involved more in the business and the strategic side of their role.

Interviewee W: Yes, that's very true. And I think this is where CEOs and COOs can change things by forcing the CIO, the IT director, to be more involved in the business. And if they don't want to be, then possibly they've got the wrong person. To me, there is a problem in IT departments anyway and this is a universal problem and this one is difficult to fix and I'll give you this example and this goes all the way up to the CEO. Sometimes as senior IT managers we have fantastic technicians working for us, fantastic senior technicians. Now you get to the point where the only way we can give them more money for what they do is to promote them and promote them into a management position. You've got senior technicians going up and up the ladder and actually they're not interested in the business. Their first loyalty is towards IT. And this is a big one. Another discussion I've had with people on many occasions is where if you actually talk to a senior technician in IT their first loyalty is to their profession and not to the business they're working in. And that's the big difference I think between a senior IT manager whether they be a CIO or a unit head. Their first loyalty has got to be to the business, not to the technology or to the IT profession. And I think that's what makes the difference. And I think to an extent-, I mean I was lucky in a way. I worked for very marketing driven organisations. I worked for Xxxx in the UK and I worked for Xxxx internationally, very marketing driven. To understand the business, I actually went out on the road with a sales rep. I made it a point of understanding the products so I could talk about the business and the issues that they had. That was my decision. A lot of CIOs don't make that decision and I think, you know, then they can't make the leap into understanding and strategising about the business.

That's why in my last job I took a job which was smaller in terms of IT but gave me a position on the subsidiary board because I wanted that experience. I wanted to be able to challenge my peers and discuss with my peers about the business, not about IT but about the business and show them how IT could help the business. That's what motivated me.

Researcher: Would you consider yourself as an IT executive or a business executive? there's no right or wrong answer but I am interested in your views on this.

Interviewee W: For me, it's a business executive with IT experience rather than an IT executive. There's this talk of what they call hybrid managers who are both technicians and businessmen. Actually, I'm not sure. I don't consider myself a technician anymore. I know enough about technology to be able to make suggestions about strategy we should take, enough about technology to challenge my senior managers on suggestions they bring to me. But am I an expert in networks, am I an expert in software development? Not anymore, I've moved away from that. I'm much more in tune with the business and I have a much greater understanding I think of where we as a xxxx, as an organisation are

going, the difficulties we're facing, the external factors that are influencing us. So, yes, I consider myself a business executive with IT knowledge, with expert IT knowledge.

I started as a programmer. But 27 years ago when I was a programmer, when I finished being a programmer 25/26/24 years ago-, things have moved on in technology. I understand where it's moved in technology. But could I programme again? No. And that's not what drives me as a CIO is not the technology. That's incidental. It's not necessarily using the latest technology. For me, it's to use tested technology that's not going to break down because I'm not in the area of wasting money on bleeding edge technology. It's to use new technology that's tested and sound in a more innovative way. But actually for me my biggest turn on is implementing solutions. It's not whether my department is 50 strong, 70 strong or 200 strong. It's not about how big an empire I have. It's delivering solutions for the business so the business can go forward. I'll give you an example. We had a situation where-, we as xxxxx, we're not xxxxx. We're fairly low down on the league tables. And one of the issues for us is progression, progression of our xxxxs. Now that has two impacts on our business. One, if they don't progress we look bad in the league tables which is bad overall as a xxxx measure. And two, if they don't progress we don't get the funding from the government. So we're losing out on funding. So we need to analyse this. We've just delivered a system using business intelligence tools from Cognos to deliver reports to the faculties so they understand how the progression is going course by course, year by year, so they start to pinpoint what the problem is. Is it the xxxxs they're taking, is it the courses they're running, is it the academics that are teaching it. So they're starting to get to the root of the problem. Now that for me was one of the biggest thrills, to put that in, not whether I use Exchange 2003 or 2007. I don't really care about that. I know enough to know the difference between Windows XP and Windows Vista to know Vista has been an absolute dog. I know that but I don't need to know all the reasons why it's been a problem. But for me, you know, I've addressed a business problem. I've put a solution in that's going to help this xxxx. So that's what turns me on, not the technology anymore. And I think if you talk to most CIOs I would think that's the picture you'll get. Yes. There are still some CIOs, certainly in the public sector-, now this is interesting-, where they judge their success by the size of their department or the size of their budget and not by what they deliver. There are far fewer of those in the private sector because they wouldn't survive very long in the private sector but unfortunately I still see that in the public sector. I don't know why. I don't know why there's this divide but there seems to be.

I think of myself as a business executive with IT knowledge. Going back, having done all that talking, yes, I still think that. I haven't changed my mind.

Researcher: We talk quite often about different areas where CIOs can actually make a real contribution to an organisation. In which areas do you think CIOs can actually make the biggest contribution to their organisation?

Interviewee W: Yes, there're four or five areas. One is business process and challenging the organisation about the way it does things and the way it's done things for years. Do we still have to do it this way? So business process is a big one and it's a big one here.

Information management – I think, you know, it's a cliché that we're data rich but information poor but it's true. And it's actually-, you know, I remember the days of EIS systems and everything so grand ideas about management information but no tools to deliver it. Now the tools are here we can start to deliver relevant information management to make good decisions. So that's another area. I think we need to deliver efficient systems and start to challenge the systems we've got. Yes, are they efficient but actually start to challenge the people. Are we using these systems we've got in the best possible way? We've had a lot of criticism about one of our corporate systems here. Actually, there's nothing wrong with our system. It was the way we were using it so we've had an implementation project where suddenly it's not about re-implementing the system. It's about looking at the business processes and how we can use the system more effectively and at the same time make our processes less cumbersome. So, yes, I think business processes, management information and efficiency of systems. Those would be the top three ways in which we can I suppose help the business. And having worked both in the private sector and now at xxxx, it goes for both organisations. It's the same thing.

One of the reasons I was employed here was to bring my private sector skills here to make things happen quicker, to make things more effective and to cut out some of the fat that exists in the public sector. But why does it work here? If I'd moved to say a xxxx which was very collegiate in its style and relied on a million committees to make a decision, I think I would have got very frustrated. What attracted me to here is it had not a completely centralised but an almost centralised operation, therefore much more akin to what I'd seen in the private sector. So the transition I made was fairly easy. Had I gone to say xxxx or xxxx, that transition would have been a lot more difficult because there's a completely different style there. So there is a difference between us and say one of the older type of xxxx.

Researcher: Would you say that something that attracted you was the fact that you probably have more freedom to make your role evolve as you see fit or to have a bit more flexibility in terms of what you actually deliver as a CIO?

Interviewee W: That was a big advantage. One of the attractions here was when I joined my boss-, he's got five direct reports now. When I joined, he had eight direct reports so I guessed I would have a certain amount of autonomy to start to deliver. Although I wasn't on the executive team, I probably had a freer hand in delivering because my boss couldn't-, with eight senior managers or eight directors reporting to him, he couldn't actually delve too far into it. So that was an attraction, the flexibility to deliver what I felt was necessary for the business. But equally, I've had to develop relationships with my peers and with other sort of board members to be able to deliver that. So that's been up to me as well, to develop those relationships. So I haven't relied on my boss to develop those relationships, those have been developed by me. So that's another thing that's important I think for CIOs to do. They have to develop those relationships. If they're on the board, they automatically have relationships with the other board members. If they're not on the board, which I'm not here, I have to develop those relationships with the other board members to try and understand what this faculty needs. In the private sector, that would be what this business unit needs as opposed to that business unit. So what does

that division president need that this one doesn't. So am I going to give one solution or do I need to give four flavours of this solution because each of the business units is very different? So it's developing I think-, that's up to the CIO. And I think that's a mark of success if you can develop that relationship, because if you don't then again I don't think you have this seat at the table to be able to discuss strategy.

Trust is a big one because I delayed implementing major software projects for two years here. Why did I do that? I probably couldn't have got away with this in the private sector. The reason I did that is, of my three teams, that one, the software development and the business analysis side was the weakest. We did a lot of work around that. First of all, I started to deliver infrastructure projects on time, on budget and effectively. Then, when I'd built up my sort of software development and business analysis team, I started to tackle some small software projects and, again, delivered them on time, on budget. And slowly slowly we built up the trust here which, for some reason, in the xxxx sector, seems to take longer. We built up the trust and suddenly they're not questioning everything I do. So I now go to committees and get papers through. I get them rubber stamped because there is an element of trust and they're not questioning everything I do. So that's actually-, I think that's one of the most important things. But then don't promise what you can't deliver. If you start to deliver what you've promised and deliver on time and on budget, you know, then I think the trust starts to grow. And also to listen to what they need and to acknowledge that sometimes I guess things need to be delivered in a particular way because sometimes you have this idea as a CIO. This is the way we're going to deliver it. And then you realise actually that's not going to meet their requirements at all. The other thing I've been sort of quite-, I've learnt over my career don't do two year projects because the business requirements change. Even in the public sector, the business requirements change. And I think that's one of the biggest problems with government projects. When they go on for four or five years, and if you have a two year project, start to deliver in six month chunks and then refine it so your final delivery at the end of two years is not what you maybe thought originally at the beginning but you've refined that because you've delivered live sections every six months. So there's-, you know, but, again, that is about trust and building relationships. And building relationships is not a formal process. It's a completely informal process. And it's different in every organisation, you know. For instance, I'll give you an example of how different it is. In Xxxx, because people often travelled-, the people I was trying to build relationships with were travelling internationally all the time. One of the few times we could sit down and talk was in the canteen. Everyone went to the canteen. If they were in the office in London, they went to the canteen. So you would sit with your peers in the canteen to try and understand and start talking business but in an informal way. And that's how you build relationships. So it was not through formal meetings. And very often it doesn't work in formal meetings.

And that's what I think in some ways makes a difference between certain CIOs and others. Those who are prepared to build those relationships-, because in every-, when you reach senior manager you sometimes you need support from the most unlikely sources to get projects through sometimes and to get backing. And actually it's those informal

relationships that you develop that help to build your own career and your own sort of contribution to the company. So for me that's key.

Researcher: What would you say is the single biggest challenge when you work as a CIO?

I think setting expectations because, if you're a successful CIO, it's in some ways self-defeating. Let me explain. If you're not delivering anything, then no-one asks you to deliver anything. But when you suddenly start to deliver things, you're asked to deliver twice as much as you can, as you have resources for or as you have funding for. And therefore, it's to set expectations so that people-, just because everyone is saying this is the most important thing, you know you can't deliver 20 projects because you've only got the resources and the funding to deliver ten. So it's actually managing expectations with your users. We've gone about it in a completely different way here in terms of governance. We have a high level committee which some places might call a steering group. We call it the information strategy board which is our highest IT board. That's the board that determines the priority of the projects. And then, once you determine the priority, on a separate thing, I have my budget and my resources and at some point you just draw the line and everything above the line is done. Everything below the line cannot be done because either we need additional funding which isn't there or we need additional resources or funding for resources. So if they want more projects, that's what the organisation has to find. So I do a first draft of the priorities. But actually we leave it for the committee to refine what they believe are the priorities for the business. And that's chaired by a board member and has two more board members on it. So it's quite-, you know, it's a senior committee which effectively prioritises the projects. So it's not me forcing what I think is right on the business. It's the business telling me this is what we want, this is what we want to do. But then it's, you know, managing those expectations.

Researcher: One of the things that we discussed earlier on, that we started discussing, was the relationship between the CIO and the CEO and the potential career path of the CIO. Do you believe that CIOs should actually be considered as potential CEOs?

Interviewee W: Yes. Yes, but they're not very often. There're very few CIOs that make it to CEO.

Researcher: What do you think is lacking or what is required to make the move from CIO to CEO?

Interviewee W: I think you have to show a total understanding of the business and what is important for the business. If you're perceived to be a technician, however highly paid but a technician, then I don't think you can ever make it to CEO. I think that's part of the problem. Equally, there's an awful lot of CIOs who don't necessarily aspire to be CEO. They don't particularly look to that career path. But even those who do, it's difficult to make that transition. I think we're still viewed by the outside world as geeks unfortunately. Gradually, younger CEOs and younger boards have a different perception.

But to give you an example, I got on very very well with our last CEO. I got on tremendously well with him, fantastic. But I'll give you a classic example. I got called to present at an executive board. And as I was walking out of that, his Blackberry had a problem. As I was leaving, having just presented to the board including the chair of the governors there, he handed me his Blackberry. He said could you get it fixed? Now that I guess sums it up. If I'd been the managing director of BMW and he'd had a problem with his car, he wouldn't have given me his car keys and said go and get my car fixed. But he did. So I think in his perception, I was still a technician if you see what I mean whereas this new one, the new CEO, completely different. He sees my role as completely different. He sees me as a business leader that happens to run the IT department.

Researcher: Do you believe that there's more clarity regarding your role now than before?

Interviewee W: Yes, there is more clarity. But it's possible. It's the character of the CEO. The previous CEO was an academic, an ideas man, very heavily involved politically whereas the current one, his background is in engineering. And maybe he sees in me a fellow engineer if you see what I mean. So it may be a personal thing rather than-, both of them are around the same age so it's not a generation thing. There it's just a perception. I've sometimes been lucky in my career, sometimes not, in how I'm perceived. So I guess it's not necessarily down to the CIO. Sometimes it's down to the CEO and the board and how they view the person or how he's allowed to be viewed. So it's difficult. If you were to ask me what I see as my next career step, if I wanted to become a CEO, I couldn't stay in the xxxx sector because there is absolutely no chance of me becoming a xxxxx, you need to have a heavyweight academic background. And I don't have that. So I would need to go back to-, I could stay in the public sector or I would need to go back to the private sector to do that. Now having come from the private sector, I'm a lot more open to that. There're an awful lot of people in the xxxx sector, IT directors, who would not want to go into the private sector. They just want to stay-, and they quite happily move from xxxx to xxxx. And actually, there's not a lot of difference between the xxxx. They just move town and the xxxx seem to be similar size, similar standing. So I don't know what drives that move, other than maybe they're fed up in one and just want to see something else.

If I was to make a move in the xxxx sector, it would be to a larger organisation or one that had different aspirations to this one that suited me better. But at the moment, you know, I am very happy here. I don't have aspirations-, do I have aspirations to be a CEO? Probably in the private sector, in a small to medium company. I wouldn't mind that. But it's not an overriding ambition for me. Again, you're asking should a CIO become a CEO. In my case, I don't have an overwhelming ambition. But that might have to do with where I am in my career, my age and everything else, you know, I'm not-, I'm 55, coming onto 55 not 35. So I'm at different stage in my life and my career.

Say you're in the legal profession, unless you're a qualified, you know, solicitor, you're not going to be CEO of a law firm if you're their CIO. You'll never become their CEO because you haven't got the legal background in the same way that I haven't got the

academic background to be a xxxx. But equally, if I was in the private sector, in my last job I could have gone for the CEO job if it had become vacant. I would have been up against the sales director probably. That would have been the biggest challenge. Could I have done it? Yes, I possibly could have. But, you know, I guess I've explained where I stand on this. But, yes, there're CIOs that I have met in my time that would make very good CEOs and they'd probably be better than the CEOs I've come across.

Researcher: Would you say that being a CIO is also partly a matter of mindset in terms of the way you actually perceive your role? And do you believe that to actually be an efficient CIO you've got to have the right mindset?

Interviewee W: Yes, absolutely. If you don't have the right mindset, then you will end up being relegated to technician. And that's irrespective of the CEO's perception of you. Unless you have the right mindset, you'll always be relegated to technician. And therefore all you'll be is a very highly paid technical resource. I don't consider myself that, you know. I'd be seriously doing something wrong if that's what I considered myself. That's certainly not how I view my role. It is about mindset. But I made that jump I guess a long time ago in my career when I stopped programming and became a management consultant. So that was the big switch in my career. I've also talked to colleagues that have never done consulting and haven't moved around and have stayed in one organisation for 20-odd years. And some of them have struggled to make that leap. It doesn't mean they're bad CIOs. But I think they could be better because they don't have the breadth of experience and, you know, they're quite closed in terms of-, quite blinkered in the way they look at things and I think one of the other things that's helped me in my career and has broadened my perspective is international experience. That's invaluable, you know, because whether you work here, in France, in Germany or whether you work-, I worked in Africa and I worked in the Middle East, there're completely different perspectives and different ways of working.

Researcher: I would like to thank you again for your participation and sharing your insights and experience with me today.

APPENDIX D - AN EXAMPLE OF CATEGORISATION AND USE OF CODING FRAMES

ROLE DEMANDS

ROLE CONSTRAINTS

ROLE CHOICES

Researcher: That's okay. Thank you very much for joining me today. It's much appreciated. As I told you in my email, I'm currently doing a part-time PhD at the University of Northampton. I've worked with CIOs for over four years and one of the things that I'm particularly interested in is trying to understand how CIOs perceive their own role within their organisation. So it's not really an interview per se, it's more of a guided conversation really. I don't know if you've noticed when you joined the teleconference but I'm actually recording this conversation, would this be okay with you?

Interviewee W: Yes, that's fine. That's not a problem for me at all, that's fine.

Researcher: It's basically just for data analysis but the study is completely anonymous and confidential. So that's absolutely fine, you don't have to worry about this.

Interviewee W: Okay, that's fine.

Researcher: One of the first questions I would like to ask you just to start this conversation is around the role of the CIO. There have been lots of changes occurring over the last few years or over the last two decades I would say. We've seen a shift from a focus on operations and tactics to a more strategic role. And the first question I would like to ask you if I may is what would you say is the role of the CIO today in an organisation?

Interviewee W: There're very much two and I would say equal parts to the role. There is the operational to keep the existing systems running, to keep the infrastructure running, to keep the applications running, to make sure they're operating as efficiently as they could, as effectively as they could, delivering-, you know, meeting all the SLAs and making sure the KPIs are produced monthly. So that's the operational side. [**ROLE OF THE CIO**]. The other one is the strategic side. However, before I get onto the strategic side which I think is as important if not more important, if a CIO is failing to deliver the operational, they're not going to be invited to the table to discuss strategy if operationally they are failing. So-, and from my point of view, my experience here has been-, when I joined, the department was not viewed as delivering operationally[**CONTRIBUTION**] Actually, that was a misguided view. It was probably half right but also half wrong. We weren't measuring properly. So there was a lot of noise about it not delivering operationally. So we-, so I did the obvious. I started measuring SLAs, I started showing-, delivering sort of KPIs every month and showing that we were okay. But also we

tightened up, you know. So the basics had to work, the email had to work, the network had to work, the applications couldn't fall-, you know, corporate applications couldn't fall over every five minutes. So once you get through that and you build up an element of trust, then effectively you've got a seat at the table to discuss strategy and the conversation changes as a CIO because you stop talking about screws and widgets and start talking about how IT can help the business.**[CRITICAL SUCCESS FACTORS]** And that's a completely different discussion that starts there and I think that's far more important. So that's where I see-, over the three years that I've been here, that's where my role has changed. Now I have strategic discussions with the executive and other senior managers across the organisation, not operational discussions. But if suddenly the operational side started to fail, then again strategy goes out of the window and suddenly we're talking bits and bites and not strategy **[ROLE DYNAMICS]**.

Researcher: That has come back on a regular basis in my conversations with CIOs. It seems important to actually keep the lights on, make sure that you get your basics right and then that's when you can start building trust and being invited to the executive table.

Interviewee W: I'm not part of the executive team, nor do I feel here I need to be. I have a voice. I have-, my boss is a xxxx. So he is on the executive team, he represents IT there. However, I also both with the previous CEO and with the current one, I have a direct line to them so they don't feel they have to go through my boss for everything. Sometimes if they want a quick update, they will come directly to me or if they want a discussion they'll come directly to me. So although I don't have a seat at the executive table, I have developed-, and that's important to develop a good working relationship with the CEO **[CRITICAL SUCCESS FACTORS]**. So this-, certain CIOs have this obsession that they have to be there on the board sitting at the executive table. I don't think that's absolutely necessary in every organisation. I have a boss that is very supportive but where necessary the CEO will come to me and have that discussion directly with me and I sit on committees where strategy is discussed. There's also a skill to being a CIO which I think a lot of people miss and that is we're an unusual department in that we have to understand the whole business.**[CRITICAL SUCCESS FACTORS]** There're very few departments that have to understand the whole business and the way it works as part of their job and I think we do and I think that's a skill that's underestimated amongst a lot of the senior executives, just how much we understand the business or have to understand the business in delivering our job.**[ROLE POTENTIAL]**

I actually haven't reported to a CFO for 15 years. I've reported to various-, in previous lives, I'm reported to the global CIO. In two jobs, I've reported to the global CIO and then I've reported to various sort of COOs and in my last job I reported to the chief executive. So I haven't reported to a CFO in a long time. I-, that's a historical reporting line. I'm not sure that's-, I don't see that as being as actual as it is unless you tell me otherwise. Obviously, working for Gartner, you may have a different perception. But I'm seeing that as a bit old fashioned, that perspective now. I think we [CIOs] have certainly got more in common with the COO than we have with the CFO, and actually in this current climate where I'm asked to deliver a 15% budget cut for next year, it's actually better reporting to the COO because I'm talking strategy as well as numbers. If you report

to the CFO, unfortunately, you start to talk numbers only. There's no strategic discussion. It's all about numbers **[REPORTING STRUCTURE]**. And actually I can deliver the numbers but that has a strategic impact and the COO is more inclined to sit and listen to me on what the impact might be to levels of service and everything else, whereas the CFO just wants the bottom line to add up at the end of the day because that's what they're reporting to the CEO on. That's a very personal view of mine but-

Researcher: There're still a large number of CIOs who are actually reporting to the CFO. But it appears from conversation with CIOs that what matters most is the level of understanding of the CEO when it comes to IT, the level of maturity in the organisation and how IT is perceived within the organisation.

Interviewee W: Well, it would be I think very negative for me to report to the CFO here. He has virtually no understanding of IT **[MATURITY OF THE ORGANISATION]** and he's just concerned about the numbers. So I'm in a much stronger position reporting to the COO and having this informal direct link with the CEO, which works very well.

Researcher: Do you feel that as a CIO you have the same level of executive power as some of your peers like the CFO or the COO?

Interviewee W: No, definitely not. I worked in the private sector before I came to xxxx and the people who have most clout on the board would be the sales and marketing-, would come first. Then IT would come a very-, IT would come sort of third because second would be HR I think and then a poor third would be IT. So that's-, certainly in my last two roles, that's where IT has sat. Although it's been on the executive board, it's sat a poor third **[EXPECTATIONS AND PERCEPTIONS]**
Researcher: How do you see the role of the CIO evolving in the future? How do you see the CIO role in the next few years?

Interviewee W: It will evolve and I think it depends on the organisation. In my opinion, if the CEO views the IT function as being a strategic contributor to the business, then the CIO role is completely different to if the CEO still views them as just delivering equipment and some software.**[FLUCTUATION OF THE ROLE]** If they view it as a purely technical function, then that's a hurdle that the CIO has to overcome. A lot of it depends. Yes, it depends on us as CIOs and we need to talk business. We don't need to talk nuts and bolts and bits and bites. We need to talk business. If we talk business and show we understand business, then I think we'll be more readily accepted **[BEHAVIOUR]**. So I think it works both ways. We have to show that we're part of the business and understand the business. But, equally, the CEOs have got to stop thinking of us as technicians. And so I think it's a two way thing. But we don't do ourselves any favours when we stand up in presentations and speak in language that the business doesn't understand. The language I use when I speak to a group of IT directors or CIOs has got to be different to the language that I use when I speak to a group of, you know, sales and marketing and operations staff because it's a completely different discussion. It's a business discussion. But if I can't have that business discussion, then I'm not going to win as a CIO really.**[BEHAVIOUR]** So I think it's both ways. I think CEOs have

changed a lot faster. I think certain CIOs have taken a lot longer to get there **[CAPABILITY GAP]**.

Researcher: From conversations with other CIOs, it was suggested that often some CIOs tend to be a bit maybe set in their own ways. They like the technical aspect of their role and are a bit reluctant to move away from the technical side to be more involved more in the business and the strategic side of their role.

Interviewee W: Yes, that's very true. And I think this is where CEOs and COOs can change things by forcing the CIO, the IT director, to be more involved in the business. And if they don't want to be, then possibly they've got the wrong person. **[CAREER CHOICE]** To me, there is a problem in IT departments anyway and this is a universal problem and this one is difficult to fix and I'll give you this example and this goes all the way up to the CEO. Sometimes as senior IT managers we have fantastic technicians working for us, fantastic senior technicians. Now you get to the point where the only way we can give them more money for what they do is to promote them and promote them into a management position. You've got senior technicians going up and up the ladder and actually they're not interested in the business. Their first loyalty is towards IT. And this is a big one. **[CAREER CHOICE]** Another discussion I've had with people on many occasions is where if you actually talk to a senior technician in IT their first loyalty is to their profession and not to the business they're working in. And that's the big difference I think between a senior IT manager whether they be a CIO or a unit head. Their first loyalty has got to be to the business, not to the technology or to the IT profession. And I think that's what makes the difference. **[ROLE TRANSITION]** And I think to an extent-, I mean I was lucky in a way. I worked for very marketing driven organisations. I worked for Xxxx in the UK and I worked for Xxxx internationally, very marketing driven. To understand the business, I actually went out on the road with a sales rep. I made it a point of understanding the products so I could talk about the business and the issues that they had **[CRITICAL SUCCESS FACTORS]**. That was my decision. A lot of CIOs don't make that decision and I think, you know, then they can't make the leap into understanding and strategising about the business. **[CAREER CHOICE]**

That's why in my last job I took a job which was smaller in terms of IT but gave me a position on the subsidiary board because I wanted that experience. I wanted to be able to challenge my peers and discuss with my peers about the business, not about IT but about the business and show them how IT could help the business. That's what motivated me. **[DISCRETION AND CONTROL]**

Researcher: Would you consider yourself as an IT executive or a business executive? there's no right or wrong answer but I am interested in your views on this.

Interviewee W: For me, it's a business executive with IT experience rather than an IT executive. There's this talk of what they call hybrid managers who are both technicians and businessmen. **[CRITICAL SUCCESS FACTORS]** Actually, I'm not sure. I don't consider myself a technician anymore. I know enough about technology to be able to make suggestions about strategy we should take, enough about technology to challenge

my senior managers on suggestions they bring to me. But am I an expert in networks, am I an expert in software development? Not anymore, I've moved away from that. I'm much more in tune with the business and I have a much greater understanding I think of where we as a xxxx, as an organisation are going, the difficulties we're facing, the external factors that are influencing us. So, yes, I consider myself a business executive with IT knowledge, with expert IT knowledge. **[ROLE PERCEPTION]**

I started as a programmer. But 27 years ago when I was a programmer-, when I finished being a programmer 25/26/24 years ago-, things have moved on in technology. I understand where it's moved in technology. But could I programme again? No. And that's not what drives me as a CIO is not the technology **[CAREER CHOICES]**. That's incidental. It's not necessarily using the latest technology. For me, it's to use tested technology that's not going to break down because I'm not in the area of wasting money on bleeding edge technology. It's to use new technology that's tested and sound in a more innovative way. But actually for me my biggest turn on is implementing solutions. It's not whether my department is 50 strong, 70 strong or 200 strong. It's not about how big an empire I have. It's delivering solutions for the business so the business can go forward. I'll give you an example. We had a situation where-, we as xxxxx, we're not xxxxx. We're fairly low down on the league tables. And one of the issues for us is progression, progression of our xxxxs. Now that has two impacts on our business. One, if they don't progress we look bad in the league tables which is bad overall as a xxxx measure. And two, if they don't progress we don't get the funding from the government. So we're losing out on funding. So we need to analyse this. We've just delivered a system using business intelligence tools from Cognos to deliver reports to the faculties so they understand how the progression is going course by course, year by year, so they start to pinpoint what the problem is. Is it the xxxxs they're taking, is it the courses they're running, is it the academics that are teaching it. So they're starting to get to the root of the problem. Now that for me was one of the biggest thrills, to put that in, not whether I use Exchange 2003 or 2007. I don't really care about that. I know enough to know the difference between Windows XP and Windows Vista to know Vista has been an absolute dog. I know that but I don't need to know all the reasons why it's been a problem. But for me, you know, I've addressed a business problem. I've put a solution in that's going to help this xxxx. So that's what turns me on, not the technology anymore. And I think if you talk to most CIOs I would think that's the picture you'll get. **[ATTITUDE / ROLE PERCEPTION]** Yes. There are still some CIOs, certainly in the public sector-, now this is interesting-, where they judge their success by the size of their department or the size of their budget and not by what they deliver. There are far fewer of those in the private sector because they wouldn't survive very long in the private sector but unfortunately I still see that in the public sector. I don't know why. I don't know why there's this divide but there seems to be.

I think of myself as a business executive with IT knowledge. Going back, having done all that talking, yes, I still think that. I haven't changed my mind.

Researcher: We talk quite often about different areas where CIOs can actually make a real contribution to an organisation. In which areas do you think CIOs can actually make the biggest contribution to their organisation?

Interviewee W: Yes, there're four or five areas. One is business process and challenging the organisation about the way it does things and the way it's done things for years. Do we still have to do it this way? So business process is a big one and it's a big one here. Information management – I think, you know, it's a cliché that we're data rich but information poor but it's true. **[CONTRIBUTION]** And it's actually-, you know, I remember the days of EIS systems and everything so grand ideas about management information but no tools to deliver it. Now the tools are here we can start to deliver relevant information management to make good decisions. So that's another area. I think we need to deliver efficient systems and start to challenge the systems we've got. Yes, are they efficient but actually start to challenge the people. Are we using these systems we've got in the best possible way? We've had a lot of criticism about one of our corporate systems here. Actually, there's nothing wrong with our system. It was the way we were using it so we've had an implementation project where suddenly it's not about re-implementing the system. It's about looking at the business processes and how we can use the system more effectively and at the same time make our processes less cumbersome. **[CONTRIBUTION]** So, yes, I think business processes, management information and efficiency of systems. Those would be the top three ways in which we can I suppose help the business. And having worked both in the private sector and now at xxxx, it goes for both organisations. It's the same thing.

One of the reasons I was employed here was to bring my private sector skills here to make things happen quicker, to make things more effective and to cut out some of the fat that exists in the public sector. But why does it work here? If I'd moved to say a xxxx which was very collegiate in its style and relied on a million committees to make a decision, I think I would have got very frustrated. What attracted me to here is it had not a completely centralised but an almost centralised operation, therefore much more akin to what I'd seen in the private sector. So the transition I made was fairly easy. Had I gone to say xxxx or xxxx, that transition would have been a lot more difficult because there's a completely different style there. So there is a difference between us and say one of the older type of xxxx.

Researcher: Would you say that something that attracted you was the fact that you probably have more freedom to make your role evolve as you see fit or to have a bit more flexibility in terms of what you actually deliver as a CIO?

Interviewee W: That was a big advantage. One of the attractions here was when I joined my boss-, he's got five direct reports now. When I joined, he had eight direct reports so I guessed I would have a certain amount of autonomy to start to deliver. Although I wasn't on the executive team, I probably had a freer hand in delivering because my boss couldn't-, with eight senior managers or eight directors reporting to him, he couldn't actually delve too far into it. So that was an attraction, the flexibility to deliver what I felt was necessary for the business. **[DISCRETION AND CONTROL]** But equally, I've

had to develop relationships with my peers and with other sort of board members to be able to deliver that. So that's been up to me as well, to develop those relationships. **[CRITICAL SUCCESS FACTORS]** So I haven't relied on my boss to develop those relationships, those have been developed by me. So that's another thing that's important I think for CIOs to do. They have to develop those relationships. If they're on the board, they automatically have relationships with the other board members. If they're not on the board, which I'm not here, I have to develop those relationships with the other board members to try and understand what this faculty needs. In the private sector, that would be what this business unit needs as opposed to that business unit. So what does that division president need that this one doesn't. So am I going to give one solution or do I need to give four flavours of this solution because each of the business units is very different? So it's developing I think-, that's up to the CIO. And I think that's a mark of success if you can develop that relationship, because if you don't then again I don't think you have this seat at the table to be able to discuss strategy.

Trust is a big one because I delayed implementing major software projects for two years here. Why did I do that? I probably couldn't have got away with this in the private sector. The reason I did that is, of my three teams, that one, the software development and the business analysis side was the weakest. **[CRITICAL SUCCESS FACTORS]** We did a lot of work around that. First of all, I started to deliver infrastructure projects on time, on budget and effectively. Then, when I'd built up my sort of software development and business analysis team, I started to tackle some small software projects and, again, delivered them on time, on budget. And slowly slowly we built up the trust here which, for some reason, in the xxxx sector, seems to take longer. We built up the trust and suddenly they're not questioning everything I do. So I now go to committees and get papers through. I get them rubber stamped because there is an element of trust and they're not questioning everything I do. So that's actually-, I think that's one of the most important things. **[CRITICAL SUCCESS FACTORS]**   But then don't promise what you can't deliver. If you start to deliver what you've promised and deliver on time and on budget, you know, then I think the trust starts to grow. And also to listen to what they need and to acknowledge that sometimes I guess things need to be delivered in a particular way because sometimes you have this idea as a CIO. This is the way we're going to deliver it. And then you realise actually that's not going to meet their requirements at all. The other thing I've been sort of quite-, I've learnt over my career don't do two year projects because the business requirements change. Even in the public sector, the business requirements change. **[PACE OF CHANGE]**   And I think that's one of the biggest problems with government projects. When they go on for four or five years, and if you have a two year project, start to deliver in six month chunks and then refine it so your final delivery at the end of two years is not what you maybe thought originally at the beginning but you've refined that because you've delivered live sections every six months. So there's-, you know, but, again, that is about trust and building relationships. And building relationships is not a formal process. It's a completely informal process. And it's different in every organisation, you know. For instance, I'll give you an example of how different it is. In Xxxx, because people often travelled-, the people I was trying to build relationships with were travelling internationally all the time. One of the few times we could sit down and talk was in the canteen. Everyone went to

the canteen. If they were in the office in London, they went to the canteen. So you would sit with your peers in the canteen to try and understand and start talking business but in an informal way. And that's how you build relationships. So it was not through formal meetings. And very often it doesn't work in formal meetings. **[CRITICAL SUCCESS FACTORS]**

And that's what I think in some ways makes a difference between certain CIOs and others. Those who are prepared to build those relationships-, because in every-, when you reach senior manager you sometimes you need support from the most unlikely sources to get projects through sometimes and to get backing. And actually it's those informal relationships that you develop that help to build your own career and your own sort of contribution to the company. So for me that's key. **[BEHAVIOUR]**

Researcher: What would you say is the single biggest challenge when you work as a CIO?

I think setting expectations because, if you're a successful CIO, it's in some ways self-defeating. Let me explain. If you're not delivering anything, then no-one asks you to deliver anything. But when you suddenly start to deliver things, you're asked to deliver twice as much as you can, as you have resources for or as you have funding for. And therefore, it's to set expectations so that people-, just because everyone is saying this is the most important thing, you know you can't deliver 20 projects because you've only got the resources and the funding to deliver ten. So it's actually managing expectations with your users. **[CRITICAL SUCCESS FACTORS]** We've gone about it in a completely different way here in terms of governance. We have a high level committee which some places might call a steering group. We call it the information strategy board which is our highest IT board. That's the board that determines the priority of the projects. And then, once you determine the priority, on a separate thing, I have my budget and my resources and at some point you just draw the line and everything above the line is done. Everything below the line cannot be done because either we need additional funding which isn't there or we need additional resources or funding for resources. So if they want more projects, that's what the organisation has to find. So I do a first draft of the priorities. But actually we leave it for the committee to refine what they believe are the priorities for the business. And that's chaired by a board member and has two more board members on it. So it's quite-, you know, it's a senior committee which effectively prioritises the projects. So it's not me forcing what I think is right on the business. It's the business telling me this is what we want, this is what we want to do. But then it's, you know, managing those expectations.

Researcher: One of the things that we discussed earlier on, that we started discussing, was the relationship between the CIO and the CEO and the potential career path of the CIO. Do you believe that CIOs should actually be considered as potential CEOs?

Interviewee W: Yes. Yes, but they're not very often. There're very few CIOs that make it to CEO.

Researcher: What do you think is lacking or what is required to make the move from CIO to CEO?

Interviewee W: I think you have to show a total understanding of the business and what is important for the business. If you're perceived to be a technician, however highly paid but a technician, then I don't think you can ever make it to CEO. I think that's part of the problem. **[EXPECTATIONS AND PERCEPTIONS]**   Equally, there's an awful lot of CIOs who don't necessarily aspire to be CEO. They don't particularly look to that career path. But even those who do, it's difficult to make that transition. I think we're still viewed by the outside world as geeks unfortunately. Gradually, younger CEOs and younger boards have a different perception. But to give you an example, I got on very very well with our last CEO. I got on tremendously well with him, fantastic. But I'll give you a classic example. I got called to present at an executive board. And as I was walking out of that, his Blackberry had a problem. As I was leaving, having just presented to the board including the chair of the governors there, he handed me his Blackberry. He said could you get it fixed? Now that I guess sums it up. If I'd been the managing director of BMW and he'd had a problem with his car, he wouldn't have given me his car keys and said go and get my car fixed. But he did. So I think in his perception, I was still a technician **[EXPECTATIONS AND PERCEPTIONS]**   if you see what I mean whereas this new one, the new CEO, completely different. He sees my role as completely different. He sees me as a business leader that happens to run the IT department.

Researcher: Do you believe that there's more clarity regarding your role now than before?

Interviewee W: Yes, there is more clarity. But it's possible. It's the character of the CEO. The previous CEO was an academic, an ideas man, very heavily involved politically whereas the current one, his background is in engineering. And maybe he sees in me a fellow engineer if you see what I mean. So it may be a personal thing rather than-, both of them are around the same age so it's not a generation thing. There it's just a perception. I've sometimes been lucky in my career, sometimes not, in how I'm perceived. So I guess it's not necessarily down to the CIO. Sometimes it's down to the CEO and the board and how they view the person or how he's allowed to be viewed. **[EXPECTATIONS AND PERCEPTIONS]** So it's difficult. If you were to ask me what I see as my next career step, if I wanted to become a CEO, I couldn't stay in the xxxx sector because there is absolutely no chance of me becoming a xxxxx, you need to have a heavyweight academic background. And I don't have that. So I would need to go back to-, I could stay in the public sector or I would need to go back to the private sector to do that. Now having come from the private sector, I'm a lot more open to that. There're an awful lot of people in the xxxx sector, IT directors, who would not want to go into the private sector. They just want to stay-, and they quite happily move from xxxx to xxxx. And actually, there's not a lot of difference between the xxxx. They just move town and the xxxx seem to be similar size, similar standing. So I don't know what drives that move, other than maybe they're fed up in one and just want to see something else.**[CAREER CHOICE]**

If I was to make a move in the xxxx sector, it would be to a larger organisation or one that had different aspirations to this one that suited me better. But at the moment, you know, I am very happy here. I don't have aspirations-, do I have aspirations to be a CEO? Probably in the private sector, in a small to medium company. I wouldn't mind that. But it's not an overriding ambition for me. Again, you're asking should a CIO become a CEO. In my case, I don't have an overwhelming ambition. But that might have to do with where I am in my career, my age and everything else, you know, I'm not-, I'm 55, coming onto 55 not 35. So I'm at different stage in my life and my career.

Say you're in the legal profession, unless you're a qualified, you know, solicitor, you're not going to be CEO of a law firm if you're their CIO. You'll never become their CEO because you haven't got the legal background in the same way that I haven't got the academic background to be a xxxx. But equally, if I was in the private sector, in my last job I could have gone for the CEO job if it had become vacant. I would have been up against the sales director probably. That would have been the biggest challenge. Could I have done it? Yes, I possibly could have. But, you know, I guess I've explained where I stand on this. But, yes, there're CIOs that I have met in my time that would make very good CEOs and they'd probably be better than the CEOs I've come across.**[ROLE POTENTIAL]**

Researcher: Would you say that being a CIO is also partly a matter of mindset in terms of the way you actually perceive your role? And do you believe that to actually be an efficient CIO you've got to have the right mindset?

Interviewee W: Yes, absolutely. If you don't have the right mindset, then you will end up being relegated to technician. And that's irrespective of the CEO's perception of you. Unless you have the right mindset, you'll always be relegated to technician. And therefore all you'll be is a very highly paid technical resource. I don't consider myself that, you know. I'd be seriously doing something wrong if that's what I considered myself. That's certainly not how I view my role. It is about mindset.**[ROLE PERCEPTION]** .But I made that jump I guess a long time ago in my career when I stopped programming and became a management consultant. So that was the big switch in my career. .**[TRANSITION FROM IT TECHNICIAN TO BUSINESS EXECUTIVE]** I've also talked to colleagues that have never done consulting and haven't moved around and have stayed in one organisation for 20-odd years. And some of them have struggled to make that leap. It doesn't mean they're bad CIOs. But I think they could be better because they don't have the breadth of experience and, you know, they're quite closed in terms of-, quite blinkered in the way they look at things and I think one of the other things that's helped me in my career and has broadened my perspective is international experience.**[CAPABILITY GAP]** That's invaluable, you know, because whether you work here, in France, in Germany or whether you work-, I worked in Africa and I worked in the Middle East, there're completely different perspectives and different ways of working.

Researcher: I would like to thank you again for your participation and sharing your insights and experience with me today.